TIHUG NEWS DIGEST

Focusing on the TI99/4A Home Computer

Volume 16, Number 10 November, 1997

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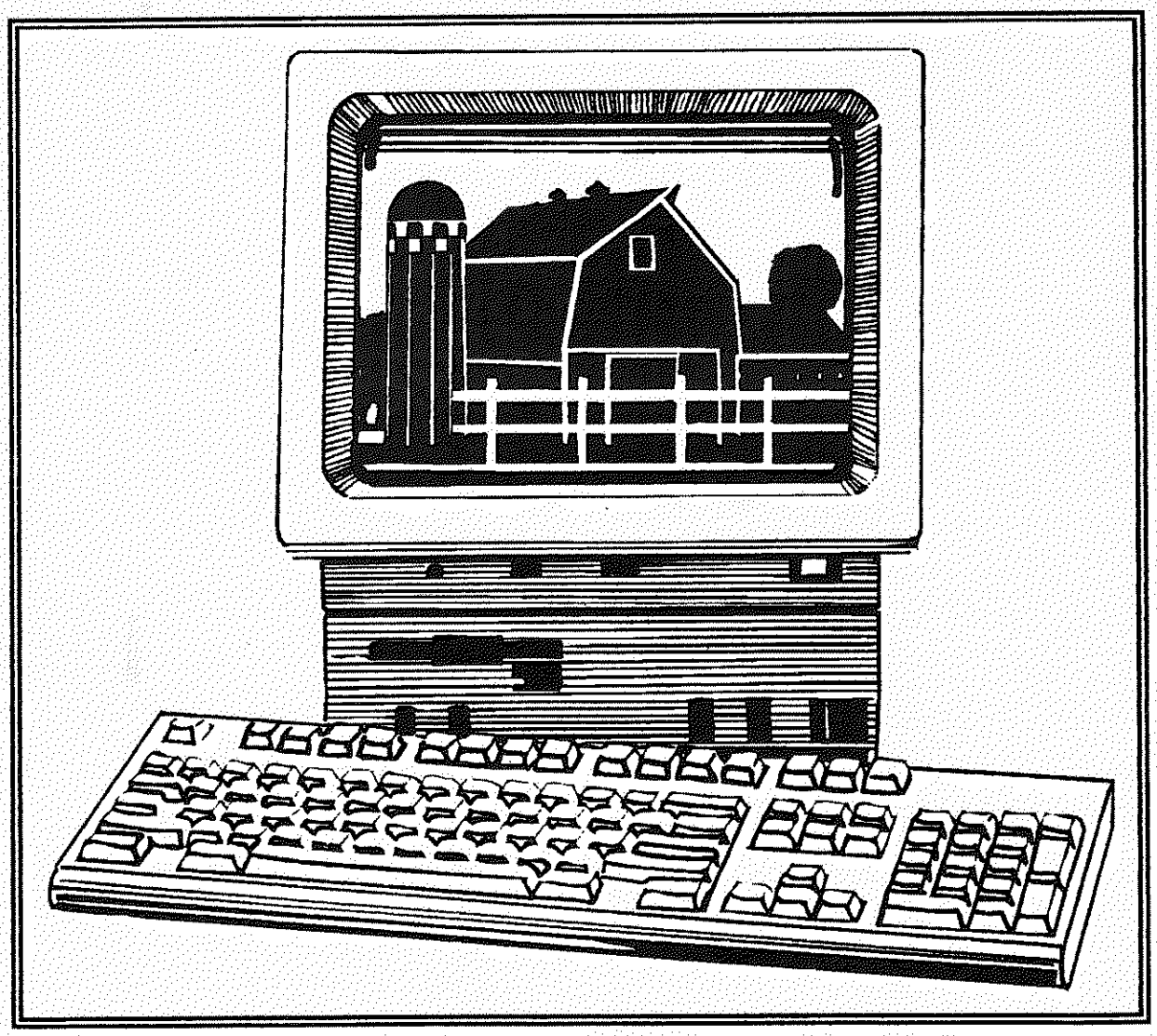

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IBM

Membership and Subscriptions

Annual Family Dues	$35.00
Associate membership	$10.00
Overseas Airmail Dues	A$65.00

TIsHUG Sydney Meeting

The November Meeting will start at 2.0 pm on the 1st November 1997 Computer repairs & upgrades from 10.30 AM. at the
Ryde East Primary School,
Twin Road Nth. Ryde.

Cyril Bohlsen
Percy Harrison
Tom Marshall
Stefan Milloy
Richard Warburton
Loren West

Following the counting of votes the Scrutineer announce that the following candidates had been elected:

Cyril Bohlsen
Percy Harrison
Stefan Milloy
Richard Warburton
Loren West

The meeting was handed back to R Warburton who thanked the members for their attendance and closed the meeting.

Meeting closed at 3:14 pm.

Minutes recorded by: Percy Harrison
Honorary Secretary
7th December 1996

Minutes approved by: _____

Richard Warburton
Chairman

Annual General Meeting
6th December 1997
Ryde East Primary School

Members are advised that the 11th Annual General Meeting of TIsHUG (Australia) Limited will be held on Saturday, 6th December, 1997 at Ryde East Primary School, Twin Road, North Ryde, NSW, commencing at 2.00pm.

Members attending are requested to arrive by 12.30pm to enable them to sign in and enjoy a barbecue lunch prior to the start of the meeting.

Agenda

1. Welcome by the Co-ordinator
2. Apologies
3. Minutes of the 10th Annual General Meeting
4. Business arising from the Minutes
5. Correspondence
6. Co-ordinator's Report
7. Treasurer's Report and Auditor's Report
8. Election of Returning Officer and two Scrutineers
9. Election of Directors (Five)
10. Election of Auditor
11. Other business

Please note: A "Nomination Form for Office of Directors is included in this issue of TND. Should you wish to nominate any full financial member for position of Director please return this form duly completed and return it to the Secretary by 8.00pm, Friday, 14th November, 1997.

Percy Harrison (Secretary)

MINUTES OF AGM

TIsHUG (Australia) Limited
MINUTES OF ANNUAL GENERAL MEETING
Held on 7th December 1996
at Meadowbank Infants School

Meeting opened at 2:15 pm with the Co-ordinator welcoming all members and visitors and our new members John and Davina Herbert.

Number present - 27 members and 5 visitors

1. **Directors Present:** R Warburton, C Bohlsen, T Marshall, L West, P Harrison

2. **Apologies:** A Lynn

3. **Minutes:** The Minutes of the 1995 Annual General Meeting had been distributed to all members via the December issue of the club's TND.

Moved by B Takach, seconded by D Gould that the minutes be accepted as a true and correct record of proceedings. Motion carried.

4. **Business arising from the Minutes:** There was no business arising from the minutes.

5. **Correspondence:** There was no correspondence.

6. **Co-ordinator's Report:** The Co-ordinator referred members to his published report in theDecemberTNDand thanked all committee and sub-committee members for their support and assistance throughout the year.
   He reminded members that as from our first meeting in February 1997 the club's monthly meetings would be held at Ryde East Public School. Twin Road, Ryde and felt that 1997 would be a year of growth for the club membership.
   He also commented on the success that had had over the last three months in increasing our sales of PC'c and indicated that this would help in increasing our membership.

Moved by A Ruggeri, seconded by D Gould, that the Co-ordinator's report be accepted. Motion carried.

7. **Treasurers Report:** The Treasurer advised that the Financial Accounts for the Year Ended 30 June 1996 had been mailed to all members with the December TND and he had nothing further to add to this report.

Moved by G Trott, seconded by, S Rebikov, that report be accepted. Motion carried.

8. **Other Business:** P Harrison advised the members present of the work that John Paine had done for the club over the many years that he had been a member of the club both on offering technical assistance and know-how for TI and PC users and his expertise in solving problems that our other technical members were unable to resolve.
   A motion was then moved by P Harrison, seconded by L Cowan, that John Paine be granted Life Membership to our club.

The motion was carried with only one member voting against the motion. T Marshall explained that he opposed the motion on the grounds that a motion had been carried at a previous meeting that prevented the granting of any further Life Memberships.

D Gould explained that the motion referred to was not a complete ban and did allow members to grant Life Membership to a person or persons who made an outstanding contribution toward the operation of the club.

6. **Election of Officers:** All Directors positions were declared vacant, Geoff Trott accepted the offer to act as Returning Officer and Davina Herbert and Alf Culloden to act as Scrutineers. Six nominations, properly nominated and seconded, had been received thus requiring the holding of a secret ballot. Nominations in Alphabetic order were:

THE TI-74 "BASICALC": A MODERN 8K POCKET SIZED REINCARNATION OF THE CC40 AND 99/4A

reviewed by **Charles Good**
Lima Ohio User Group

Why did TI suspend further HexBus product development and stop selling the CC40 in late 1984 less than two years after the CC40 introduction in January 1983? No, it probably wasn't because TI's non release of the "didn't work very well" Wafertape Digital Tape Drive left the CC40 without any means of mass storage. TI had that problem solved with the CC40+ which had a built in reliable cassette interface. But the CC40+ was never released. Why? A probable answer to these questions is that TI had something better up its sleeve. In 1985 TI began selling the TI-74, a downsized improved version of the CC40 with an optional cassette interface. In 1992 these products are still available.

The TI-74 is "modern" in the sense that TI still actively sells the product through dealers. Although first released in 1985, my TI-74 user guides have a 1990 copyright indicating TI's continuing support of the machine. The TI-74 is a "reincarnation" of the CC40 and 99/4A in the sense that its BASIC is very similar to TI Extended BASIC for the /4A and almost identical to the BASIC used in the CC40. Anyone familiar with Extended BASIC on the /4A will have no trouble programing the TI-74. The similarities between the 99/4A and the TI-74 are so profound that both the Lima Ohio user group and the Swedish user group have members who own a TI-74 and DO NOT own a 99/4A. I have typed in several games and application programs written for the 99/4A into my TI-74 with very little modification. Finally the TI-74 can be considered a "pocket" computer because it measures only about 4x8x1 inches. You can carry the thing around in your shirt pocket if you don't mind having half the computer sticking out beyond top of the pocket.

The TI-74 can best be described as a reduced sized CC40 with more memory, a greatly enhanced set of scientific calculator functions, and a slightly reduced suite BASIC commands compared to the CC40. The keyboard layout of the TI-74 is very similar to that of the CC40. Anyone familiar with the key combinations of the CC40 will find the same keys, usually in the same place on the keyboard, do the same things on the TI-74. Typing FRE(0) on the TI-74 shows 7710 bytes of program space available for BASIC programs. On the unenhanced 6K CC40 a FRE(0) shows 5730 bytes available to BASIC.

PHYSICAL DESCRIPTION:

The TI-74 is powered by 4 AAA batteries or an optional AC transformer. Most memory contents are preserved when the computer is "OFF". Although TI makes no claims about how long the batteries should last, my experience suggests several tens of hours of "ON" time on a single set of batteries and many more hours of "computer is OFF" time. Unlike many "modern" laptop and palmtop computers, the TI-74 does not have battery eating features such as a backlit display screen or a built in hard drive. Like the CC40 the TI-74 has an LCD display that shows 31 5x7 pixel characters of an 80 character line. You can scroll or window left/right with arrow keys and can use the up/down arrow keys to display adjacent lines. A contrast adjustment allows viewing in most lighting situations.

The keyboard has slightly concave rectangular (chicklet style) keys which provide a definite tactile response when a keypress is detected. Keys are arranged in a manner similar to, but not identical with, the CC40 keyboard.

The alphanumeric keys are arranged typewriter style with a large <ENTER> key and (unlike the CC40) a shift key on BOTH sides of the space bar. Cursor and other special purpose keys (FN CT Mode Break Run) are lined up in a row above the letter keys where one usually expects to find number keys. The number keys form a numeric keypad to the right of the letter keys along with large ON and OFF keys. Most keys have at least two functions and many have more. For example, the letter keys all have specific calculator functions in CALC mode and in BASIC mode these same letter keys can be used to display on screen most BASIC commands with just two keypresses. Keys are closer together than on the CC40 so touch typing is not possible. However two finger typing is fairly easy. I am composing the first draft of this article on my TI-74.

CALCULATOR MODE:

Pressing the MODE key while in BASIC command mode switches the TI-74 to calculator mode. A total of 70 "scientific calculator" functions are available by entering a number and then pressing one or two keys to perform some action on the number. CALC functions include linear regression, permutations, regular and hyperbolic trig functions, a full range of statistics, and much more. One interesting CALC function allows you to enter

angles in degrees as degrees-minutes-seconds and have this converted to degrees+decimals. Factorials up to 83 can be calculated by just entering a whole number and then pressing the "n!" key. An INV(erse) key will reverse the effect of most CALC functions. For example pressing INV and TAN will yield the ARCTAN of the displayed number.

Mathematical display and accuracy are identical to that of the 99/4A and the CC40. Ten digits are displayed on screen with internal calculations carried to 13 or 14 digits. Large and very small numbers are displayed in scientific notation.

As an educator, one feature of CALC mode I particularly appreciate is STAT mode. I can enter a long list of student test scores and then obtain statistical information such as the median and standard deviation of these data. Other statistics available once you enter a set of numbers (data) include sum, sum of squares, number of data entries, regression, line intercept and slope, and correlation coefficient. Stastical data can be entered as single data values (as I do for student grades) or paired values (such as plots on a two dimensional graph).

BASIC programs as well as text assigned to "hot keys" (up to 10 hot keys each of which will recall from memory up to 80 characters of text and/or mathematical formulas) remain in memory when in CALC mode and can be immediately recalled by pressing the MODE button to enter BASIC mode. Stastical data remain in memory when you switch from CALC to BASIC mode and can later be accessed by going back to CALC. When you turn the computer "OFF" and later turn it "ON" you are returned to the mode you left when you pressed "OFF". Memory contents (BASIC programs, the contents of "hot keys", and stastical data) are all preserved when the computer is "OFF".

BASIC MODE:

Except for lacking commands for user defined graphics, speech, color, sprites, and sound, TI-74 BASIC is very similar to TI Extended BASIC on the 99/4A. Keeping in mind the limited screen display of the TI-74, 99/4A users should have no trouble programming the TI-74. Although TI-74 BASIC has a few fewer functions than CC40 BASIC the differences between the two are minor. Most CC40 BASIC software listings can be typed into the TI-74 with no modifications at all and will run with no problems. The following functions in CC40 BASIC are not available on the TI-74:

- BEEP (Used in the CC40 with DISPLAY AT. There is no sound at all available on the TI-74).
- ATTACH and RELEASE (A feature of CC40 subprograms I have never actually seen used).
- CALL CHAR (There are no user definable display characters).
- CALL INDIC (No user definable display indicators are available).
- CALL SETLANG (No alternative languages for text prompts. All built in text prompts in the TI-74 and its software modules are in English).
- CALL VERSION (The version of BASIC is identical on all TI-74's).
- CALL CLEANUP (Instead you can remove from memory variables not being used in the current program by SAVEing to a non existent device).
- There is no direct access to assembly language except for CALL IO on the

TI-74. Therefore the following CALL's of CC40 BASIC are not available on the

TI-74: GETMEM POKE PEEK LOAD EXEC RELMEM and DEBUG.

The only important CC40 BASIC software I have that can't be modified to work with the TI-74 are "DIR" programs designed to read the directories of mass storage devices such as the Wafertape drive and Quickdisk drive. These programs are very useful because they give you the exact spelling of program and data file names. You need the exact spelling to load from these devices. The directory reading software uses assembly CALL's not available on the TI-74. The only other important assembly CALL known to me on the CC40 is a CALL EXEC(xxxx) to deactivate the battery saving automatic power down. The same thing can be done on the TI-74 by a specific sequence of keypresses.

ACCESSORIES AND PERIPHERALS:

Standard equipment that comes with the TI-74 includes two book length guides, a set of alkaline batteries, a plastic hard case, and a quick reference card that fits into the inside of the hard case's hinged lid. I really like the hard case and keep my TI-74 in the case most of the time, even when I am actively using the computer as I am now to enter the text of this article. The case is very tough and prevents accidental keypresses. The increased size of the TI-74 plus case does, however, make it more difficult to

keep the computer in one's shirt pocket. If you open the case lid all the way you can lean the TI-74 against a small object at a convenient viewing/typing angle and position the case lid over the object's top for stability. Right now as I type this article I have my TI-74 resting against an apple!

A cartridge port to the right of the display accepts a solid state software or RAM cartridge. Available software cartridges include LEARN PASCAL, STATISTICS, CHEMICAL ENGINEERING, FINANCE, and MATHEMATICS. The capabilities of these software cartridges are almost identical to cartridges of the same name sold for the CC40 and the TI-95 programmable calculator. When I sent in my TI-74 registration card to TI, I received back a large color brochure describing TI's custom module service for industry. For about $100 per module TI offers to manufacture (burn eproms for) custom TI-74 software modules tailored to a customer's specifications. Specific examples of some custom modules are described in the brochure.

For me the most useful TI-74 module is the battery backed 8K RAM. A similar module exists for the CC40. You can save an "image" of the TI-74's memory into the module, remove the module, and later reinsert the 8K RAM and load its contents back into the TI-74. Used this way the 8K RAM serves as a mass storage device. You can also leave the RAM module in the TI-74 and exchange the contents of the computer's memory for what is stored in the module. You can thus keep two different BASIC programs in the computer at the same time, one in the RAM module and one in the computer's memory, switching back and forth between the two. This memory flip-flop trick is something you can't do with a CC40. You can also use the 8K RAM as additional CPU memory by invoking CALL ADDMEM. This makes about 15700 bytes of memory available in BASIC instead of the TI-74's normal 7710 bytes.

The TI-74 has a 10 pin peripheral connector TI calls the Dock Bus. Available TI peripherals that fit this connector include an AC adapter (the "adapter adapter" plugs into the TI-74 and TI's AC9201 AC adapter plugs into the "adapter adapter"), a battery powered thermal printer, a cassette tape recorder interface, and an MS-DOS computer interface. I don't yet own any of these peripherals, so the descriptions below are based on information published by TI and on articles that have appeared in past issues of TI PCC

NOTES.

The PC-324 THERMAL PRINTER is set up as device #12 and uses an unusual size ~~thermal~~ paper roll. You can either purchase FAX paper and cut it to size with a hacksaw or pay $5 at a dealer for a 3 roll pack of "official" paper. Sort of reminds you of the paper "problem" with the 99/4's Thermal Printer (TP)! The small PC-324 printer is about the same length and width as the TI-74. It runs on batteries or an optional AC adapter. Text is only 24 columns. There is only one text font and there are no dot addressable graphics. From CALC mode you can use the PRINT key at any time to print the screen display. From BASIC mode you can LIST programs or OPEN the printer in a program or from command mode and print whatever you want.

The CI-7 CASSETTE INTERFACE CABLE allows you to use most cassette audio recorders, even those that use miniature cassettes, to save BASIC programs or data files to tape. It appears to work the same way as the cassette interface of the never released CC40 PLUS. Its operation also resembles that of the Wafertape drive. You can save several files sequentially on the same tape each with a different file name. If you don't know the exact starting position of a particular file the TI-74 can search the tape from the beginning for a particular file name and when found load that file. The TI-74 can also be programmed to load the next file found on the tape irrespective of file name. Screen prompts are available telling the operator to press the recorder's PLAY, RECORD, and STOP buttons and the computer automatically senses the beginning and end of the requested file. You cannot use the CI-7 to save programs from a CC40. Many have tried and failed to do this. Apparently the TI-74 contains within it specific code needed to operate the CI-7 cassette interface, code which is lacking in the CC40.

The PC INTERFACE CABLE connects between the Dock Bus and the 25 pin parallel port of an MS-DOS computer. With this cable you can use the TI-74 to directly control the MS-DOS computer via several device numbers. Addressing device 14 lets you print using a parallel printer connected to the PC. Device 45 lets you direct output from the TI-74 to the PC's monitor for a nice 80 column multi line display. You can save or load TI-74 programs to and from the PC's disk drives by referencing device 100. Text in ASCII format can be saved to the PC's drives with device 101. If you own an MS-DOS computer this cable would seem to be a very useful TI-74 peripheral. Can it be used with the CC40? I don't know, but someone should find out. The PC interface may be the mass storage solution for CC40 owners who cannot get obtain a Quickdisk or Wafertape drive.

HEXBUS COMPATIBILITY:

Superficially the 10 pin Dock Bus looks quite different from the 8 pin HexBus. However, as first noted in 1990 in articles published in TI PCC NOTES and later in an article by Dan Eicher in the March 1992 issue of the Lima User Group newsletter, the Dock Bus and HexBus are electronically identical. Two extra Dock Bus lines not found in the HexBus that allow an external 6 volt source to power the computer or peripheral through the bus. By connecting the proper wires of a HexBus cable to corresponding wires of a Dock Bus cable ALL HEXBUS PERIPHERALS ARE COMPATIBLE WITH THE TI-74! If you don't want to make your own cable you can buy one from L.L. Conner for $15. Plug one end of the Conner cable into the TI-74's Dock Bus and attach a HexBus cable to the other end. With this HexBus/Dock Bus cable I have used my TI-74 with the following HexBus peripherals: RS232, Printer 80, Printer Plotter, Wafertape Drive, and Quickdisk drive.

I much prefer to my use Printer 80 with my TI-74 rather than the 24 column PC324 printer. Like the PC324 the Printer 80 can be run on batteries or an AC adapter. Unlike the small hard to find expensive rolls of thermal paper used by the PC324, the Printer 80 uses easily obtainable FAX paper rolls or with a Thermal Ribbon obtainable from Sears or by mail from TI regular sheets of typing paper

MASS STORAGE AND CC40/TI-74 SOFTWARE COMPATIBILITY:

With my TI-74 I can OLD SAVE and OPEN files to and from my Quickdisk (device 8) with no problems at all. This is in spite of the fact that I have the HexBus rather than the Dock Bus version of the Quickdisk drive. All I need is the HexBus/Dock Bus interface cable made by L.L. Conner. I know of someone who uses a Dock Bus Quickdisk drive with his CC40 also with no problems. The few CC40 applications written for the Wafertape drive assume this device is configured as device #1. That's how I have always used my Wafertape Drive with my own CC40. It is fortunate that the tape drive can be switched to other device numbers because I can't successfully use my Wafertape drive as device 1 with the TI-74. The TI-74 expects the CI-7 cassette interface to be device 1. If I switch my Wafertape drive to some other device number (I use device 2) then I can OLD SAVE and OPEN files to and from wafertapes with my

TI-74.

I knew when I bought my TI-74 that the syntax of TI-74 BASIC is almost identical to that of CC40 BASIC. I now know that the similarities between the BASICs of these two devices are more profound. Any BASIC program written on a CC40 and saved to Quickdisk or Wafertape will successfully OLD into the TI-74 and if the program doesn't use any of the BASIC functions unique to the CC40 will RUN in the TI-74. Almost my entire library of CC40 BASIC programs stored on disk or wafertape will load RUN out of my TI-74! The two computers use similar 8 bit central processor chips (TMS70C20 for the CC40 and TMS70C46 for the TI-74) that use the same assembly instruction sets and BASIC token codes.

GENERAL CONCLUSIONS; COMPARING THE CC40 AND TI-74:

The only reason for using for using small "notebook" or "palmtop" computers such as the CC40 or TI-74 is portability and/or ease of operation. The additional memory and better displays of desktop computers mean that in general desktops are more powerful. Software is available for desktops that can accomplish anything that can be done with ROM cartridge or BASIC software available for the CC40 and TI-74. There is a lot to be said for portability! The ability to carry the CC40 or TI-74 around with you and use them anywhere (a classroom the office on a camping trip etc.) is the raison d'être of these small computers. Unlike "modern" laptop computers whose batteries usually last less than 4 hours per charge these small TI machines last tens or a couple of hundred hours of on time on a set of batteries. For use in the field the TI-74 and CC40 and their battery operated peripherals offer lots of convenience. For example, I am typing this article while I lay in bed propped against a couple of pillows. A few minutes ago I made a phone call from the phone by my bed that required me to look up the phone number. I have my name/address/phone data base stored in my TI-74's 8K RAM cartridge, so I did a CALL GET(-1) to store this article in the RAM cartridge and at the same time put my data base in the TI-74's memory. I looked up the number and made the call. Then I did another CALL GET(-1) to bring back my document into memory and put my data base back into the RAM cartridge.

ADVANTAGES OF THE CC40:

- 1-Its CHEAPER. You can get one used for $55. Used TI-74s are hard to find and a new one costs $100.
- 2-CC40 BASIC is a bit more powerful.
- 3-The KEYBOARD is physically larger and thus according to some people easier to type on than the keyboard of the TI-74.
- 4-There is an assembly language word processing cartridge called MEMO PROCESSOR available from TI for the CC40. No commercial word processing software is available for the TI-74. I am using a BASIC word processor program I wrote myself to enter this article into my TI-74. MEMO PROCESSOR is much better than my BASIC word processor.

ADVANTAGES OF THE TI-74:

- 1-CALC MODE. Scientists, engineers, and educators will appreciate the rapid availability of 70 scientific and statistical functions on the TI-74. The same sorts of calculations can be done in BASIC with the CC40 (and the TI-74) by putting formulas into BASIC programs, but doing the math directly from the keyboard is much easier and faster.
- 2-More user memory is available on the TI-74 than you get in an unexpanded

CC40.

- 3-Physical size. The CC40 is just a little too big to get your hand around and is slightly awkward to carry around or hold in one hand. No matter how you carry the CC40 it seems the keyboard overlays are about to fall off and your gripping fingers have trouble finding a place where they don't press some keys. In my opinion the TI-74 is much easier to handle. You can easily and grasp the TI-74 with the fingers of one hand. The hard case prevents dust accumulation, accidental keypresses, and the accidental loss of the quick reference card (or the LEARN PASCAL keyboard overlay). I feel very comfortable about carrying my TI-74 around with me in my hand, in my briefcase, or in my coat or shirt pocket just about everywhere I go. Personally I have no more difficulty typing on the TI-74 keyboard than I do on the CC40. In both cases two finger "must keep looking at the keyboard" is my technique. Touch typing is not really possible on either machine.
- 4-The DOCK BUS is physically superior to the HexBus. Although the two bus designs are electronically identical the HexBus is structurally flimsy. When inserting a HexBus I/O cable into the bus on a CC40 or HexBus peripheral it is hard to seat the cable properly. There is lots of "play" in the HexBus opening and it is possible to bend some pins in the bus as you fool around with inserting the I/O cable. The HexBus cables themselves are flimsy. They are very flexible and it is difficult to avoid pulling on the cable rather than the small rigid cable end piece when removing an I/O cable from the HexBus. The DockBus and its I/O cables are more substantial. Cables fit snugly into the bus with no free play and little likelihood of bending a bus pin. The cables are stiffer than HexBus cables and have large easy to grasp ends. Physically the DockBus and its cables seem more substantial and thus probably more reliable than the HexBus.

The capabilities of the CC40 and TI-74 are similar. The TI-74 is a better math calculator. The CC40 has a better word processor but both can be used as calculators or text processors. Because of the memory flip-flop capability of the 8K RAM and for physical reasons I prefer the TI-74.

SOURCES OF TI-74 SUPPLIES:

Available by credit card directly from TI at 806-747-1882:

- HX1010 Printer 80, the 80 column HexBus printer, $70
- CI-7 Cassette interface $35
- PC324 Thermal printer $60
- Technical manual $5
- 8K constant RAM cartridge $50
- Learn Pascal, Statistics, Mathematics, Finance, Chemical Engineering software cartridges $50 each
- TP324 thermal paper and PC Interface cable also probably available directly from TI, prices unknown.

Available from EDUCALC at 800-677-7001 or (credit card orders only 24

hours) 800-535-9650

- TI74 (the topic of this article) $99.95

- Statistics. chemical engineering. finance cartridges $39.95 each.
- 8K constant RAM cartridge $39.95
- PC324 Thermal printer $89.95
- TP324 paper for printer $4.95
- CI-7 Cassette interface $26.95
- PA201 AC interface for TI74 (the "adaptor adaptor", uses adaptor below) $6.95
- AC9201 adaptor to power printer and/or TI94 $16.95
- PC interface cable. allows storage of TI74 software on PC disks and use of PC screen controlled by TI74 $54.95

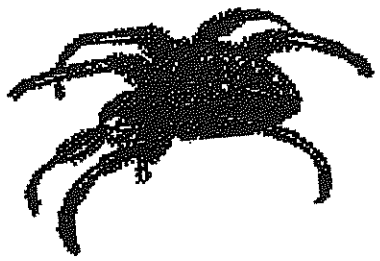
- Available from L.L. Conner Enterprise 1521 Ferry St. LaFayette IN 47904. phone 317-742-8146
- Custom cable to connect HexBus peripherals to the TI-74s DockBus. a special order item. $20
- Custom cable to connect HexBus RS232 to TI99/4A RS232 card. a special order item. $20.
- Various HexBus peripherals. Call for availability.

Available from T.A.P.E. 1439 Solano Place. Ontario California 91764. phone 714-989-9906
Quickdisk disk drives. either the DockBus version or the HexBus version
(with the L.L. Conner cable) will work with the TI-74.

Jim Lesher, 722 Huntley, Dallas Texas 75214, phone 214-821-9274

nice selection of HexBus peripherals

END OF ARTICLE



A WARNING

With thanks to Derek Wilkinson

Please pass this on, as this sort of thing has been happening in Melbourne and is moving to Sydney.

There is a big scam going on where a person calls and says that they are doing a computer survey from a company, The company name that they give is usually a big well-known software company, and they usually say that they are doing the survey because they want to give out free software. They want to know what would be a good time for someone to come from their company and install the software on your PC. They also ask questions about income, etc. During their questioning, they (unknowingly to you} find out what time you're usually home, what kind of computer equipment you have and all sorts of other valuable information. At a company where a friend of mine works, a co-worker of his received one of these calls, and he was robbed the very next day (of course, when he was not home). I received a similar call yesterday afternoon. Fortunately, I knew about this ahead of time, and didn't provide them with any information. I want to make you all aware of the situation and the potential danger involved in giving out any information like this over the phone. The

people sound very genuine, and very few people are going to question receiving free software. I would advise you, however, to tell the people that if they have your phone number, they should have your address, and they can mail you any free software they might be offering. If you have a home computer set-up, you should be familiar with installing your own software. You may even want to tell them you don't have a home computer. Whatever you're comfortable with.

Please don't give out any information that you may regret later. Pass this information along to friends and family members, as well. The fewer people they are able to burgle, the better.

END OF ARTICLE

Fest West ~98

100 rooms booked at Lubbock hotel, web site organized

By TOM WILLS

Things ate moving along with the planning of the "first" International Tl Fest West-Lubbock on Feb. 14. Arrangements have been made with one hotel for a block of 100 rooms. It is the Sheraton Hotel and they have offered a rate of $54 for a single or double room (1 or 2 persons). Each additional person is $10. We are looking at another hotel so we can be assured of enough rooms. That price with be in the same range, except it will be for up to four people.

Airlines serving Lubbock include American Eagle, ASA the Delta Connection, Continental, Southwest and United Express.

One potential fly in the ointment, so to speak, might be transportation to the Tl facility. The facility is just outside the city and about five miles from the Sheraton. This means we'll need to ask those driving to Lubbock, or those renting cars, to help out by taking a couple additional passengers to the facility. I really don't think this will be a real problem, but it is best to prepare now.

At a South West Ninety Niners User Group meeting in early June, it was decided to try to make this Pest West less of a buy/sell fair, not that there won't be Tl vendors there, but we want this to be a real "Ti Experience!" Instead of just wandering around looking at what the vendors have, we want to have things happening in the main hall throughout the day(s). Much of this is still being formulated, but we hope to make this a fair never to be forgotten.

For more information, readers can access Tom Wills' web site (http:/lpersonal.riverusers.com/~twills/).—Ed.

(With thanks to MICROpendium)

END OF ARTICLE

Cleaning up

Retyped for TIsHUG by Loren West

The following item was written by **Michael O'Dowd** and appeared in the newsletter of the 9T9 User's Group.—Ed.

I decided it was time to clean one of my old single sided drives to see would it perform any better and I did not want to use one of the disk cleaners.

One of my extra drives is in a power box so I removed the four case screws and the bottom screws which were holding the disk drive in the box. Knowing how one can forget where a part goes when it comes time to put things together again, I made a sketch and notes of everything I did, no matter how small.

All those resistors and chips looked very formidable, so taking the bull by the tail, I removed the power plug and put a dot with a marker pen on the male and female parts of the plug. The four pins are marked but a magnifying glass is required to see the numbers properly. The dot saves time and when replacing parts, .1 also removed the 34-pin cable from the edge connector, the other end goes to the disk controller card.

With the disk drive removed from the box 1 then removed the connections plugged into the rear of the board. There are several of them and I sketched and marked them as well. Then the two screws holding the board were removed and the board slid out from under two tags, and I gazed at the unknown.

Remembering my sea-going days when I cleaned the gyro compass parts with carbon tet (dangerous stuff) I decided to use alcohol. I cleaned the edge connectors with a soft rubber eraser and set the board on some aluminium foil to protect it from static. I bought some alcohol and cleaned around the worm gear mechanism being careful not to disturb the head, I used cotton swabs and changed them frequently and cleaned the head with a new swab dipped in the alcohol. Some Teflon lubricant was applied on moving parts and I blew and sucked out dirt with a vacuum and put everything back together and bingo to my surprise the drive functioned on all cylinders.

END OF ARTICLE

The IBM SHOP

with Cyril Bohlsen

Parallel printer cable 1.8M	$ 5.00
Power cables (computer/monitor)	$ 5.00
Power cables (wall socket/computer)	$ 5.00
3 Button mouse Mitsumi new	$ 10.00
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Keyboards S/H	$ 10.00
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IBM M1 Heatsink & fan (686 CPU)	$ 7.50
S3 VGA TRIO64+ Video cards	$ 38.00
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386 Mother board with DX40 CPU	$ 30.00
486 M/B + 'Intel' SX25 CPU	$ 25.00
486 M/B + 'AMD' SX 2x50 CPU	$ 45.00
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16mb Simm 72 pin 60ns EDO	$ 95.00
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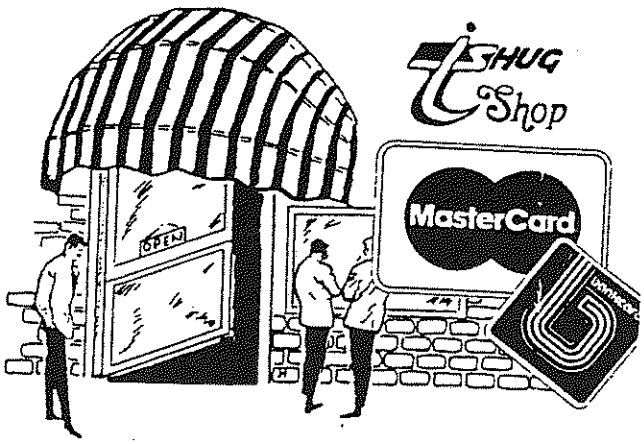
Windows 3.1 software & book	$ 20.00
Windows 3.1 book only	$ 5.00
Lotus Smart Suite97 CD	$ 30.00
World book entertainment pack (8 CDs)	$ 40.00
Deluxe compact disk pocket (holds 8)	$ 10.00
5.25" Disk storage box (100)	$ 10.00
3.5" Disk storage box (100)	$ 10.00
3.5" HD Laser floppy disks	$ 6.00
3.5" HD Data Max colour floppy disks	$ 7.00

For current pricing of items not listed please contact Cyril Bohlsen at the general meetings or Phone (02) 9639 5847

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



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PRICE ..... $ 250.00

SEE THE IBM SHOP

NOTICE :-

To aide the cash flow of the Club finances, it has been decided by the Directors that a deposit of 50% will be required with all orders of new computer systems, and final payment to be made on delivery of same.

NOTE :- Payments can no longer be made by credit card, as we no longer have this physicality.

CD-ROM Drive Information

by Ben Takach

1. Introduction

It is important to know what type of interface your CD-ROM drive has so that you can make proper choices regarding how to install your system. The best way to find out the type of your CD-ROM is to read the documentation that came with it. Failing that this document should provide some help. Here are some of the more popular types of CD-ROMs:

- IDE/ATAPI
- SCSI
- Sony CDU31A and CDU33A
- SONY 535
- Sound Blaster type interface (Panasonic, Matsushta, Kotobuki)
- Reveal
- Goldstar
- Sanyo 3 CD changer
- Other (Aztech, Wearnes, Orchid etc.)

2. IDE Drives

The most common type of CD-ROM drive on the market today is IDE, a great number of which are IDE/ATAPI. They usually come with their own interface card, but can be connected to a standard EIDE interface if you have available ports. The only real way to tell if your drive is a true IDE/ATAPI compliant drive is to read it's documentation. One indication is a 40 pin connector.

2.1 Configuring IDE Drives

If your IDE drive isn't properly detected by your operating system first check the drive select jumper setting - if the drive has one. Some drives are dedicated to a matching interface/sound card, these will not work from the conventional IDE/EIDE interface. If your system has two IDE channels then you may connect true IDE CD-ROM drives as primary IDE slave, secondary IDE master or secondary IDE slave. If your system has only one IDE channel, then you can only configure the CD-ROM drive as a slave, and the IDE Hard Disk Drive as master.

There is no standard drive select jumper identification! Makers use various codes, these are explained in the user manual of the drive in question. Some jumper headers are marked 0 1 2 3, however these do not necessarily mean drive 0, drive 1. Etc. Another popular convention uses letters like C, S and M, denoting Csel, Slave and Master. Also you will have to load the appropriate device driver and modify your Config.sys and Autoexec.bat files accordingly.

3. SCSI Drives

The next most common type of CD-ROM drive is the SCSI. Basically, if your drive connects to a SCSI interface card, it's SCSI (gee I'm getting smarter all the time). It should have a 50 pin connector going to it.

3.1. Configuring SCSI Drives

SCSI drives require only that the SCSI card be configured first. If the controller is properly detected, 99% of the time the drive is detected as well. If you are having trouble getting your SCSI controller detected, consult your SCSI interface manual and your CD-ROM DRIVE manual.

4. Sony Drives

It is very important to note that just because your drive may be made by Sony, it may not be one of these drives. It could still be SCSI or IDE. Only use this section if you have model numbers CDU31, CDU33 or 535. To identify this type of drive you must use the part number on the drive itself or in the documentation that came with it. You may also find the identification when watching the drivers load under DOS or other operating systems.

5. Sound Blaster Type Drives

A large part of the CD-ROM drive market used to be dominated by the proprietary Sound Blaster type interface drive. Noticeable drives that fit this designation are Panasonic 56x, Matsushta and Kotobuki makes. It is worth noting that not all of these drives must be connected to a Sound Blaster. Some "compatible" sound cards have this type of interface attached. There are interface cards that

are not part of a sound card at all that will work with this driver too (one in particular is the "Sun Moon Star" board). These drives also have a 40 pin connector, just like an IDE or EIDE interface.

6. Reveal Drives

The "Reveal" drives are really one of the other types listed. But, it could really be any one of those. The early Reveal drives (circa 1994) are usually of the Sound Blaster type. Later ones are usually IDE, but could be proprietary. The IDE types will work from conventional IDE channels, but the proprietary ones do not. The difficult part is that there isn't an easy way to tell if you have the proprietary one.

7. Goldstar Drives

The Goldstar drives will only work with their dedicated sound card. If yours claims to be IDE you can try it, but it may not work

8. Sanyo 3 CD Changers

The Sanyo 3 CD changers ship with many Gateway systems. I suppose they can be purchased separately, but I've never seen one. Anyway, this drive should be installed and used with its own interface/sound card.

9. Other Drives

Many other drives use a proprietary interface. To know if they are compatible with interfaces from other makes is subject to trial and error. The Aztech, Wearnes, Okano and Orchard drives are the most well known of these. Each can be identified by the manufacturer's label on the drive itself or in the documentation. There are many other makes, and each maker has more than one type and model (I know of 25 manufacturers, not including No Name Taiwanese and Korean CD-ROM makers). Documentation is essential as well as its device driver for successful installation.

These remarks apply to all CD-ROM drives. Do not expect success by simply replacing an old drive with a new model just like you would do with a floppy drive! Of course there are some exceptions with regard to the device driver. Some operating systems (for example Windows NT) can auto-detect the installed CD-ROM drive, in which case a CD-ROM driver is not needed.

10. Multi-speed and High-speed

Two speed models were the rage in 1993, we have reached 24 speed CD-ROMs by 1997. Does one notice any appreciable difference between a two speed and a 24 speed unit? Well it depends on the application and your system; I could not detect any difference on stand alone PCs running under 100 MHz between a two speed and a 20 speed drive. Some technical explanation will shed some light on the significance of speed.

10. 1. Data Transfer Rate (DTR)

The data transfer rate (in kB/s) would vary considerably from the inner tracks of the disk towards the outer tracks if the rpm of the disk is kept constant. CD-ROM design technology used Constant Linear Velocity (CLV) technique to achieve constant data transfer rates. The data transfer rate was increased by simply increasing the spindle motor speed. The motor must run faster at the inner track (500 rpm in the case of single speed models) and slower at the outer track (150 rpm for single speed). This method was used since the release of the 2x speed CD-ROM drives up to the present. This technology did cause some problems with high speed CD-ROM drive designs, such as 12x drives. Problems such as noise, vibration, disk data accessibility, reliability, etc. does occur and can only be eliminated by slowing down the data transfer rate at the inner track. Different design technology was needed to overcome the problem.

The Constant Angular Velocity (CAV) technique, where the spindle motor speed is constantly modulated to achieve constant data transfer rate has solved the problem. This is done by decreasing the data transfer rate at the inner track and increasing it at the outer track. This method has resolved most of the problems and limitations of the CLV technology. For example a 20x drive will operate through the inner portion of the disk at 10x speed and the speed will increase gradually towards the outer tracks to reach 20x speed.

The data transfer rate is also influenced by the applied data compression method. The impressive theoretical DTRs published in specifications are seldom achieved in practice. This is partly due to the Command cycle involved in data transfer. If

the BIOS in the mother board is programmed to recognise any installed CD-ROM drive as PIO Mode 0 device then it is impossible for a high speed drive to reach maximum transfer rate performance. You can only resolve this problem by a BIOS upgrade to be able to detect high-speed CD-ROMs as PIO Mode 4 devices.

10.2. DTR Summary

The average user may not benefit from high speed CD-ROM drives if the CPU speed and BIOS chip does reduce the specified DTR by a factor of 10 to 20.

Increased performance will not be noticeable when general purpose CD Disks are used, such as telephone directory, trade catalogues, audio CDs, installation software and the like, even if the system is capable of handling near theoretical DTR.

Increased performance will be very noticeable when large CD-ROM resident data bases are searched or sizeable records are accessed, or when large high resolution colour graphics and pictures are processed, provided that the computer hardware and CD-ROM are well matched.

11. The Read/Write CD-ROMs (CD-RW)

After almost a decade of Read only CD-ROMs the recordable drives have reached commercial viability and affordability - for some non professional users. Producing a full length CD-ROM disk however is still painfully slow (comparable to the process of backing on tape).

CD-RW disks cause a new problem to conventional read only drives. The reflection rate of CD-RW disks is only 25% - 35% of the normal reflection rate, most of the current drives have difficulty reading this media. New drives are designed to support multi-read function. Automatic Gain Control (AGC), well known to wireless enthusiasts, has been implemented to ensure optimal signal strength.

12. Benchmarking

There are a number of commercial, shareware and freeware benchmarking programs around. Every one of these has some limitations. New technology cannot be anticipated in advance (speed comparison with IBM PC and XT is archaic, no one has used one since the mid eighties!).

Many of the benchmarking programs for CD-ROMs have been released during the CLV design period, long before CAV technology was introduced. Since the motor spins with 10x speed at the inner portion of the disk, any program monitoring DTR for a few minutes only will record much reduced transfer rates. To calculate the average data transfer rate one also has to assess the DTR at the outer tracks of the disk. Some of the better known benchmarking programs for monitoring data transfer rates are:

a) Testing the outer portion of the disk :

WinBench 97
CDDSCAN

b) Testing the inner portion of the disk:

WinBench 96
CDSPEED
SCANCD
SPEED
CD Stone

c) Testing the average data transfer rate:

CD-Certify
CDC 2.0
MPC Wizard 3.0

13. CD-ROM Technical Data

The detailed technical data below was compiled from a cross-section of manufacturers specification and data sheets. Certain drives will exceed some of the values, and in a year or two all of the drives will exceed all of the data.

Dimensions:

For desktop computers 149 x 42 x 195.5 mm

(to suit 5.25" half height bays)

Designs for laptops have much reduced size.

Weight: 0.4 - 0.9 kg

Disk size: 80 mm dia. Or 120 mm dia.

Disk capacity:

Mode 1: 650 - 660 MB

Mode 2:	740 - 750 MB
Max. Playing time:	up to 75 minutes
Data buffer size:	128 - 500 kB
Drive Interface:	IDE, SCSI, Proprietary
Audio sampling:	40 - 45 kHz
Audio quantisation:	16 or 32 bits

Data Transfer Rate (kB/s)	16x	20x	24x
Normal speed, Mode 1:	150	150	150
High speed, Mode 1:	1200-1200	1800-3000	1800- 3000
Normal speed, Mode 2:	170	170	170
High speed, Mode 2:	1300-2700	1700-3400	2000-4100

14. Conclusions

My grandmother used to tell me that 13 is an unlucky number thus, as a force of habit, I had to add this short summary to make it 14. More than likely, most of the information in the preceding 13 sections will be obsolete by the time you read it. So is your cherished CD-ROM drive! However, do not rush to update the old workhorse, chances are a new model would not give you any worthwhile advantage. You could not make a racing car out of a model T Ford by fitting a Ferrari gearbox to it! On the other hand it would be also foolish to transplant an old 2x speed Sound Blaster into a 150 plus MHz Pentium machine to save about 150 dollars. So we have now reached the last point that I wish to make: beware of cheap, preloved bargains from second hand stores and auctions. You do need documentation, device driver software and, more often than not, the matching interface board. Even so you would only save a few dollars, if you are lucky!

END OF ARTICLE

PUZZLE

The words in this puzzle are based around the subject of "Measurements"

M L O F N M G K C A F D H H S
A I N N O O A E X X E A Q B V
R G L P R E T E M G C U I D K
G H O L C V L W R R A Y N Q Q
O T T U I I R E E R X U C J S
L Y T N M S E T T N O P H D H
I E J A O I E R E P M A R G T
K A H T W M C C M O H T A F K
T R L S I O N A O K A O T Z J
B O L T U U L S L N N W U Q J
V U N T O B F I I O D S N R X
T E E F S N T U K L R B O V Y
C B W D Y E K M Y L W I Y C E
T R C G R K D D O A M N E X M
A L P Z H N D D F G D Z P Q C

The 35 words below are in the puzzle of letters above, they could run vertical, horizontal or backwards.
See if you can find them
Good luck!

Acre	Hand	Mile
Ampere	Hour	Millisecond
Bolt	Inch	Month
Bushel	Kilogram	Newton
Calorie	Kilometer	Ounce
Centimeter	Kilowatt	Pound
Day	Knot	Quart
Degree	Light year	Ream
Fathom	Liter	Ton
Feet	Meter	Volt
Gallon	Micron	Watt
Gram		Week

Finding the Location of the Environment in Memory.

From John Paine

Tip: Use DEBUG to find the location of your environment in memory. Your environment's location depends on how much memory is occupied by the other items that are located in front of it in memory (see fig. 9.1). A list of the first 10 areas in memory follows; notice that the environment is number 8:

1. Interrupt vectors
2. BIOS data areas
3. BIOS routines
4. DOS Routines
5. DOS data areas
6. Device Drivers
7. COMMAND.COM (resident portion)
8. Environment
9. Program memory
10. Other (transient portion of COMMAND.COM, ROM, BIOS, and other RAM/ROM)

Areas 1, 2, 3, 4, and 7 are fixed in size for any given version of DOS on any one machine; area 2 does not vary in size depending on the version of DOS. The system configuration area, 5, varies in size and contains customized instructions for your CONFIG.SYS file: the number of input/ output buffers, device drivers, and file control blocks.

Whenever you change your CONFIG.SYS file or change to a different version of DOS, the location of your environment in memory changes as well. if knowing the location of your environment is important, use this procedure again to find the memory location of your environment.

To look for the environment, include one or more strings, such as SET THIS=THAT, that you will easily recognize in a dump and that are not likely to occur anywhere else in memory. For example, you can type SET THIS=THAT at the DOS prompt, and then call DEBUG and enter a search command similar to the following:

S 0:0 FFFF "THIS=THAT"

DEBUG searches the first block of memory (block 0) from its first byte (byte 0) to its last byte (byte FFFF) looking for the string "THIS=THAT". Remember that DEBUG is itself a program and has its own copy of the environment. Only the program environment and the master environment (which you are looking for) will contain the string "THIS=THAT".

The string you are searching for may be in memory at one or more locations, simply because you typed it twice-once to put it in the environment and once in the search command. The string may therefore be in input buffers or in other areas where DOS and DEBUG hold commands while processing them.

DEBUG responds to the search command by printing the addresses in memory of all occurrences of the string in block 0. The addresses will look like 0000:3B74 or OOOO:C2A6. The segment address precedes the colon: 0000 for block 0; 1000 for block 1 (the 2nd block); 2000 for block 2; and so on up to 9000 for block 9 (the 10th and last block). Following the colon is the offset address, the number of the particular byte at which the string begins. Write down the addresses.

You next choose one of the addresses and issue a dump command similar to the following:

D 0:5E90

Use an address about 50 or 60 bytes before the address of the string so that you are dumping the contents of memory in the neighborhood of the string, both before and after it. If you do not find the rest of the environment there (COMSPEC, PATH, and whatever else it contains), you have found a spurious occurrence of the string, not the real environment. In that case, try another address. When you do find the entire environment in one place, remember that this is only one of two such locations. You have found the master environment only if the environment is the first one that is found in memory, the one at the lowest address.

If you search through block 0 of memory and you still have not found the environment, search the next block (block 1) by typing

S 1000:0 FFFF "THIS=THAT"

know whether to start searching in block 0 or 1, determine how much memory is occupied by drivers and buffers. If 64K of memory is being used by drivers and buffers, one entire block is occupied. In that case, you should search in the second block (block 1) from the start.

When you find the master environment, you want to find the beginning of the environment (the first string) rather than the address of your string. Its location always appears at the beginning of a line in the dump-that is, at a byte whose offset address is a multiple of 16 (the display is 16 bytes to a line). Notice also that the line immediately preceding always begins with the letter M;

there is always an M in memory exactly 16 bytes before the beginning of the environment, if that M is not there, you have not found the master environment.

When you find the string, look at the far left of that line (the line following the M, which is the first line of the actual environment). At the far left, separated by a colon, will be the segment and offset that represent the address of the master environment. Write down those two numbers and keep them in a safe place; those numbers determine the location at which your program must place the environment characters whenever you are using the CONFIG.SYS file and the current version of DOS. You will need those two numbers when you write the program. Figure 9.2 is an example of the dump I created.

The environment begins at OOOO:CD20. Note the address at the left on the fifth line of the dump. Note also that at the right on the same line, the environment begins with the COMSPEC parameter, followed by my characters, plus several other items, including the PATH. Notice the M at offset CD10, just 16 bytes before the environment begins.

END OF ARTICLE

SUMMER

There are five deliberate mistakes in the pictures above, see if you can find them!
The bottom picture is the original, good luck.

How to contribute to your Magazine

All [..'] or [💾] or [💾] posted to TIsHUG 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
- TI Computer floppy disks....5.25" DSDD or DSSD.....Text files, Funnelweb or TI Writer
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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

DATABASE and SPREADSHEET

Re edited for TIsHUG by Loren West

123BOOK.ZIP 29816 30-08-95 An electronic book on the parent of all
spreadsheet software, 123 for DOS.

ACCV17.ZIP 17929 04-08-95 DBF with name, address, phone, fax, email,
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ADSSHAR.ZIP 18826 27-07-95 The Address Book ver 1.0s
This little Program allows you to keep up with all of those addresses you always are looking for. It features everything that you could need. It even has an entry for separate voice and fax numbers. Also has an Entry for an Email Address. Very nice little gem of a util. The shareware ver allows only 10 records in each phone book. The Full ver allows up to 100 records. By. Daniel J. Pyc.

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FPSCED21.ZIP 15476 09-07-95 [Front Page Sports Football Pro '95]

SCHEDULE 2.1 Fully functional - not a demo! Schedule 2.1 will take a 28 team league and create a 1995 schedule based on the final 1994 final standings. It follows all NFL rules for competition, division matchups, home-away games and division winner play. Register to choose what year matchup you want, or to have Schedule 2.1 adjust to your final standings, changing every year you play your league. [$9.50]

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IDEX216.ZIP 727734 20-07-95 Infodex v2.16 <ASP> Multipurpose Database!

Infodex is a versatile database manager used to keep track of names and addresses, equipment, computer software, books, and more! Includes a FREE-FORM layout. Add, delete, or rearrange fields EASILY! Search for text in any field. Import and export to a delimited text file. Easy push button interface w/mouse support! Now with drag & drop support & improved printing!

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high quality Personal Information Manager - Address Book, Calendar, To Do Lists, and Notepads - Simple, easy-to-use interface - Context-Sensitive Help - Lost cost registration - Great for home or office!

INKEYS.ZIP 2685 11-07-95 Inkey Codes in .Dbf Format.

LISTBLD1.ZIP 501082 13-07-95 ListBuilder v1.11 <ASP> Contact Manager for

building networks of people. Collect demographic info, set appointments on your calendar, auto-dial your contacts, brain storm to build bigger lists! Print reports and create mailing labels. Categorize your contacts onto different lists. Display only the people you are working with. Very easy- to-use, and can be customized.

MCD25B2.ZIP 165627 31-08-95 Music Collection Database 2.5b will catalog

and index your music collection. 2/2

MCOOK191.ZIP 469750 06-08-95 MicroCook 1.91 <ASP> Recipe Manager - NORSKi

Software. Easy to use menus and editor with full mouse support. Number of recipes only limited by hard disk space. Export and Import. Import Meal-Master, MasterCook, Edna's ASCII recipes. Powerful searches in index and data files. Full File Manager with ASCII viewer and editor. Duplicate recipe checking. 145 recipes included. 2200+ recipes included when registering. Work great in Windows.

MEMBER32.ZIP 291439 19-08-95 Membership database application used by all

types of organizations. Holds info on individual member & former members. Tracks dues, committees, officers and member interests and more. 10 reports with many variations, 8 address labels. Menu driven with lot of helpful messages.

MIKELOO.ZIP 24657 24-08-95 Cook-mm (Mm) Several Recipes From Michael Loo

MNRCH20D.ZIP 977122 16-07-95 Monarch 2.0 Chess Database for MS-DOS

PHONES20.ZIP 230806 10-07-95 PHONES: Phone and Address Database System

This is version 2.0. $5.00 Registration. Need an easy way to keep up with your phone numbers and addresses? Phones allows an easy method of managing this information. Create your own phone lists to print, address lists AND mailing labels. Lots of printers supported! Get it NOW! CHEAPWARE!

PSTAMP19.ZIP 110517 25-08-95 Pro~Stamp 1.9 ! Stamp Collection Manager !

Pro~Stamp is a v-e-r-y easy to use program to manage stamp collections. Use as many "worksheets" as you like (one for different countries, types, your kids, or whatever). Menu-driven, on-line help, customizable!

PTHORA33.ZIP 716153 07-08-95

Plethora v3.3 - The complete DOS GUI system software. Includes: Autoload, Powerful File Manager, Formats, Communications, Address Book-PCX Photos/Dialer, Calendar/Reminders, Text editor, Program Usage/Log, Password, PCX-GIF screen saver & viewer, 2 games,

System and Memory Stats, Utilities menu, Unlimited Alarms/Auto Alarm, Humor window, Back-up, Autoexec & Config switcher, On Line Reference and Instant Help, Chime on half or hour, Chime composer, Doodle, Switch printer ports by a CLICK, Set Keyboard/Mouse rate, Instant Time Change, Turbo Spooler, Timed programs, Checks for modem ring to AUTO switch to Fax/BBS software, Show Environment ^^N E W^^ StartUp Folder, BOOTCFG - cache flush! Bench mark, Mailing Labels, AutoLoad from File Manager, File Association, Print Line,

REBDECAD.ZIP 538680 18-08-95 Full version of REBEL 6.0 (not a demo!), ELO

2200 (USCF 2320). All database and analysis options, 3 good opening books, inside the program 5 languages are supported (English, German, French, Spanish and Dutch). 3 complete manuals (as files) are available (English, German and Dutch). Replaces the REBEL60.ZIP demo. From the author, Eduard Schroder.

REGSTR50.ZIP 40529 27-08-95 Registrations: Database program mainly for

programmers to keep track of user regist- rations. Two formats. Labels, Printer Dumps, etc. $10 registration fee.

REM_SEND.ZIP 376253 01-07-95 REM_SEND.ZIP REMIND is a command line utility

used to issue a daily, weekly, monthly, or annual list of remin- ders and calendar entries. This list of reminders can be redirected to a text file, which is then written into Squish or *.MSG message bases using SENDMSG. DOS and OS/2 versions included in archive. C sources too.

RM21.ZIP 304140 12-08-95 ROOTS MASTER, v2 <ASP> - Easy to use

genealogy program. Unlimited number of people and generations. Prints ancestor charts, descendant charts, and a wide variety of useful reports. Includes GEDCOM utility to import & export GEDCOM files. -RKS Software, Inc. $25.00. 703-534-1726.

RXDATE20.ZIP 21593 04-08-95 Fwrexx Rexx Calendar Functions V2.0

SAYPHONE.ZIP 5771 03-08-95 SayPhone v1.0 beta Compiles words from phone

numbers. This handy program will write over 2,100 different letter combinations from any seven digit telephone number into ascii file SAYPHONE.DAT. Absolutely freeware.

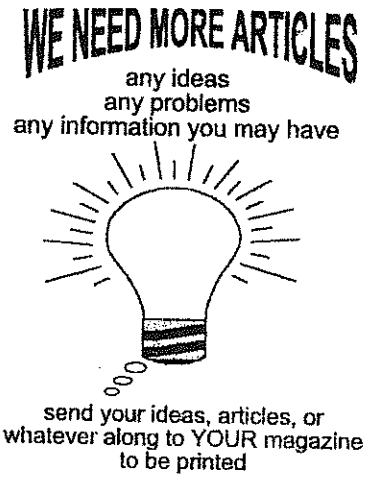
VIDEO452.ZIP 610418 17-07-95 Bwvideo 4.52 Pos/Rental System

WLH110.ZIP 461982 05-08-95 Wine Lover's Handbook 1.10 Multimedia

WVH25D.ZIP 317449 02-07-95 What Vehicle History? V2.5d for Ms/Pc-dos

All of these Shareware programs are on (CD1) from your club CD library

END OF ARTICLE



CHECKIT V3 Question

by John Paine

Can anyone tell me what the wiring diagrams are for the loopback connectors (9 & 25 pin serial and 25 pin parallel)? Normal loopback connectors will come up with a failure message if used.

25 pin Serial:

TD (2) _____ (3) RD
RTS(4) _____ (5) CTS
DSR(6) _____ (8) CD
DSR(6) _____ (20) DTR
CD (8) _____ (22) RI

9 pin Serial:

CD (1) _____ (6) DSR
CD (1) _____ (9) RI
RD (2) _____ (3) TD
DTR(4) _____ (6) DSR
RTS(7) _____ (8) CTS

25 pin Parallel:

Busy (11) _____ (17) Scl In
Ack (10) _____ (16) Init
Paper(12) _____ (14) Auto Feed
Sel (13) _____ (1) Strobe
DB 0 (2) _____ (15) Error

From p. 120 & p. 123 of the manual.

END OF ARTICLE

Adding to the Path

by John Paine

Ever wanted to temporarily add a directory to your path to test something

Try this
Start of AddPath.Bat

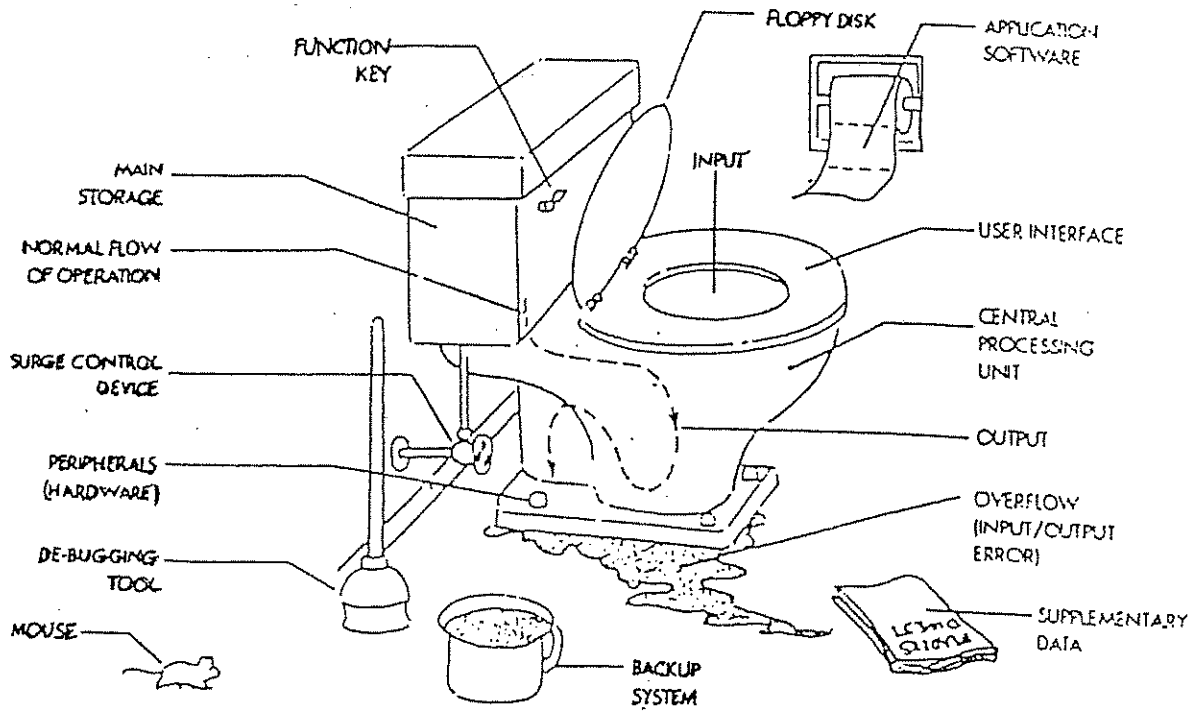
```
@Echo Off
If "%1"=="" Goto Help
Set Flag=

::Already Exists? — Case sensitive! — Otherwise,
        Duplicate path
For %%F In (%PATH%) Do If %1==%%F Set
        Flag=Found
If "%Flag%"=="Found" Goto Found

:Add
Path %Path%;%1
Echo.
Echo %1 successfully added to Path
Echo.
Goto End

:Found
Set Flag=
Echo.
Echo %1 already in Path
Echo.
Path
Echo.
Goto End

:Help
Cls
Echo Syntax: ADDPATH path
Echo.
Echo    Where "path" is the new path to add to the old
one
Echo.
:End
```

Another?

Here's a .bat file I use to edit my path: add to it, delete from it, works most of the time for me...can't say it was all mine, I picked up bits and pieces of it from all over.

```
@echo off
cls
if '%1'=='+' shift
```

Understanding Computer Technology



```
if '%1'==''    goto help
if '%1'=='-'   goto drop
if '%1'=='sub' goto sub

:optionally, put new dir first, path=%1;%path%
path=%path%;%1
echo The directory  '%1'  has been added.

:display path
path
goto end

:drop
if '%2'=='' goto help
set removed=
set tmp-path=%path%
path=%2
set drop=%path%

:now drop contains %2 capitalized

path=%tmp-path%
set tmp-path=
for %%a in (%path%) do call %0 sub %%a
path=%tmp-path%
set tmp-path=
if '%removed%'==''    echo The directory  '%drop%'  was
          not found in the path
if '%removed%'=='YES' echo The directory  '%drop%'
          has been removed
set drop=
set removed=
:display path
path
goto end

:help
echo.
echo The options are:
echo %0  -  directory          : drops directory from path
echo.
echo %0 [+] directory          : adds directory, '+' is optional
echo.
goto end
:sub
if %drop%==%2 set removed=YES
if %drop%==%2 goto end
if '%tmp-path%'=='' set tmp-path=%2
if %tmp-path%==%2 goto end
set tmp-path=%tmp-path%;%2
:end
```

END OF LISTING

SPEAKERS CORNER

Our thanks go to Paul Bonnice of Composite Marine, Rushcutters Bay, for his talk at last month's meeting.

Paul's talk on designing boat components using "Publisher" was most interesting. Judging by the number of questions asked both during and after the address, all of which were most ably answered and demonstrated by Paul, the time could have been extended.

Our next Speaker will be Nicholas Baltinos. Nicholas is the CEO of INTERNET SUPERHIGHWAY PTY LIMITED. His company has a reputation amongst the Internet industry as a leader in advanced Internet technologies. It was the first provider in Australia to implement 33.6 modems and the newer 56k. It was also the first to implement a desktop search engine within it's browser.

Last month, as CEO of the company, Nicholas was inducted as an honorary member of International Who's Who for services to the Internet.

If there's anything you wish to know about the Internet, don't miss this one, at 2 o'clock at our next meeting.

John Herbert

REGIONAL GROUP REPORTS

TIsHUG in SYDNEY

Monthly meetings start promptly at 2pm on the first Saturday of the month. They are held at the **RYDE EAST PRIMARY SCHOOL, HALL** located at TWIN RD North Ryde. Plenty of off street parking is available and is accessed from Badajos Rd North Ryde. Regular items include news from the directors, the publications library, the shop, and demonstrations of monthly software.

NOVEMBER MEETING 1st NOV 1997

DECEMBER MEETING 6th DEC 1997

ILLAWARRA

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.

Meeting Summarys for NOVEMBER

Central Coast	0 8/11/97 Saratoga
Hunter Valley	09/11 16/11/97
Illawarra	04/11/97 Keiraville
Liverpool	07/11/97 Yagoona West
Sutherland	21/11/97 Jannali

HUNTER VALLEY

The meetings are usually held on the second or third Sunday of each month at members homes starting at 3pm. Check the location with Alan Lawrence on (049)486509. Please note that the previous phone number (049)428176 is now used exclusively by the ZZAP BBS which also has TI support.

CENTRAL COAST

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

LIVERPOOL

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

*** ALL WELCOME ***

7th NOVEMBER 1997

SUTHERLAND

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.

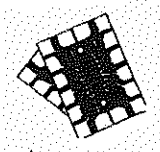
The cut-off date for submitting articles to the Editor for this magazine is the.....

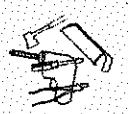
15th NOV FOR THE DECEMBER MAGAZINE

You can post your letters or disks to TIsHUG C/o 3 Storey St. Ryde 2112 Australia.

Or hand it to the Editor or one of the Club Directors.

TOOL TIME





At Cyril Bohlsen's home the Friday after each TIsHUG Meeting

Tune up your system, Install some new hardware

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