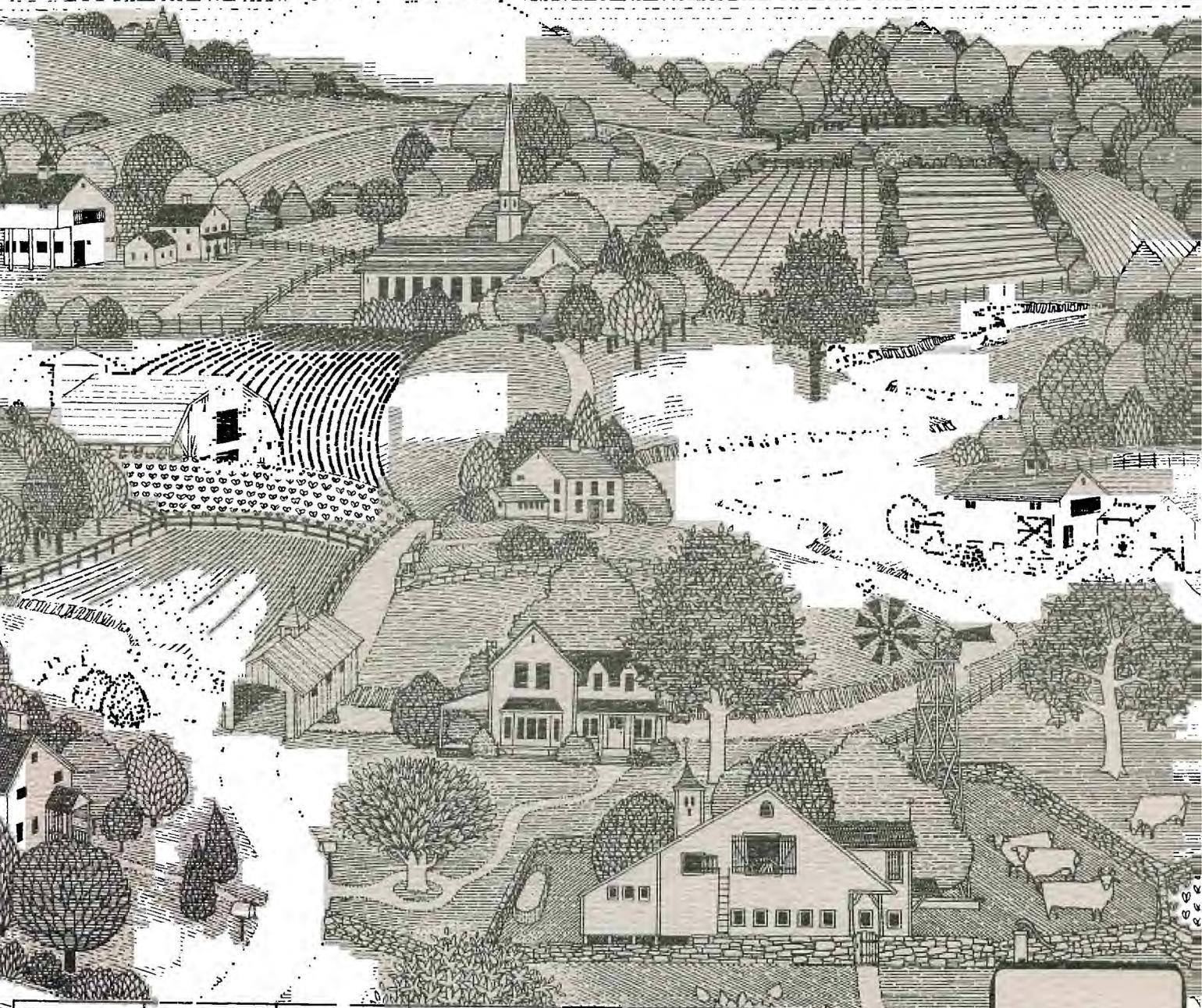


SYDNEY NEWS

SHUG
PO BOX 149
PENNANT HILLS
2120, N.S.W.
REGISTERED BY AUSTRALIA POST
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JULY '84



DIGEST



Sydney News Digest



The Texas Instruments Home-computer User's Group, known as TISHUG is a non profit, self supportive group of Texas Instruments computer owners and users. Information regarding membership and payment of dues should be directed to the Secretary, address below.

DISCLAIMER

The Sydney News Digest (SND) is the official newsletter of TISHUG, and whilst every effort is made to ensure the correctness and accuracy of information contained therein, be it of a general, technical, or programming nature, no responsibility can be accepted by TISHUG as a result of the applying of such information.

THE NEWSDIGEST-

The SND is published eleven times per year (no January edition), by voluntary staff, from material provided by group members, other user-groups and other related sources.

Contributions and all correspondence (other than membership) should be addressed to the EDITOR, LIBRARIAN, ADVERTISING, etc., and submitted at the group meetings or posted to the appropriate person at the general address, below.

Copy for publication may be typed, hand printed, or be on tape or diskette media as files suitable for use with TI-WRITER (ie, DIS/FIX 80 or DIS/VAR 80). Please include sufficient information to enable the files to be read -filename, etc. Persons wishing to contribute on a regular basis should contact the editor who will make available a suitable public domain word processor program. The copy deadline for an issue is the first Saturday of the month (ie, meeting date) prior to the month of publication.

Any material, written or electronic, submitted to SND or Library Service is to be considered TISHUG property and to be used at the committee's discretion.

SOFTWARE LIBRARY SERVICE

TISHUG operates a Public Domain Software Library, containing programs written by TISHUG members and from other user groups as well as miscellaneous public domain sources. These programs are made available to members in two ways:-

- 1) by monthly issue - a selection of programs is made available at general meetings for a production/media cost fee. (See TISHUG SHOP column elsewhere for details of releases).
- 2) as a reward for members contribution to the activities of TISHUG by
 - (a) submission of an original program (own work) members receive three programs of their choice, and,
 - (b) submission to SND, or other activity as the committee may otherwise determine, programs of the contributor's choice will be made available.

As the Library is maintained on a voluntary basis, no individual requests for software (other than for the above reasons) can be honoured at the present time.

YOUR COMMITTEE

CLUB CO-ORDINATOR:	
Peter Varga	023897025
NON-SECRETARY:	
John Robinson	028480956
TREASURER:	
Terry Phillips	027976313
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Russel Welham	043924000

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for SOFTWARE DOWN-LOADING, UP-TO-DATE NEWS & VIEWS, ELECTRONIC MAILING SERVICE, PROGRAMMING HINTS.

You'll see it first on your TI.S.H.U.G.BBS .

from the 1st JULY '84 @ 9AM on.



COURTESY TO YOUR FELLOW TISHUGERS

When you strike a programming problem, require information, or just want to chat (modem or otherwise) please look at the clock before you pick up the 'phone' And always ask if it is a convenient time for your call.



IMPORTANT TISHUG ADDRESSES:-

General address
(for all letters
except membership)

TISHUG,
PO BOX 395,
MARRICKVILLE,
NSW, AUSTRALIA, 2204.

Membership address

The SECRETARY,
TISHUG,
PO BOX 149,
PENNANT HILLS,
NSW, AUSTRALIA, 2120.

Monthly Meetings
first Saturday
of the month

St. John's Hall,
Victoria Street,
DARLINGHURST.



EDITORIAL



with SHANE

WOW!!! Have we got another BUMPER ISSUE for you this month. We had so much to put in, that we had to go 28 pages again.

But of course, the main reason for this big issue is to tell you all about our very own TI.S.H.U.G.BBS (ELECTRONIC BULLETIN BOARD SERVICE).

All of the photographs in this issue, were taken at our recent FULL DAY TUTORIAL WORKSHOP.

Let's run through each of the following pages...

PAGE 4: SECRETARY'S NOTE BOOK ----- with J.R.

PAGE 5: TI.S.H.U.G.SHOP PAGE ----- with Terry Phillips.

PAGE 6 & 7: A MINI TUTORIAL on ----- FORTH by Ed York of the Cin-Day User Group.

PAGE 8: NEW GOODIES AT ----- COMPUTER WAVE.

PAGE 9: Four NEW things you ----- will want to get for your computer, which include 2 new GREAT SPACE GAMES by our own Younger Set Member, IGOR.

PAGE 10: REGIONAL NEWS... ----- What's happening around town, at our Regional Groups.

PAGE 11: Part 2 in the series ----- by TONY MCGOVERN on EXTENDED BASIC TUTORIAL. Next month, he continues with SUBPROGRAM PARAMETER LISTS etc.

PAGE 12: PROGRAMMING with our ----- MUSIC CO-ORDINATOR, RUSSELL WELHAM. And has he got a good one for you this month. PAGES 13,14 & 15: Our Special ----- CENTRE FOLD LIFT-OUT about our new BBS.

Giving you every thing you wanted to know, and who's who on the system. Followed by... PAGE 16: TECO TIME column ----- With Robert, who shows you how to connect MODEMS and PRINTERS to your TI-99/4A.

PAGE 17: Our YOUNGER SET ----- (under 18's column).

PAGE 18, 19, 20 & 21: STACKS ----- OF GREAT PROGRAMS FOR YOU TO TYPE IN, and not too BIG. But they do include a great one called BAT ATTACK which you'll get a kick out of typing in for yourself.

PAGE 22: RAY Reviews a new ----- Commercial Cassette program, from our own EXTENDED BASIC TUTOR-Tony McGovern, entitled TEX-BOUNCE. This is continued on PAGE 23, along with details of our Monthly Software awards Competition and the WINNER of last month's JUDGING.

PAGE 24: More photographs from ----- our Tutorial day, and plenty of PROGRAMMING HINTS, which are continued on the following page.

PAGE 25: Here is a listing of ----- other TI USER GROUPS in countries such as U.K.

BELGIUM, SWEDEN, NEDERLANDS, DEMARK, GERMANY and ENGLAND. PAGE 26: One program which I ----- purchased from the States some months ago, and which is still available in the U.S.A, is called RINGWRAITH'S LAIR. This program is reviewed, and it's one that you will want to send away for, if you like good meaty ADVENTURES. There are some other tips that you will want to read on this page.

PAGE 27: YOUR CUT-UP PAGE (we ----- do, however, suggest that you photocopy this and the next page, so as not to CUT your NEWSDIGEST UP). Use it to send away for your CLUB TAPES/DISKS, RENEW MEMBERSHIPS, and place CLASSIFIED ADVERTS. A BANKCARD slip has been provided for your convenience for any of these transactions.

AND LAST OF ALL, THE BACK PAGE, Your REGISTRATION FORM to fill out and send in, so you can take full advantage of our TI.S.H.U.G.BBS.

REMEMBER, THE NEXT MEETING WILL BE CONDUCTED ON THE FIRST SATURDAY OF JULY (7th), AT 2PM St. Johns Church Hall, Victoria Street, Darlinghurst. We have some special Guests, and TWO PRESENTATIONS, one to the winner on the CLUB SOFTWARE AWARDS, and the other to ROBERT CRAGO (Author of our TI.S.H.U.G.BBS PROGRAM).

I hope to see you there, because I will also have some news that I'm keeping for that meeting...(MORE GOOD NEWS).

BYE FOR NOW,

SHANE ANDERSEN (EDITOR)



The TEXAS INSTRUMENTS HOME COMPUTER USER'S GROUPS around Australia...Keeping the family together, with computing FUN, EDUCATION. Proud to be AUSTRALIAN.



Sydney News Digest

Secretary's Notebook with J R

Hi! I hope those of you who attended the All Day Workshop enjoyed yourselves and found the experience worthwhile. We welcome 69 new members who joined in May. Our 1000th member signed up in the middle of month he is Tim Woolmer from Glebe in Sydney. The committee will consider a special memento for this milestone or should I say kilometrestone at the next Executive Meeting.

My solution to the Prime Number problem is as follows:

```
100 REM FIND FIRST 100 PRIME NUMBERS
110 DIM A(99)
120 N=3
130 A(0)=3
140 J=1
150 N=N+1
160 I=0
170 X=N/A(I)
180 IF X<A(I) THEN 220
190 IF X=INT(X) THEN 150
200 I=I+1
210 GOTO 170
220 A(J)=N
230 J=J+1
240 IF J<100 THEN 150
250 FOR I=0 TO 99
260 PRINT A(I)
270 NEXT I
280 END
```

This will run in console or Extended Basic. I timed it at around 40 seconds for all numbers to be printed on the screen.

The next fastest solution received came from Joshua Velling of Thornleigh. His program follows and runs in around 90 seconds.....

```
100 A=1
110 A=A+1
120 IF A>541 THEN STOP
130 FOR I=2 TO SQR(A)
140 IF A/I=INT(A/I) THEN 110
150 NEXT I
160 PRINT A;
170 GOTO 110
```

You will note Joshua's program takes up less memory than mine and at first glance one would bet on his program running faster. Has anyone any idea why the speed should be so different? PRINT statements are usually the source for bottlenecks in the execution of a program but the same number of PRINT statements are executed in each program.

I am beginning to receive solutions to my password problem. My solution has already been improved by Jim Peterson of TIGERCUB SOFTWARE, Columbus, Ohio. More on this next month, but in the meantime keep those solutions coming,

Do you want to receive a welcome to the universe of Return From Sirius... then write to Nick Snell of "The Missing Tiger" at GPO Box 286 C, Hobart, Tasmania. The Return From Sirius is a Play-by-mail Strategic Game. The costs involved are a \$5.00 deposit, which is refundable to all players who continue the game to its completion plus an additional \$5 for initial set up and \$2.50 each turn thereafter.

We have agreed to swap newsletters with the Sydney Forth group and plan to have a regular column in the SND. Anyone out there willing to help please contact Shane Andersen. Our friends at the Cin-Day User Group have published a digital clock program in their May newsletter, this will hopefully be reproduced in this NEWSDIGEST.

The third issue of SOFTEX is currently at the printers. I will be bringing back some copies with me when I visit Melbourne on a business trip during June.

William Collins Pty. Ltd. located at 55 Clarence Street has copies of the book "Learning to Use the Texas TI99/4A Computer." I have not yet had the opportunity to review this book but I understand it is a Beginner's guide suitable for business, educational and hobby uses. Contact Sandra Gorman, Special Projects Manager on 290 2066 for more information.

Mark Hill of Elmtech Pty. Ltd. has written to me advising his company is now offering TISHUG members a low cost, comprehensive hardware maintenance agreement. In association with QBE Insurance they are marketing a range of computer insurance policies, designed to protect you against the high costs of computer breakdown. The cost is around 1% of the total hardware value per annum. For more information contact Mark on (02) 92 4175 or write PO Box 117, Willoughby, NSW 2068.

MARK WILL BE ONE OF OUR SPECIAL GUEST AT THE NEXT CLUB MEETING, ON SATURDAY 7th JULY (2PM), WE WILL ALSO HAVE A GUEST FROM MODEM TECHNOLOGY, THE AUSTRALIAN COMPANY THAT MAKES THE UDM-1200 (our TI.S.H.U.G.BBS AUTO ANSWER MODEM).

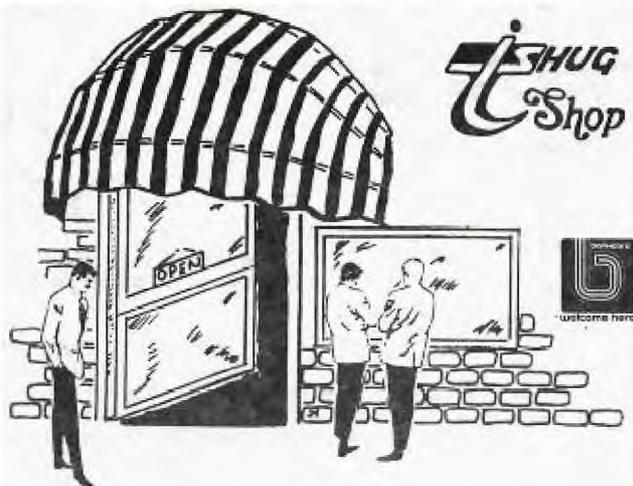
We have recently been licensed to produce software locally for Challenger International, and Pewterware. We are presently reviewing software from Vaughan Software and Tigercub. A decision on whether to sign similar agreements with these companies is expected soon.

I am accumulating several copies of SND which have been returned to me by Australia Post. Some of the mail was sent to members, who only joined in the last month or so. If you know of members who have not received their club mail recently please ask them to leave a message on the answering service. It's way past midnight so I had better sign off.

Happy Computing,

John Robinson.
Hon. Secretary

Sydney News Digest



BEST OF 99'ER

A further 50 copies have been order which should satisfy all outstanding orders

RED & BLUE BOOKS

The RED Assembly language book sold out at the June meeting so another 30 copies have been ordered. About 12 of the BLUE Programme books remain at a cost of \$20 each.

SOFTWARE

Two nice programmes - Wallaby and Horrors - are to be sold under licence by TISHUG. We are just awaiting packaging material before we can start to sell. Retail price should be around the \$10 mark for each programme. Further news on this venture will appear in later editions of this column.

THIS MONTHS TAPE/DISK

Will be the first in our ADVENTURE series and should make a pleasant change from continually shooting down aliens etc.

Remember all tapes are \$3 at meetings and \$4 by mail from the TISHUG shop address listed elsewhere in the News Digest.

A final word. It has been evident lately that a lot of members are forwarding cash through the mail in payment of their mail orders. TISHUG does not encourage this practice and cannot accept any responsibility should the cash go missing. Make sure you use only a cheque - personal or bank - money order or of course quote your Bankcard Number when ordering from the shop.

STOP PRESS

Members struggling with FORTH will be pleased to know that 2 copies of Leo Brodies book "Starting Forth" have been purchased and will be lent to members for a maximum period of 2 weeks. Contact Terry to arrange. Any member wishing to purchase this book is advised that it is available at the Technical Book Shop King Street City at a cost of \$28.50

CLASSIFIED ADS >>>>

TI-99/4A WITH EXTENDED BASIC, ONLY THREE MONTHS OLD. MANUALS, POWER, MODULATOR - \$200. Phone TED 9139649.

TI-99/4A COMPUTER + EX-BASIC AND SPEECH SYNTHESIZER - \$350 O.N.O. Phone Peter on (076)937119.

POWER SUPPLY FOR TI-99/4A \$30. Phone 3897025 a/h



Items currently available from the TI-SHUG SHOP include :

SOFTWARE TAPES

Basic Vol. 1 No. 1 containing the following programmes: Name that bone, County fair derby, Draw paint, Life expectancy, Mutant maze, Othello, Spider and Tiny math 1

Basic Vol. 1 No. 2 - Blockade, Camel, Co-ordinate geometry, TI Jumping jack, Jedi pilot, Fire-fighter, Yahtzee and Alphablox

Basic Vol. 1 No. 3 - Artillery, Backgammon, Capitals, Dragonmaze, Earth attack, Hark the Herald Anegls, Jingle bells, safety and Snoopy Xmas

Basic Vol. 1 No. 4 - Acey Ducey, Boggle, De-fuser, Forest fire, Going home, Match pair, Space laser and Tunnel vision

X-Basic Vol. 1 No. 1 - Aldestry, Aussie fight, Chicken helper, Euchre, Marksman, N-Vaders, space battle and Upscope

X-Basic Vol. 1 No. 2 - Deepspace, Alphabet, TI Maths, Corner wars, Ear training for music, Say and Spell, Readfast and Beethoven Variations

X-Basic Vol. 1 No. 3 - Gallery bug, Rubik's cube, 99/4A Word processor, Medical record, Math practice and Balloon voyage

X-Basic Vol. 1 No. 4 - Cacti kill, Donkey tail, Duck, Golf, Hot dog, Pompeii, Trapshoot and Zanquest

X-Basic Vol. 2 No. 1 - Alien attack, Bizmark, Darts, Skip to the loot, Mazzo, Molasses man, Piring squad and Rescue

Education Vol. 1 No. 1 - Astronomy, Australian cities, Bowling math, First math, Homonyms, Physics problems, Time clock and Who am I

Education Vol. 1 No. 2 - Color fractions, Color math, Elements, Fireball, Hare-n-To rtoise, Australian quiz, Spell down and World birds

Dont forget our 2 great MUSIC Tapes containing a nice selection of oldies and newies which are sure to get your foot tapping to the beat of your TI

WIDGETS

The 20 ordered in April have finally arrived and those members who reserved them should contact Terry ASAP and arrange to pick them up or have them sent out in the mail. A further order has been placed for another 20 Widgets. About half of this lot have been reserved so first in gets the remainder.

HOME COMPUTER MAGAZINE

Issue No. 2 is currently available - \$8 at meetings or \$9 by mail.

BOXES OF DISKS

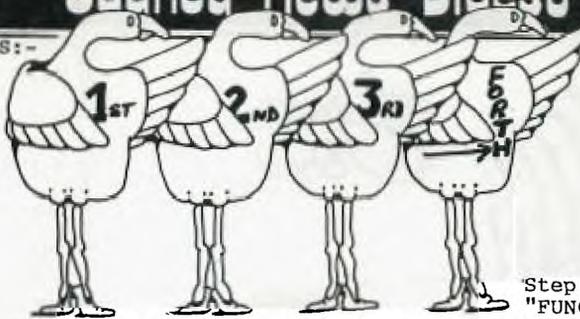
Are available at a cost of \$34 plus one 90 capacity disk file box is available at a cost of \$44.

Sudney News Digest



TI-FORTH SCREENS:-
BY ED YORK
CIN-DAY

4th?



The "Step-By-Step" instructions on how to begin typing in the TI-FORTH screen are really quite simple. The steps listed below should enable you to not only being typing into the TI-FORTH screens, but also see, save and later recall the "fruits of your labor".. I will use the program that I wrote as the example in the "Step-By-Step" instructions.

NOTE:- In order to type in the other program, simply substitute where necessary. The two TI-FORTH programs in this newsletter can be entered into screens 31 and 32.

Step 1: Make a "working" copy from your master copy of TI-FORTH without covering the protect-notch.

Step 2: Load TI-FORTH, using the working copy, per the instructions in Chapter 1 of the TI-FORTH manual.

Step 3: Load in the following options per the instructions in Chapter 1 of the TI-FORTH manual: -EDITOR -VDPMODES -GRAPE

Step 4: Edit screen 31 by typing in the following:-
31 EDIT

Step 5: Type in the program exactly as it is written.

Step 6: Press the "FUNCTION-BACK" key when you have finished typing in the program.

Step 7: Type in the following in order to save the screen you have just typed: FLUSH

Step 8: Type in the following in order to load the "fruits of your labour": 31 LOAD

Step 9: Type in the following if you are ready to see the "fruits of your labour": A9

NOTE: In order to verify that the screen was indeed saved type in 'MON' and you should return to the title screen. Simply load TI-FORTH again following the steps One, Two, Three, Eight and Nine.

The program listed below was submitted By Rick Mirus, a member of the Cin-Day User Group. The program is written in TI-FORTH and will display a digital clock on the screen (complete with seconds) and allow you to continue programming in TI-FORTH. Great programming job Rick!

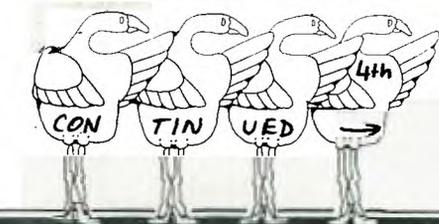
```

[SCR #31]
0 ( clock to start enter hour 1 - 24 and minutes
and TIME)
1 0 VARIABLE XX 8 ALLOT 58 XX 2 + C! 58 XX 5 + C!
0 VARIABLE TT
2 : *UPDATE 1 TT +! TT @ 59 > IF 0 TT !
3 XX 7 + 1 OVER C@ + DUP 58 < IF SWAP C! ELSE DROP
48 SWAP C!
4 XX 6 + 1 OVER C@ + DUP 54 < IF SWAP C! ELSE DROP
48 SWAP C!
5 XX 4 + 1 OVER C@ + DUP 58 < IF SWAP C! ELSE DROP
48 SWAP C!
6 47 TT !
7 XX 3 + 1 OVER C@ + DUP 54 < IF SWAP C! ELSE DROP
48 SWAP C!
8 XX 1 + 1 OVER C@ + DUP 58 < IF SWAP C! ELSE DROP
48 SWAP C!
9 XX DUP C@ 1 + SWAP C! ENDIF XX C@ 50 = XX 1 + C@
52 = + 2 = IF
10 48 48 XX C! XX 1+ C! ENDIF ENDIF ENDIF ENDIF
ENDIF
11 XX 22 8 VMBW ENDIF ;
12 : TIME 10 /MOD 48 + XX 3 + C! 48 XX 6 + C! 48
XX 7 + C!
13 48 + XX 2 + C! 10 /MOD 48 + XX C! 48 + XX 1+ C!
14 INTLNK @ 0 *UPDATE CFA ISE ! -31804 ! ;
15 : STOPCLOCK 0 -31804 ! ;
    
```

This is a clock program in TI-FORTH. To set the clock enter the hours and the minutes and enter TIME. The word STOPCLOCK will stop it. Here is a line by line description of how it works:-

LINE 0 : Remark. Not needed.

LINE 1 : Variable TT will be used to count tenths of a second. Variable XX will be 8 bytes long. 2 bytes for hour, a colon, 2 bytes for minutes, a colon, and 2 bytes for seconds. The time is stored in ASCII so it won't have to be converted before writing to the screen. Char 58 is a colon.



Sydney News Digest



VARIABLE NAMES
 XX XX+1 XX+2 XX+3 XX+4 XX+5 XX+6 XX+7

ASCII CHARACTERS
 1 2 : 4 5 : 0 0

ASCII CODES
 49 50 58 52 53 58 48 48

Since this clock is updated by an ISR the computer is free to do other things while the clock is running. You can even write and edit Forth programs with the clock running. Use the STOPCLOCK command before using COLD command or Bit-Map modes.

LINE 2 : The word *UPDATE is the main portion and is responsible for keeping track of time and displaying it on the screen. The word *UPDATE will be executed 60 time per second. Each 1/60th of a second 1 is added to TT. If TT is greater than 59 then 1 second has elapsed and clock is updated by lines 3 to 10.

LINE 3 : XX + 7 (units seconds) is incremented by 1. If greater then 9 (ASCII 58) then it is made equal to zero (ASCII 48) and tens seconds is updated.

LINE 4 : Update XX + 6 (tens seconds)

LINE 5 : Update XX + 4 (units minutes)

LINE 6 : Correction factor. Adds 470 milliseconds to clock every ten minutes to make up for inaccuracy in clock. This can be changed from 0 to 59 to slow or speed up the clock.

LINE 7 : Update XX + 3 (tens minutes)

LINE 8 : Update XX + 1 (units hours)

LINE 9 : Update XX (tens hours) If the maximum tim has been reached then reset to all zeros. To change from 24 hour clock to a 12 hour clock change 50 to 49 and change 52 to 50.

LINE 10 : Change time to all zeros.

LINE 11 : Display time on screen. XX is memory location of time data. 22 is the screen location to start writing. Changing this value wil change where the clock appears on the screen. 8 is the number of characters to be displayed. This could be changed to 5 to display hours and minutes only. No seconds.

LINE 12 : Create word TIME which breaks up starting time into tens and units and stores the ASCII value (add 48) in variable XX.

LINE 13 : Continuation of line 12

LINE 14 : Set up ISR so that the word *UPDATE will be executed 60 times per second. Chapter 10 page 3 of Forth book explains this.

LINE 15 : Word STOPCLOCK stops ISR by putting a zero into memory location -31804 (hex 83C4).

This clock will work in the TEXT mode and the GRAPHICS mode. Variable XX is actually an array. In line 2 ""8 allot"" is similar to ""dim XX(8)"" in BASIC. This command sets aside 8 bytes for XX. If the time was 12:45 the time would be stored like this:-



There is an error in the TI FORTH system disk and manual that affects the use of a printer. In line 5 on SCREEN 72, the first PAB-ADDR is shown as PAB_ADDR. Bring the SCREEN up by typing 72 EDIT after you have loaded.

-EDITOR. Change the underline to a minus or dash. Exit the editor by pressing FCTN BACK. Save to system disk with FLUSH.

If you are using a parallel instead of a serial printer, you also have to change Line 4 of the same screen. Change "RS232.BA=9600" to "PIO". Pay special attention to the space after the first (").

Letters

Dear Shane,

Just a quick note to say thanks for the new format of Sydney News Digest; it's really great.

We are relatively new members but have seen the change from just a newsletter to a really professional publication.

Many thanks to you and your team for helping make T.I.S.H.U.G. an even better group to belong to.

Bob, John-Paul and Michelle Vernon.

Sydney News Digest

BOOK REVIEW
BY
CHERYL BAILEY

Every now and then, we come across a gem of a bargain, and believe it or not this one is just around the corner from most of us. It was indeed a surprise sitting in the middle of all the TANDY books, a book called "UNDERSTANDING COMPUTER SCIENCE" developed and published by none other than TEXAS INSTRUMENTS LEARNING CENTRE. The most incredulous part of the book is the price, at \$3.95, everyone can afford it, which is alot less than TI wanted for it originally.

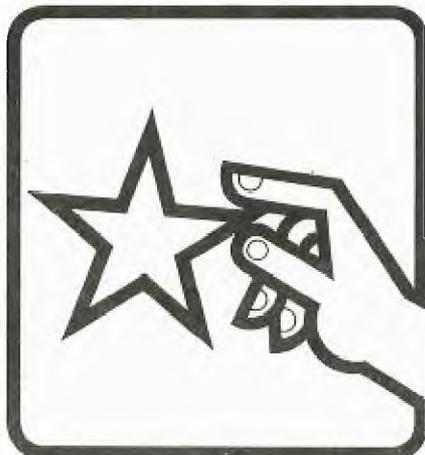
The book comprises 10 chapters on the fundamentals
E.G. Computer Architecture and

Hardware, How to tell a computer what to do - Programming, Languages, Operating Systems, Resource Management, System Analysis and the future.

The book is written in a clear, concise manner with excellent illustrations plus a quiz at the end of each chapter to see if you are absorbing it all.

This fascinating little manual should have been given to us with the computer and is the starting point for two more sequels, "Understanding Digital Electronics and Understanding Microprocessors"

TANDY will be taken aback with sudden demand for "Understanding Computer Science" when all the TI enthusiasts know about it.



\$99
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You no longer have to settle for Texas Instruments' bulky expansion box with it's messy cable when for \$99 you can connect any parallel-input printer to you TI computer using our Parallax TI printer interface.

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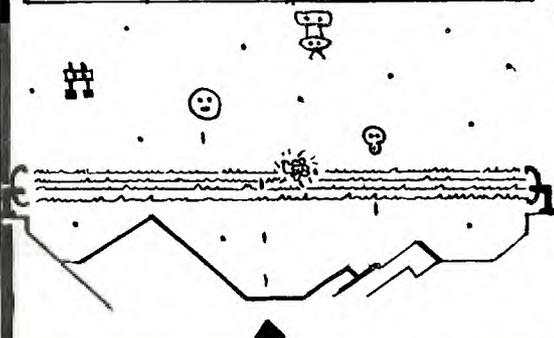
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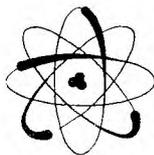
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REGIONAL NEWS



LIVERPOOL REGIONAL USERS GROUP REPORT

Twelve people attended the Liverpool Region Users Group meeting on May the 12th held at Vince Cerato's place. It was encouraging to see additional new members attending and supporting the users group. The region is gradually spreading with members coming from Northmead in the north and Moorebank and Campbelltown southward.

Demonstrations on Adventure games were given by Vince Cerato, and in "How do you do it" segment of the meeting showed the capabilities of combining Speech Synthesizer with the Terminal Emulator module were shown.

In the coming months it is proposed to introduce more involvement in the meetings with the members attending as a way of expanding users experience and assisting new members with programming tips.

Coming meetings are to be held at the following members residences:-

Sat 14th July 84 1PM.
Stan Puckle 15 Richmond Cr
Campbelltown (046) 256157

Sat 11th August 84 1PM
Cyril Bohlsen 4 Madeline Ave
Northmead (02) 639-5847

Sat 8th September 84 1PM
Norm Norton 3 Glenroy St
Wentworthville (02) 631-5852

Please contact a week before meeting to advise of your attendance.

ILLAWARRA REGIONAL MEETING

There were 22 at the last meeting 07-05-84.

We have attempted to be more social than previously by providing tea or coffee midway through the meeting.

There was a report from the previous TISHUG meeting and Software was finally available for sale and was generally well accepted.

HERE ARE REPORTS OF WHAT HAS BEEN, AND WHAT WILL HAPPEN WITHIN OUR REGIONAL GROUPS.

Regional Co-Ordinators, please note...All reports should be sent to the Marrickville Post Office address by the first Saturday of each month.

From TISHUG records, it shows that some 27 members live locally. Some of those have never attended a local meeting. We would like to meet them,

Next meeting: 04 07-84
Time: 7.30 PM Tutorial
8.00 PM Meeting
venue: The Shop 4 Home Computing
Waters Walkway
Corrimal
Phone: 83-3952
OR
Contact: R. Montgomery
Phone: 28-6463

BAULKHAM HILLS REGIONAL MEETING

8 People attended the meeting on May 12.

John Robinson demonstrated TI-WRITER and paid particular attention to the formatting mode. An attempt was made to transfer files with Shane Andersen but without success.

Information from TYMNET in the U.S.A. via the MIDAS satellite facilities was obtained and a demonstration on saving data and reading files back later was given.

The meeting lasted 5 hours and a bleary eyed secretary was the last to leave. Next meeting will be different venue, date & time to be announced.

LOU NEWHOUSE

NEWCASTLE REGIONAL NEWS

At our last meeting we called for nominations to run the Newcastle Group of TISHUG.

Our members came up with what we think will be a winning team who will try their best to uphold all the things we stand for (I.E. late nights & bleary eyes!!!)

We take this opportunity to say hello, and introduce them to one and all:-

PRESIDENT: JOE WRIGHT
(049) 46-8129

SEC/TREASURER: PETER COXON
(049) 75-1930

LIBRARIAN: AL LAWRENCE
(049) 48-6509

CO-FOUNDER &
CO-ORDINATOR: BRIAN RUTHERFORD
(049) 49-8184

GARRY JONES, GAY BRYDEN, ALAN BYRNE, BRIAN MADDON, TONY MCGOVERN, NEIL SAKAC and BRIAN WOOD make up the committee members. If you have any queries please make them known to us and we'll do our best to sort them out.

Our thanks go to Computer Inovation Pty Ltd, for demonstrating the TI Professional, it was like finding a good armchair next to an open fire on those cold, wintery nights - when it was switched on everyone gathered around it! (could somebody please return the armchair!!)

New dates for our Regional Meeting should be out at the time of printing, if you have't heard by then please ring a member of the committee to confirm new dates.

To keep things going at a hot pace, Neil Sakac will be demonstrating the Modem in July and he'll endeavour to show the ease of communicating with others. Look out programmers we have some fine up and coming talent at the moment..more on this next issue.

Before I finish, if anyone in the TAREE/FORSTER AREA is interested in starting their own Regional Group and require assistance, how about calling Joe Wright as we have had a few enquiries from your area.

Bye for now - remember .. errors bring terrors on your screen.....

Peter C.

MARRICKVILLE REGIONAL GROUP:

At our recent meeting, we had a demonstration of the new T.I.S.H.U.G.BBS, and were given a project each, to be completed by the next meeting. We were to re-produce our CLUB LOGO into a written program that could be added to each of the club software. Prizes will be given to the three winners, and each member of our Regional group will be the Judges, except for his or her own work. BY THE WAY, OUR REGIONAL GROUP MEETINGS HAVE BEEN CHANGED TO THE 1st WEDNESDAY OF EACH MONTH at 7:30PM. SO THE NEXT ONE WILL BE HELD ON THE WEDNESDAY PRIOR TO THE NEXT MEETING(4th July).

Extended

TUTOR



with
Tony
McGovern.

TONY CONTINUES HIS TUTORIAL ON EXTENDED BASIC THIS MONTH, WITH PART 2 IN HIS SERIES, ENTITLED Extended Tutor.

```
100 DATA 1
110 READ X :: PRINT X :: READ
X :: PRINT X
120 SUB NOTHING
130 DATA 2
140 SUBEND
```

When you RUN this program it makes no difference that the second data item is apparently located in a sub-program. IMAGES behave likewise. On the other hand DEFED functions, if you care to use them, are strictly confined to the particular part of the program in which they are defined, be it main or sub. During the pre-scan DEFED names are kept within the allocation process separately for each subprogram or the main program. Once again try a little programming experiment to illustrate the point.

```
100 DEF X=1 :: PRINT X;Y ::
CALL SP(Y) :: PRINT X;Y
110 SUB SP(Z) :: DEF X=2 ::
Z=X :: DEF Y=3
120 SUBEND
```

This point is not explicitly made in the XB manual and has been the subject of misleading or incorrect comment in magazines and newsletters. A little reflection on how XB handles the details will usually clear up difficulties.

TI BASICS assign nominal values to all variables mentioned in the program as part of the prescan, zero for numeric and null for strings, unlike some languages (some Basics even) which will issue an error message if an unassigned variable is presumed upon. This means that XB can't work like TI LOGO which has a rule that if it finds an undefined variable within a procedure it checks the chain of CALLing procedures until it finds a value. However, unlike Pasca which erases all the information left within a procedure when it is finished with it, XB retains from CALL

to CALL the values of variables entirely contained in the sub-program. The values of variables transferred into the sub-program through the SUB parameter list will of course take on their newly passed values each time the sub-program is CALLED. A little program will show the difference.

```
100 FOR I=1 TO 9 :: CALL
SBPR(0):: NEXT I
110 SUB SBPR(A):: A=A+1 ::
B=B+1 :: PRINT A;B
120 SUBEND
```

The first variable printed is reset to 0 each time SBPR is called, while the second, B, is incremented from its previous value each time. Array variables are stored as a whole in one place in a program, within the main program or sub-program in which the DIMension statement for the array occurs. XB doesn't tolerate attempts to re-dimension arrays, so information on arrays can only be passed down the chain of sub-programs in one direction. Any attempt by a XB sub-program to CALL itself, either directly or indirectly from any sub-program CALLED from the first, no matter how many times removed, will result in an error. Recursive procedures, an essential part of TI LOGO, are NOT possible with XB sub-programs, since CALLing a sub-program does not set up a new private library of values.

All of this discussion of the behaviour of TI Extended Basic comes from programming experience with Version 110 of XB on a TI-99/4a with 1981 title screen. Earlier Versions and consoles are not common in Australia, but TI generally seems to take a lot of trouble to keep new versions of programs compatible with the old. On the other hand TI has also been very reticent about the details of how XB works. The Editor/Assembler manual has very little to say about it, less by far even than it tells about console Basic. I am not presently aware of any discussion of the syntax of the Graphics Programming Language (GPL), let alone of the source code for the GPL interpreter which resides in the console ROM of every 99/4a.

Another simple programming experiment will demonstrate what we mean by saying that XB sets up a separate Basic program for each sub-program. RUN the following

```
100 X=1 :: CALL SBPR :: BREAK
110 SUB SBPR :: X=2 :: BREAK
:: SUBEND
```

When the program BREAKS examine the value of variable X by entering the command PRINT X, and then CONTINUE to the next program BREAK, which this time will be in the main program, where you can once again examine variable values.

We will now summarize the properties of XB sub-programs as procedures in complete XB programs, leaving the details of joining up the various procedures to the next section.

(a) XB treats each sub-program as a separate program, building a distinct table of named (REFed) and DEFed variables for each.

(b) All DATA statements are treated as being in a common pool equally accessible from all sub-programs or the main program as are also IMAGE statements, CHARacters, SPRITES, COLORS, and File specifications.

(c) All other information is passed from the CALLing main or sub-program by the parameter lists in CALL and SUB statements. XB does not provide for declaration of common variables available on a global basis to all sub-programs as can be done in some languages.

(d) Variable values confined within a sub-program are static, and preserved for the next time the sub-program is CALLED. Some languages such as Pascal delete all traces of a procedure after it has been used.

(e) XB sub-programs may not CALL themselves directly or indirectly in a closed chain. Subject to this restriction a sub-program may be CALLED from any other sub-program.

(f) The MERGE command available in XB with a disk system (32K memory expansion optional) allows a library of XB sub-programs to be stored on disk and incorporated as needed in other programs.

NEXT MONTH, TONY CONTINUES HIS SPECIAL EXTENDED TUTORIAL SERIES, with SUBPROGRAM PARAMETER LISTS etc. BE SURE NOT TO MISS EACH AND EVERY ONE OF THESE LESSONS. Ed

Sydney News Digest

Programming with Russell

MUSIC CO-ORDINATOR



```
1 |*****
2 |*      CALCUTTA.      *
3 |*      WINIFRED ATWELL. *
4 |*      BY HEINO GAZE.  *
5 |*
6 |*      EXT-BASIC PROGRAM. *
7 |*      BY RUSSELL WELHAM. *
8 |*      MAY 1984.      *
9 |*****
10 |
11 |AF0=779 :: A0=825 :: AS0,
    |BF0=875 :: B0=923 :: C0=982
    |:: CS0,DF0=1040 :: D0=11
    |02 :: DS0,EF0=1168 :: E0=123
    |7 :: F0=1311 :: FS0,GF0=1389
    |12 A1=110 :: AS1,BF1=117 ::
    |B1=123 :: C1=131 :: CS1,DF1=
    |139 :: D1=147 :: DS1,EF1
    |=156 :: E1=165 :: F1=175 ::
    |FS1,GF1=185 :: G1=196
    |13 A2=220 :: AS2,BF2=233 ::
    |B2=247 :: C2=262 :: CS2,DF2=
    |277 :: D2=294 :: DS2,EF2
    |=311 :: E2=330 :: F2=349 ::
    |FS2,GF2=370 :: G2=392
    |14 A3=440 :: AS3,BF3=466 ::
    |B3=494 :: C3=523 :: CS3,DF3=
    |554 :: D3=587 :: DS3,EF3
    |=622 :: E3=659 :: F3=698 ::
    |FS3,GF3=740 :: G3=784
    |15 A4=880 :: AS4,BF4=932 ::
    |B4=988 :: C4=1047 :: CS4,DF4
    |=1109 :: D4=1175 :: DS4,
    |EF4=1245 :: E4=1319 :: F4=13
    |97 :: FS4,GF4=1480 :: G4=156
    |8
    |16 G0=1471 :: GS0,AF1=1559 :
    |:: GS1,AF2=208 :: GS2,AF3=415
    |:: GS3,AF4=831 :: GS4,A
    |F5=1661 :: R=40000
    |17 X=150 :: Y=300 :: FLAG=0
    |18 |
    |19 GOTO 30
    |20 CALL SOUND(T,S1,V1):: RET
    |URN
    |21 CALL SOUND(T,S3,V3):: RET
    |URN
    |22 CALL SOUND(T,S1,V1,S2,V2)
    |:: RETURN
    |23 CALL SOUND(T,S1,V1,S2,V2,
    |S3,V3):: RETURN
    |24 CALL SOUND(T,S1,V1,S2,V2,
    |S3,30,-4,V3):: RETURN
    |25 CALL SOUND(T,S3,30,S3,30,
    |S3,30,-4,V3):: RETURN
    |26 CALL SOUND(T,S1,V1,S3,30,
    |S3,30,-4,V3):: RETURN
    |27 |
    |28 |
    |29 |
    |30 T=Y :: S3=G0 :: V3=4 :: G
    |OSUB 25 :: T=X :: S1=G2 :: S
    |2=D2 :: S3=B2 :: V1,V2,V
    |3=0 :: GOSUB 23 :: GOSUB 23
    |31 !@P-
    |32 T=Y :: S3=D0 :: V3=4 :: G
    |OSUB 25 :: S3=B2 :: V3=0 ::
    |GOSUB 23
    |34 S3=G0 :: V3=4 :: GOSUB 25
    |:: T=X :: S3=B2 :: V3=0 ::
    |GOSUB 23 :: GOSUB 23 ::
    |T=Y :: S3=D0 :: V3=4 :: GOSU
    |B 25
    |36 S1=D3 :: S2=B3 :: GOSUB 2
    |2
    |38 S1=E3 :: S3=G0 :: GOSUB 2
    |4 :: S1=FS3 :: S3=D1 :: GOSU
    |B 23 :: S1=B4 :: S2=D3 :
    |:: S3=D0 :: GOSUB 24 :: S1=FS
    |3 :: S2=B3 :: S3=D1 :: GOSUB
    |23
    |40 S1=E3 :: S3=G0 :: GOSUB 2
    |4 :: S3=D1 :: GOSUB 23 :: S3
    |=D0 :: GOSUB 24 :: S1=D3
```

```
:: S3=D1 :: GOSUB 23
42 S1=E3 :: S3=G0 :: GOSUB 2
4 :: S1=FS3 :: S3=D1 :: GOSU
B 23 :: S1=B4 :: S2=D3 :
:: S3=D0 :: GOSUB 24 :: S1=FS
3 :: S2=B3 :: S3=D1 :: GOSUB
23
44 S1=E3 :: S2=C3 :: S3=A1 :
:: GOSUB 23 :: S3=D1 :: GOSUB
23 :: S3=D0 :: GOSUB 24
:: S1=D3 :: S3=D1 :: GOSUB
23
46 S1=E3 :: S3=A1 :: GOSUB 2
3 :: S1=FS3 :: S3=D1 :: GOSU
B 23 :: S1=C4 :: S2=E3 :
:: S3=D0 :: GOSUB 24 :: S1=G3
:: S2=C3 :: S3=D1 :: GOSUB
23
48 S1=FS3 :: S3=A1 :: GOSUB
23 :: S3=D1 :: GOSUB 23 :: S
3=D0 :: GOSUB 24 :: S1=G
3 :: S3=D1 :: GOSUB 23
50 S1=E3 :: S3=A1 :: GOSUB 2
3 :: S3=D1 :: GOSUB 23 :: S3
=D0 :: GOSUB 24 :: S1=FS
3 :: S3=D1 :: GOSUB 23
52 S1=D3 :: S2=B3 :: S3=G0 :
:: GOSUB 24 :: S3=D1 :: GOSUB
23 :: S3=D0 :: GOSUB 24
:: S3=D1 :: GOSUB 23
54 S1=E3 :: S3=G0 :: GOSUB 2
4 :: S1=FS3 :: S3=D1 :: GOSU
B 23 :: S1=B4 :: S2=D3 :
:: S3=D0 :: GOSUB 24 :: S1=FS
3 :: S2=B3 :: S3=D1 :: GOSUB
23
56 S1=E3 :: S3=G0 :: GOSUB 2
4 :: S3=D1 :: GOSUB 23 :: S3
=D0 :: GOSUB 24 :: S1=D3
:: S3=D1 :: GOSUB 23
58 S1=E3 :: S3=G0 :: GOSUB 2
4 :: S1=FS3 :: S3=D1 :: GOSU
B 23 :: S1=B4 :: S2=D3 :
:: S3=D0 :: GOSUB 24 :: S1=FS
3 :: S2=B3 :: S3=D1 :: GOSUB
23
60 S1=E3 :: S2=C3 :: S3=A1 :
:: GOSUB 23 :: S3=D1 :: GOSUB
23 :: S3=D0 :: GOSUB 24
:: S1=D3 :: S3=D1 :: GOSUB
23
62 S1=E3 :: S3=A1 :: GOSUB 2
3 :: S1=FS3 :: S3=D1 :: GOSU
B 23 :: S1=C4 :: S2=E3 :
:: S3=D0 :: GOSUB 24 :: S1=G3
:: S2=C3 :: S3=D1 :: GOSUB
23
64 S1=FS3 :: S3=A1 :: GOSUB
23 :: S3=D1 :: GOSUB 23 :: S
3=D0 :: GOSUB 24 :: S1=G
3 :: S3=D1 :: GOSUB 23
66 S1=E3 :: S3=A1 :: GOSUB 2
3 :: S3=D1 :: GOSUB 23 :: S3
=D0 :: GOSUB 24 :: S1=D3
:: S3=D1 :: GOSUB 23
68 S1=G3 :: S2=B3 :: S3=G0 :
:: GOSUB 24 :: S3=D1 :: GOSUB
23 :: S3=G0 :: GOSUB 24
:: GOSUB 20
70 S1=A4 :: S2=F3 :: S3=D1 :
:: GOSUB 23 :: S1=B4 :: S2=G3
:: S3=G1 :: GOSUB 23 ::
S1=D4 :: S2=B4 :: S3=G0 ::
GOSUB 24
72 S1=B4 :: S2=G3 :: S3=G1 :
:: GOSUB 23
74 S1=A4 :: S2=F3 :: S3=D1 :
:: GOSUB 23 :: S3=G1 :: GOSUB
23 :: S3=G0 :: GOSUB 24
:: S1=G3 :: S3=G1 :: GOSUB
```

```
23
76 S1=A4 :: S2=E3 :: S3=C1 :
:: GOSUB 23 :: S1=B4 :: S2=G3
:: S3=G1 :: GOSUB 23 ::
S1=D4 :: S2=B4 :: S3=G0 ::
GOSUB 24
78 S1=B4 :: S2=G3 :: S3=G1 :
:: GOSUB 23
80 S1=A4 :: S2=C3 :: S3=C1 :
:: GOSUB 23 :: S3=G1 :: GOSUB
23 :: S3=G0 :: GOSUB 24
:: S1=G3 :: S2=R :: S3=G1 :
:: GOSUB 23
82 S1=A4 :: S2=EF3 :: S3=C1
:: GOSUB 23 S1=B4 :: S3=G1 :
:: GOSUB 23 S1=D4 :: S
3=C1 :: GOSUB 23 :: S1=B4 ::
S3=G1 :: GOSUB 23
84 S1=A4 :: S2=D3 :: S3=B1 :
:: GOSUB 23 :: S3=G1 :: GOSUB
23 :: S3=B1 :: GOSUB 23
:: S1=G3 :: S3=G1 :: GOSUB
23
86 S1=A4 :: S2=CS3 :: S3=A1
:: GOSUB 23 :: T=X :: S1=B4
:: S2=R :: S3=B2 :: GOSU
B 23 :: S1=A4 :: S3=A1 :: GO
SUB 23 :: S3=R :: GOSUB 21
88 S1=G3 :: S3=G1 :: GOSUB 2
3 :: T=Y :: S1=E3 :: S3=E1 :
:: GOSUB 23
90 S1=D3 :: S3=D1 :: GOSUB 2
3 :: S3=R :: GOSUB 21 :: S1=
D4 :: S2=D3 :: S3=D0 ::
GOSUB 24 :: S1=D3 :: S2=B3 :
:: GOSUB 22
92 S1=E3 :: S3=G0 :: GOSUB 2
4 :: S1=FS3 :: S3=D1 :: GOSU
B 23 :: S1=B4 :: S2=D3 :
:: S3=D0 :: GOSUB 24 :: S1=FS
3 :: S2=B3 :: S3=D1 :: GOSUB
23
94 S1=E3 :: S3=G0 :: GOSUB 2
4 :: S3=D1 :: GOSUB 23 :: S3
=D0 :: GOSUB 24 :: S1=D3
:: S3=D1 :: GOSUB 23
96 S1=E3 :: S3=G0 :: GOSUB 2
4 :: S1=FS3 :: S3=D1 :: GOSU
B 23 :: S1=B4 :: S2=D3 :
:: S3=D0 :: GOSUB 24 :: S1=FS
3 :: S2=B3 :: S3=D1 :: GOSUB
23
98 S1=E3 :: S2=C3 :: S3=A1 :
:: GOSUB 23 :: S3=D1 :: GOSUB
23 :: S3=D0 :: GOSUB 24
:: S1=D3 :: S3=D1 :: GOSUB
23
100 S1=E3 :: S3=A1 :: GOSUB
23 :: S1=FS3 :: S3=D1 :: GOS
UB 23 :: S1=C4 :: S2=E3
:: S3=D0 :: GOSUB 24 :: S1=G
3 :: S2=C3 :: S3=D1 :: GOSUB
23
102 S1=FS3 :: S3=A1 :: GOSUB
23 :: S3=D1 :: GOSUB 23 ::
S3=D0 :: GOSUB 24 :: S1=
G3 :: S3=D1 :: GOSUB 23
104 S1=E3 :: S3=A1 :: GOSUB
23 :: S3=D1 :: GOSUB 23 :: S
3=D0 :: GOSUB 24 :: S1=D
3 :: S3=D1 :: GOSUB 23
106 S1=G3 :: S2=G2 :: S3=G0
:: GOSUB 24 :: S3=D0 :: GOSU
B 24 :: S1=FS4 :: S2=G3
:: S3=A0 :: GOSUB 24
```

The Communicators



SHUG BBS

02.5600926

from 9:00 am Sunday 1st JULY

Well, it's about to start, our very own Electronic Bulletin Board Service (TI.S.H.U.G.BBS).

With close on 1,000 members in this group, the need for a BBS was eminent. On SUNDAY, the 1st of JULY at 9am, our BBS will commence, with some very interesting features for those who have an RS232, TERMINAL EMULATOR II, and a modem (Telephone Coupler).

BEHIND THE SCENES: We are using the very latest model of the powerful Australian made UDM-1200 modem, by MODEM TECHNOLOGY, plus TI-99/4A computer with three Disk Drives, 128K memory card and other goodies.

Robert Crago, the author, and winner of the competition recently conducted to create this BBS software, has designed a two-part program. He will be presented with a cheque to the value of \$100 at the next meeting (SATURDAY 7th JULY-2PM).

PART#1 A machine language routine loaded into MINI MEMORY MODULE, and **PART#2** a TI-BASIC program with the menu and directives. DISK DRIVE#1 has SOFTWARE to down-load, DRIVE#2 contains your MESSAGE files, and DRIVE#3 holds 20 pages of NEWS/VIEWS from around the world.

The 128K card will contain a listing and checking file of USERNUMBERS and names. We use the TI-WRITER (or EDITOR ASSEMBLER) to create NEWS and MESSAGE files at our end. Shane is able to monitor all operations at his end, CHAT facilities are hopefully to be included in this program.



HOW TO USE YOUR TI.S.H.U.G.BBS.

1: PLUG IN YOUR TERMINAL EMULATOR MODULE, 2: set it at #3>DEFAULT OPTION TE II, or press #2 and set the following options...

- (a): BAUD RATE ... 300
- (b): PARITY EVEN
- (c): DUPLEX FULL
- (d): RS232 PORT .. #1 (or #2)
- (e): COL.WIDTH. .. 40
- (f): Delete the 'L' from LOGON with a tap of the space bar then press <ENTER>.

Your Cursor will appear at the top lefthand side of the screen.

3: Phone us on (02)560-0926. If you live either out of the Metropolitan Viewing Area, or Interstate, either go STD or ask the operator to give you a DATA-LINE, which will not sound BEEPS every 3 minutes. This is a service by Telecom for Modem Users.

Select ORIGINATE on your modem.

Our phone will ring 3 times, then sound a high pitch tone, called a CARRIER TONE, so instantly switch your modem to DATA/MODEM and it will hand-shake with it's own Carrier tone.

4: The TI.S.H.U.G.BBS will instruct you to PRESS ANY KEY and <ENTER>. If not, do so anyway. You will then be welcomed aboard.

Before I explain the different features, please note very carefully *****NOT***** to use any commas or full-stop's when sending Messages or News items, as you will get a WARNING MESSAGE.

IF YOU MAKE A SPELLING MISTAKE, and you wish to correct it by back-spacing, you must now use <CTRL> H to step back your cursor.

If a screen of information scrolls off the top, and you want to print that screen, you should be able to press <FCTN> X to bring that text back down, or <FCTN> E to take it back up.

To PRINT A SCREEN to your printer, use <CTRL> 2 and your computer will prepare the screen for OUTPUTTING to either PIO for Parrellel, RS232 for Serial printers, or DSK1 for Disk Storage. A program can be provided for your convenience, to read Disk files.

NOW FOR THE MAIN BBS MENU...

PRESS #1: For NEWS UPDATES (20 items of the very latest news and views). To add more news, press #4 and type NEWS when it asks you WHO IS THE MESSAGE FOR.

PRESS #2: TO LOAD SOFTWARE. This section will probably be placed further down on the menu, by July 1st.

PLEASE NOTE: Make this the last one you go to, as this system will cut you off after it has transmitted a program. (1) ONE PROGRAM PER CALL, but you can call as many times as you like, remembering that there are others who may want to LOGON. Follow the instructions very carefully, as listed on the next page of this COMMUNICATORS SPECIAL >

PRESS #3: To READ MESSAGE... this will ask you for your name. If there is no message for you, it will let you know. Try typing: ALL instead of your name, as this is made available for PUBLIC MESSAGES other than NEWS. And keep you up-to-date with who's who on this system. If there is a message for you, please DELETE it after you have read it or saved it to Disk or Printer. We recommend that you come ON-LINE at least once a week, to DELETE any ELECTRONIC MAIL for you.

PRESS #4: To LEAVE MESSAGE... (or PUBLIC NOTICES by Typing 'ALL'). You can leave messages for any other TI.S.H.U.G.BBS USER. The system will ask you WHO IS THE MESSAGE FOR: Any messages to SHANE can only be read by him. REMEMBER, NO COMMAS OR FULLSTOPS and PRESS <ENTER> at the end of each line of no more than 40 characters (screen width). When you wish to finish your message, place two of these ** (asterisks) at the start of a new line, and your message will be stored on the MESSAGE DISK.

IF YOU HAVEN'T REGISTERED YET, please fill in the REGISTRATION FORM on the back cover of this publication, and send it in to: USERNUMBERS and PASSWORDS will be supplied to all USERS shortly, but you may still use the system without them.

TI.S.H.U.G.BBS, PO BOX 595,
MARRICKVILLE, NSW, AUST. 2204

TI SHUG BBS

HOW TO DOWN-LOAD SOFTWARE
on the TI.S.H.U.G.BBS ...

1. <FCTN>+ (QUIT) to return to the title screen.
2. Select TI BASIC (option 1)
3. Type OLD RS232 or OLD RS232/2, depending on where your modem is connected.
4. The number 255 will appear at the top centre of your screen.
5. This will soon be replaced with the number of sectors in the file.
6. This sector count will decrease towards 0 as data is transferred.
7. When the count is 0, then TI BASIC > prompt will reappear.
8. At this stage, the program is in your computer. Do NOT run it yet.
9. *TURN OFF YOUR MODEM and HANG UP THE PHONE at this point*.
- 10 Copy the program to your Storage device (DISK or CASSETE) e.i: type SAVE DSK1.name or SAVE CS1
- 11 If you wish to load another program, you will have to ring up again.

This is why we suggest that you check out all of the NEWS items and ELECTRONIC MAIL first, prior to software down-loading.

Depending on the work-load; of the System operator, and the amount of times this system is used, software could possibly be changed twice a month, but at least once a month.

TO GET THE NEW TI.S.H.U.G.BBS UNDERWAY, WITH SOFTWARE DOWN-LOADING, HERE IS A LIST OF THE TWELVE PROGRAMS YOU CAN OBTAIN FROM THIS SYSTEM.

ADULT: An ADULTS Party game just like TWISTER that you play with someone you love. You can even play this game with a number of people.

BANKER: This is a very powerful Business program that will help you manage your money.

THE HOBBIT: A text Adventure with some very interesting twists to it, but you may need to down-load the instructions.

HOBBIT INSTRUCTIONS: This one speaks for it's self.

JAWS: Just when you thought it was safe to go back onto your TI-99/4A. This is a cute little game of eat-the-fishes.

KEYS: A very good instructor, to teach children of all ages, how to use the keyboard. It get's faster as you play it.

MATHAID: Another Educational Maths program for the kids.

RUSSIAN: This program enables you to learn your Russian alphabet by displaying the keyboard, and typing sentences in Russian.

SPRITEGEN: With this one, it will so much easier to design those sprites with both GRID and HEX displayed on the screen.

STATS: Education/Business STATISTICS program.

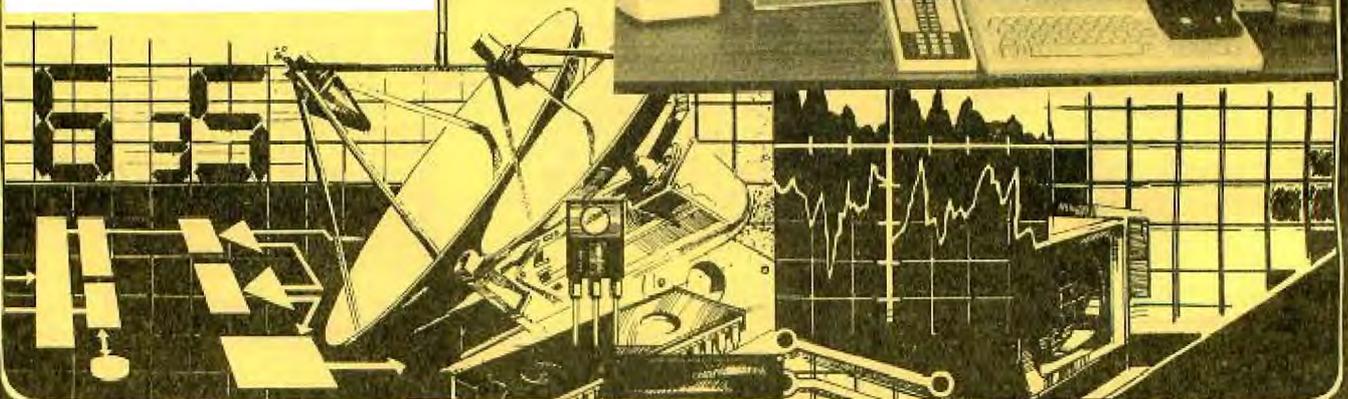
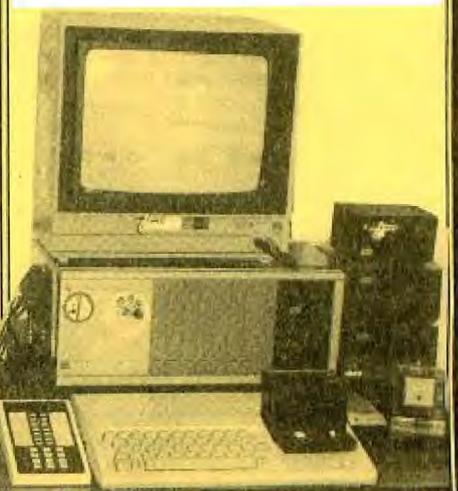
TEXSCRIBE: A very good Word Processor.

TRENCH: Back to WORLD WAR 1, and a TI-BASIC Trench war game.

If you have any requests for a particular program, why not contact Shane on the ELECTRONIC MAIL section of your new TI.S.H.U.G.BBS, and your request may be granted. The SOFTWARE disk will be changed at least once a month with the cream of software, usually before the Club Library is able make it available. Some software will be exclusive to our BBS Users.

The TI.S.H.U.G.BBS is a free service to all TI USERS who Register to use it, however, any or all donations will be gratefully appreciated. If you wish to make a donation, please make your Cheque or Money Order out to TI.S.H.U.G.

TURN TO THE FOLLOWING PAGE FOR DETAILS OF BBS HOURS, AND WHO'S WHO ON THE SYSTEM FOR YOU TO SEND YOUR ELECTRONIC MAIL TO.....>



ISHUG-BBS



There has been a great deal of interest in this group, to the setting up of our BBS. At the recent FULL-DAY TUTORIAL WORKSHOP, a special class was set up, under the leadership of Shane, to talk about MODEM COMMUNICATION. We should point out at this time, that ALL TI CLUB MEMBERS both from Other User Groups within Australia, and overseas, are welcome to use our TI.S.H.U.G.BBS, as long as you fill in the Form on the back page. This page can be photocopied to save cutting this publication up. So let's hear from all of you out there in *TI.M.U.G, *TI.B.U.G, *A.T.I.C.C, *TI.U.P, *TI.C.H.U.G and *TI.T.U.G.

Prior to the TI.S.H.U.G.BBS COMING ON LINE, we had already received the following applications, or Registrations

USERNAME	FIRSTNAME	LOCATION
ALEX	DAVID	SEVEN HILLS
ASSNFEET	NORMAN	MINNAMURRA
ASTRO	MICHAEL	SYDNEY
AUTHOR	ROBERT	WST.PENN HILLS
BAGDAL	GUY	WAVERLEY
BIGEARS	MICHAEL	GLEBE
BUNGIE	STEVEN	ERSKINEVILLE
COLDPAC	JOHN	KILLARNEY HTS
COMPAUST	BERNIE	MT.LAWLEY(PERTH)
COMPUTEX	MARK	RYDE
DIABLO	MANUEL	BRIGHTON LE-SAND
GOWFAR	GREG	SYDNEY
ICEPAC	GEOFFREY	TUNCURRY
JOHNO	ROBERT	BEECROFT
MALBRU	BRUCE	MALABAR
MAYDAY	DAVID	BANKSTOWN
SECRETARY	JOHN	PENNANT HILLS
SNOW	MARI	LEGHBRIDGE
SQUEET	RAY	DULWICH HILL
SWAVEE	SLAWOMIR	CLOVELLY
SHANE	SHANE	MARRICKVILLE
THE-COUNT	HUMPHREY	ASPLEY (QLD)
TICKLES	JIM	CONCORD
TRELLE	TERRY	ASHFIELD

The TI.USERS of PERTH have also been conducting test transmissions of their new BBS, and will also commence their system on the 1st July '84. We will be able to provide you with more details of that, on our system and within the next issue of the SYDNEY NEWSDIGEST.

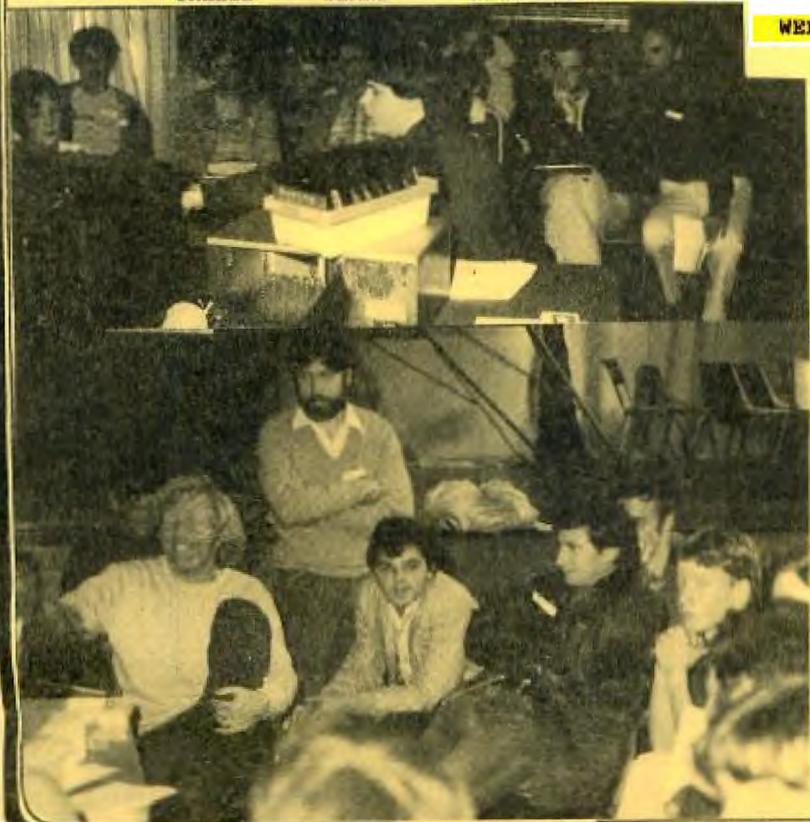
PLEASE NOTE: CHAT MODE has been placed on the TI.S.H.U.G.BBS, but at the moment will not be displayed on the MAIN MENU. If you press 6, this will sound BELLS at the BBS CENTRE, and you will be able to briefly chat to Shane if you have any difficulties.

PLEASE ALSO NOTE: OUR TI.S.H.U.G.BBS WILL BE TURNED ON, THREE DAYS A WEEK...

They are as follows> SUNDAY 9AM through to MONDAY EVENING 7:00PM, then off for service and message/News up-dates 'till 8:30pm, then on again through to TUESDAY EVENING 7:00PM 'till 8:30PM to WEDNESDAY MORNING. The BBS will also be placed back on-line again from THURSDAY MORNING at 7:00AM to 10:00pm.

Please do not call the BBS number out of these hours, as the same computer will be used in the production of the SYDNEY NEWSDIGEST, UPDATING BBS INFORMATION, AND PERSONAL USE.

WELL, HAVE FUN, and away we go!!!!



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99/4
Users-Group



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() Please send me more information about I.U.G
() I wanna join I.U.G...
Please find enclosed my membership fee.

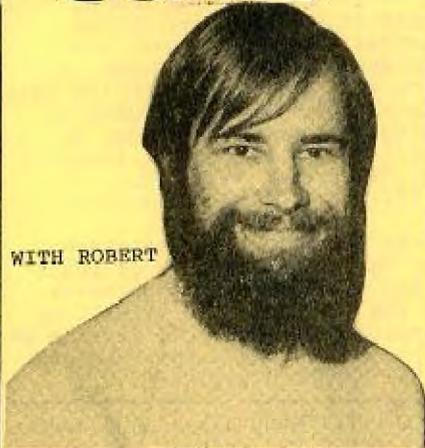
NAME _____
ADDRESS _____
Post Code (zip) _____
I am a member of TI.S.H.U.G.

International
99/4
Users-Group



P.O. Box 67
Bethany, OK
73008

TECHO TIME



WITH ROBERT

By the results obtained from the questionnaire given out at the All-Day meeting, it seems that most of the members there wanted low cost stand-alone interfacing for printers and modems as well as 32K memory expansion.

A 32K memory card is near design completion but should be readily adaptable for stand-alone use. I would like to hear from anyone prepared to design a stand-alone (or card) RS 232 and/or PARALLEL PORT.

I hear that someone has a an EPROM programmer if so i would like to here from you.

A new list of technical Support people will be available to anyone on that list when they attend the next meeting or they can contact me and I will send them a copy.

It has come to my attention that the joystick article in "SOFTX Magazine" Vol.1 No.1 has shown the wrong pin labelling. To avoid anyone making a mistake in this project or any other, I have included a copy of the standard pin configurations of "D" type connectors, plus wiring configurations for modem, acoustic Coupler and Monochrome Monitors.

Anyone wishing to work on the mentioned projects, or if someone has a technical problem just contact me (ROBERT) on 602-4168 between 5.00-8.30 P.M. or send a letter to "TECHO TIME" P.O. BOX 595 MARRACKVILLE 2204. And we will endeavour to find a solution.

Anyone wishing to contribute technical articles can send them to the above address.

TI MONOCHROME MONITOR WIRING.

PIN#2 = VIDEO OUT
" #3 = SOUND OUT (needs amp)
" #6 = EARTH (GND)

You need a 6 pin din plug, twin core shielded cable. Both signals share common GND.

PARALLEL PRINTER WIRING.

PIO end to PRINTER

1.....	1
2.....	2
3.....	3
4.....	4
5.....	5
6.....	6
7.....	7
8.....	8
9.....	9
10.....	11 (busy)
11.....	19 (gnd)
16....	(OPTIONAL)..and other gnd

SENDATA MODEL 700 COUPLER.

RS232 to COUPLER

2.....	3
3.....	2
4.....	4
5.....	5
7.....	7
8.....	8

*6 to 20 on RS232.

CICADA 300 MODEM

RS232 to MOD.

1.....	1
2.....	3
3.....	2
6.....	20
20.....	6
7.....	7

DICK SMITH MODEM

1.....	1
2.....	3
3.....	2
7.....	7
20.....	8

To wire up the UDM-1200 AUTO ANSWER MODEM, the terminal is configured as a DCE (I.E. like a modem). Such serial ports are expected to drive a peripheral such as a printer...



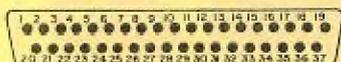
BASIC CONTACT ARRANGEMENTS



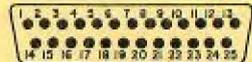
MD 9



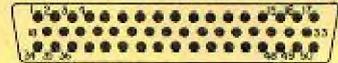
MD 15



MD 37



MD 25



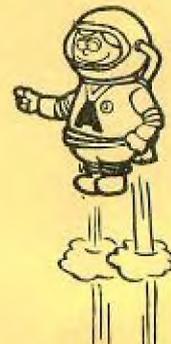
MD 50

THESE SHOW THE FACE VIEW OF THE MALE OR REAR VIEW OF FEMALE.



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Younger Set



We all hear about kids who get a computer and become enthralled with it. Mostly aged 8 and up. The other day the park family from IOWA went into computerage. They had gotten a computer for Christmas and their son had become involved in programming. Nothing unusual there, except that Ryan is only 4 1/2 Years Old! Should see some interesting things from him in the future.

Here are some programs made up while they were in the store.

```
100 CALL CLEAR
200 FOR A=1 TO 16
300 CALL SOUND(A,-2,2)
400 CALL SCREEN(A)
450 CALL COLOR(2,7,12)
500 CALL HCHAR(12,3,42,99)
600 NEXT A
700 CALL SOUND(1000,-2,2)
800 GOTO 100
```

```
10 CALL CLEAR
20 CALL COLOR(2,7,12)
30 CALL HCHAR(12,3,42,28)
40 GOTO 40
```

HOW TO USE DATA
BY MIKE TOWERS

Now I will explain how to create music with DATA. The program is an example of how to do this.

Now I will briefly run through the program. Line 190 to 230 are all DATA statements. The first is the length of the note, the second number is the first tone, the third number is the second tone, the fourth number is the third tone, and the fifth number is the length of the second note etc. Line 240 reads the DATA, four numbers at a time (length, tone 1, tone 2, tone 3). Line 250 detects to see if the piece has been completely run through. The length that equal -1 is at the end of the piece. Line 260 does the placing of the data. Line 280 restores all the data if it is at the end of the piece.

```
100 REM *****
110 REM * MUSIC WITH DATA *
120 REM * BY *
130 REM * MIKE TOWERS *
140 REM * IN *
150 REM * TI BASIC *
160 REM *****
170 CALL CLEAR
180 PRINT TAB(9);"CAMPTOWN RACES":::
190 DATA 250,587,32000,32000,
250,587,147,196,250,587,247,
196,250,494,196,247,250,587,
196,247,250,659,196,247
200 DATA 250,587,196,247,500
494,196,247,250,494,247,185,
750,440,131,185,250,494,185,
247,500,440,131,185
```

```
210 DATA 250,587,131,185,250
587,147,196,250,587,247,196,
250,494,196,247,250,587,196,
247,250,659,196,247
220 DATA 250,587,196,247,500,
494,196,247,500,440,247,185,
250,494,131,185,250,440,131,
185,750,392,147,196
230 DATA 250,32000,32000,
32000,-1,0,0,0
240 READ L,T1,T2,T3
250 IF L=-1 THEN 280
260 CALL SOUND(L,T1,0,T2,5,
T3,5)
270 GOTO 240
280 RESTORE
290 GOTO 240
```

For those of you with MINIMEM or Editor/Assembler, here are a couple of programs from the Pittsburg Users Group. The first changes screen colour and the second shows the different graphic modes of the computer.

```
100 FOR T=1 TO 16
110 CALL POKEV(784,16+T)
120 NEXT T
130 GOTO 100
```

```
100 PRINT "PRESS A KEY==>N,C,
T,M,B":
110 CALL KEY(5,K,S)
120 IF K<>78 THEN 140
130 CALL POKEV(-32768,0)
140 IF K<>67 THEN 160
150 CALL POKEV(-32352,0)
160 IF K<>84 THEN 180
170 CALL POKEV(-32272,0)
180 IF K<>77 THEN 200
190 CALL POKEV(-32280,0)
200 IF K<>66 THEN 100
210 CALL POKEV(-32766,0)
220 GOTO 110
```

MORE HANDY PROGRAMMING HINTS

As most of us have noticed, when you 'PRINT' information to the screen, graphics will scroll upward. Since this is not desirable in many cases, you might use the following section or a variation of it to display data on the screen!

```
100 INPUT "DATA":A$
(or READ A$ or A$= or A$(N))

110 FOR R=1 TO 24
120 FOR C=1 TO 32 (or 3 to 28)
130 IF LEN(A$)<(R-1)*32+C THEN
170
140 CALL
HCHAR(R,C,ASC(SEG$(A$,(R-1)*32
+C,1)))
150 NEXT C
160 NEXT R
170 END (or GOTO 100 or
CONTINUE PROGRAM)
```

There are lots of variations of this, but line 140 is the key line.

*Bye for now
Jenny*

Sydney News Digest

100 REM HERE ARE SOME PROGRAMS FOR YOU TO TYPE IN. TAKE YOUR TIME AND TYPE
 110 REM CAREFULLY. THE LISTINGS ARE FROM TESTED PROGRAMS. SO IF THEY CRASH
 120 REM CHECK YOUR TYPING. HAPPY KEYING. AND ENJOY THE PROGRAMS - TISHUG.
 130 REM HERE ARE SOME PROGRAMS FOR YOU TO TYPE IN. TAKE YOUR TIME AND TYPE
 140 REM CAREFULLY. THE LISTINGS ARE FROM TESTED PROGRAMS. SO IF THEY CRASH
 150 REM CHECK YOUR TYPING. HAPPY KEYING. AND ENJOY THE PROGRAMS - TISHUG.
 160 REM HERE ARE SOME PROGRAMS FOR YOU TO TYPE IN. TAKE YOUR TIME AND TYPE
 170 REM CAREFULLY. THE LISTINGS ARE FROM TESTED PROGRAMS. SO IF THEY CRASH
 180 REM CHECK YOUR TYPING. HAPPY KEYING. AND ENJOY THE PROGRAMS - TISHUG.
 190 REM HERE ARE SOME PROGRAMS FOR YOU TO TYPE IN. TAKE YOUR TIME AND TYPE
 200 REM CAREFULLY. THE LISTINGS ARE FROM TESTED PROGRAMS. SO IF THEY CRASH
 210 REM CHECK YOUR TYPING. HAPPY KEYING. AND ENJOY THE PROGRAMS - TISHUG.

PROGRAM LISTINGS

```

100 REM ** BAT ATTACK **
110 REM ** D.A.LYNDEN **
120 REM ** MAY 1984 **
130 GOSUB B70
140 CALL CLEAR :: RANDOMIZE
150 FOR ST=3 TO 8 :: CALL CO
LOR(ST,16,1):: NEXT ST
160 CALL SCREEN(2):: CALL CO
LOR(2,8,1,13,2,8)
170 CALL CHAR(41,"FFFFFFFFF
FFFFFFFF",120,"COE0FEFFFE0C00
0",124,"F0000000000000F0
")
180 CALL CHAR(128,"894A24D81
B245291",132,"99DBFFFFFFFDB
81",136,"5A5A7E7E7E7E665
2")
190 CALL CHAR(42,"FF7F3F1F0F
070301",43,"0103070F1F3F7FFF
",44,"80C0E0F0F8FCFEFF")
200 CALL CHAR(129,"183C7EFFF
F7E3C18")
210 T=8 :: WD=10 :: SC,CV=0
:: SHP=3 :: ERG=75 :: BV=3
220 CALL DELSPRITE(ALL):: GO
SUB 230
230 CALL CLEAR :: VT=9 :: MK
=0
240 CV=CV+1 :: AV=BV+BATZ/3
250 FOR HZ=1 TO 31 STEP 2
260 CALL VCHAR(VT,HZ,41,WD):
: CALL VCHAR(VT,HZ,43):: CAL
L VCHAR(VT+WD,HZ,42)
270 CALL VCHAR(VT,HZ+1,41,WD
):: CALL VCHAR(VT,HZ+1,44)
280 XX=INT(RND*3)+1
290 ON XX GOTO 300,320,340
300 VT=VT+1 :: IF VT>13 THEN
VT=VT-2
310 IF VT>13 THEN 280
320 NEXT HZ
330 GOTO 370
340 VT=VT-1 :: IF VT<=2 THEN
VT=VT+2
350 IF VT<=5 THEN 280 ELSE 3
20
360 RETURN
370 CALL SPRITE(#1,120,5,96,
10)
380 FOR Q=1 TO 3 :: CALL SPR
ITE(#Q+2,132,2,(VT-Q-1+(WD/2
))*8,256-(Q*56)+56):: NE
XT Q
390 DISPLAY AT(22,1):"TUNNEL
";CV;
400 DISPLAY AT(24,15):"SHIPS
=";SHP
410 DISPLAY AT(24,1):"DEAD B
ATS=";BATZ
420 DISPLAY AT(22,15):"ENERG
Y=";ERG;
430 DISPLAY AT(1,1):"HIGH SC
ORE=";TSC :: DISPLAY AT(3,1)
:"YOUR SCORE=";SC;
440 IF ERG<=0 THEN DISPLAY A
T(10,8):"NO POWER LEFT";: G
OTO 690
450 CALL JOYST(1,Y1,X1)
460 CALL MOTION(#1,-X1,5)
    
```

```

470 CALL POSITION(#1,A1,B1):
: IF B1>=224 THEN CALL DELSP
RITE(ALL):: GOSUB 220
480 A2=A1/8+.5 :: IF A2>9 TH
EN A2=A1/8+1.75
490 B2=B1/8 :: CALL GCHAR(A2
,B2,SS)
500 IF SS<>41 THEN CALL MOTI
ON(#1,0,0):: GOTO 690
510 CALL MOTION(#3,SN,-AV/3,
#4,SN,-AV/2,#5,SN,-AV)
520 CALL PATTERN(#3,136,#4,1
32,#5,136):: CALL SOUND(-1,8
80,10)
530 CALL KEY(1,KY,ST):: ERG=
ERG-1
540 IF B1>200 THEN 570
550 IF KY<18 THEN 580 ELSE
CALL SPRITE(#2,124,2,A1,B1+8
,0,30)
560 MK=1
570 CALL POSITION(#2,A3,B3):
: IF B3>=232 THEN CALL DELSP
RITE(#2)
580 CALL COINC(#1,#3,T,V1)::
CALL COINC(#1,#4,T,V2):: CA
LL COINC(#1,#5,T,V3)
590 IF (V1=-1)+(V2=-1)+(V3=-
1)THEN 690
600 CALL COINC(#2,#3,6,VR1):
: CALL COINC(#2,#4,6,VR2)::
CALL COINC(#2,#5,6,VR3)
610 IF VR1=-1 THEN 810
620 IF VR2=-1 THEN 820
630 IF VR3=-1 THEN 830
640 REM
650 CALL POSITION(#2,A4,B4):
: IF B4>=216 THEN CALL DELSP
RITE(#2):: MK=0
660 IF MK=1 THEN 600
670 CALL PATTERN(#3,132,#4,1
36,#5,132)
680 GOTO 410
690 CALL PATTERN(#1,128):: C
ALL SOUND(250,-7,0):: FOR DE
L=1 TO 150 :: NEXT DEL :
: CALL DELSPRITE(#1)
700 SHP=SHP-1 :: IF SHP=0 TH
EN 710 ELSE 370
710 DISPLAY AT(24,15):"SHIPS
= 0"
720 DISPLAY AT(5,8)BEEP:"NO
SHIPS LEFT";: FOR DEL=1 TO
300 :: NEXT DEL
730 SC=CV*BATZ
740 IF TSC<SC THEN TSC=SC
750 FOR DEL=1 TO 200 :: NEXT
DEL
760 BATZ,CV=0 :: FOR DEL=1 T
O 300 :: NEXT DEL
770 DISPLAY AT(10,3)BEEP:"HO
W ABOUT ANOTHER GAME?";
780 CALL KEY(0,K,S):: IF S=0
THEN 780
790 IF K=89 OR K=121 THEN 21
0
800 IF K=78 OR K=110 THEN EN
D ELSE 780
810 MK=0 :: CALL SOUND(99,-5
,0):: CALL DELSPRITE(#2,#3):
: GOTO 840
    
```

```

820 MK=0 :: CALL SOUND(99,-5
,0):: CALL DELSPRITE(#2,#4):
: GOTO 840
830 MK=0 :: CALL SOUND(99,-5
,0):: CALL DELSPRITE(#2,#5):
: GOTO 840
840 BATZ=BATZ+1 :: ERG=ERG+2
0 :: EXT=BATZ/5 :: AV=AV+(BA
TZ/5):: SC=CV*BATZ
850 IF EXT=INT(EXT)THEN SHP=
SHP+1
860 GOTO 670
870 CALL CLEAR :: CALL SCREE
N(16)
880 CALL CHAR(97,"0",98,"E79
097E5979595E5",99,"FF0070212
22482F",100,"C040800000
0000C0")
890 CALL COLOR(9,2,12)
900 DISPLAY AT(2,3):"** B A
T A T A C K **"
910 DISPLAY AT(8,14):"BY" ::
DISPLAY AT(10,10):"D.A. LYN
DEN"
920 DISPLAY AT(17,7):"WITH A
POLOGIES TO"
930 DISPLAY AT(19,6):"abcd I
N THE ATTIC"
940 FOR DEL=1 TO 250 :: NEXT
DEL
950 DISPLAY AT(24,2):"DO YOU
REQUIRE INSTRUCTIONS" :: CA
LL KEY(0,K,S):: IF S=0 T
HEN 950
960 IF (K=78)+(K=110)THEN RE
TURN
970 IF (K=89)+(K=121)THEN 98
0 ELSE 950
980 PRINT "THE GAME OBJECTIV
E IS TO GET":"THE HIGHEST SC
ORE POSSIBLE" ::
990 PRINT "YOUR TASK IS TO G
UIDE A SHIP":"THROUGH A SERIE
S OF TUNNELS" ::
1000 PRINT "OBSTACLES WILL B
E MET ALONG":"THE WAY IN THE
FORM OF BATS"
1010 PRINT "NUCLEAR POWERED
BATZ TO BE":"PRECISE. TO OBT
AIN POWER FOR"
1020 PRINT "YOUR SHIP, THESE
SORDID BATS":"WILL REQUIRE
DESTRUCTION BY"
1030 PRINT "THE USE OF COPIO
US AMOUNTS":"OF LASER-BOLTS"
::
1040 PRINT "WARNING DON'T CR
ASH INTO THE":"TUNNEL WALLS
OR THOSE VILE":"CREATURE
S" ::
1050 PRINT "ANOTHER SHIP WIL
L BE":"ASSIGNED WITH EVERY 5
DEAD BATS" ::
1060 DISPLAY AT(24,3)BEEP:"R
ESS ANY KEY TO START"
1070 CALL KEY(0,K,S):: IF S=
0 THEN 1070 ELSE RETURN
    
```

Software



```

100 CALL CLEAR
110 CALL SCREEN(12)
120 PRINT " MONTHLY COST OF
RUNNING"
130 PRINT
140 PRINT TAB(8);"A MOTOR VE
HICLE"
150 PRINT : : :
160 PRINT TAB(8);"BY R.A. JO
NSSON OF ATTIC"
170 PRINT : : : : :
180 FOR DELAY=1 TO 200
190 NEXT DELAY
200 CALL CLEAR
210 CALL SCREEN(16)
220 PRINT "ENTER ALL AMOUNTS
IN DECIMAL": :
230 PRINT "e.g. 45 CENTS=.45
": " $2 = 2": : :
240 INPUT "LITRES USED FOR T
HE MONTHS? " :LT
250 PRINT
260 INPUT "COST OF PETROL PE
R LITRE? " :PT
270 PRINT
280 INPUT "KILOMETRES TRAVEL
LED FOR THEMONTH? " :KM
290 PRINT
300 INPUT "AMOUNT OF OIL USE
D FOR THE MONTH? " :OIL
310 PRINT
320 INPUT "COST OF OIL PER L
ITRE? " :CS
330 PRINT
340 INPUT "COST OF REPAIRS F
OR THE MONTH? " :RP
350 PRINT
360 INPUT "INCIDENTAL EXPENS
ES? " :EX
370 CALL CLEAR
380 PRINT "BREAKDOWN EQUALS
-"
390 PRINT
400 PRINT "KILOMETRES=" :KM
410 PRINT "MILES =" :KM*5
/8
420 PRINT "LITRES =" :LT
430 PRINT "GALLONS =" :LT/4
.444444444
440 PRINT "MILES PER GALLON=
":(KM*5/8)/(LT/4.444444444)
450 PRINT "OIL COST =" :CS*O
IL
460 PRINT
470 PRINT "TOTAL COST = $":(
PT*LT)+(OIL*CS)+RP+EX
480 GOTO 480
    
```



```

100 CALL CLEAR
110 CALL SCREEN(6)
120 PRINT "          MUSIC"
: : :
130 PRINT "          THE ENTERTA
INER": : : *
140 PRINT "          BY BEN VA
NG": : : : : : : : :
150 REM MUSIC "THE ENTERTAIN
ER"
160 OPTION BASE 0
170 DIM T(26)
180 FOR N=0 TO 25
190 T(N)=132*1.059463094*N
200 NEXT N
210 T(26)=40000
220 BEAT=150
230 !
240 !
250 RESTORE
260 FOR I=1 TO 74
270 READ B,TA,TB,TC
280 CALL SOUND(BEAT*B,T(TA),
2,T(TB),15,T(TC),15)
290 NEXT I
300 DATA 1,2,26,26,1,3,26,26
,1,4,0,4,1,12,0,4,2,4,0,4,2,
12,0,4
310 DATA 2,4,0,4,6,12,0,4,1,
14,0,4,1,15,0,4,1,16,7,11,1,
12,7,11
320 DATA 2,14,7,11,1,16,7,11
,1,12,7,11,2,14,7,11,6,12,0,
4,1,2,0,4
330 DATA 1,3,0,4,1,4,0,4,1,1
2,0,4,2,4,0,4,2,12,0,4,2,4,0
,4
340 DATA 6,12,0,4,1,9,0,4,1,
7,0,4,1,6,2,6,1,9,2,6,2,12,2
,6,1,16
350 DATA 2,6,1,14,2,6,2,12,2
,6,6,14,7,11,1,2,7,11,1,3,7,
11
360 DATA 1,4,0,4,1,12,0,4,2,
4,0,4,2,12,0,4,2,4,0,4,6,12,
0,4,1,14
370 DATA 0,4,1,15,0,4,1,16,7
,11,1,12,7,11,2,14,7,11,1,16
,7,11
380 DATA 1,11,7,11,2,14,7,11
,6,12,0,4,1,12,0,4,1,14,0,4,
1,16,0,4
390 DATA 1,12,0,4,2,14,0,4,2
,16,0,4,1,14,0,4,1,12,0,4,1,
16,0,4
400 DATA 1,12,0,4,2,14,0,4,2
,16,0,4,1,14,0,4,1,12,0,4,1,
16,7,11
410 DATA 1,12,7,11,2,14,7,11
,1,16,7,11,1,11,7,11,2,14,7,
11
420 DATA 2,12,0,4,2,7,0,4,2,
12,0,4
430 GOTO 150
    
```



AND MORE HINTS FROM BRISBANE
BY ALWAY SMITH

Function to format \$ data to two decimal places.

```

300 DEF CSH$(X)=STR$(X)&SEG$(
".00", (LEN(STR$(X))&".00")-POS
(STR$(X)&".", ".", 1))-1,4)
    
```

Function to format numeric items into a print column

```

230 DEF FMT$(X)=SEG$( " " &
STR$(X), LEN(STR$(X)), 3)
    
```

Function to truncate a numeric item to two decimal places

```

105 DEF TRN$(X)=SEG$(STR$(X), 1
, POS(STR$(X)&".", ".", 1)+2)
    
```

Function to round off a numeric item to two decimal places

Function to centre a print line on the screen

```

230 DEF CTR$(X$)=SEG$( "
", 1, 14-LEN(X$)/2)&X$
    
```

Function to play note N for specified base freq

```

110 DEF NOTE=FREQ*(2^(1/12))^N
    
```

MORE HINTS FROM CANBERRA

HCHAR PAUSE ELIMINATOR

Sometimes there is a noticeable pause when you are printing character, word or phrase from a data statement in a FOR-NEXT loop. For Example:-

```

DATA 71,82,69,69,84,73,78,71,
83
FOR Y=10 TO 18
READ L
CALL HCHAR(9,Y,L)
NEXT Y
    
```

The pause is before the last letter is printed. This problem can be circumvented by adding a non-visible character such as ASCII 32 to the DATA statement and printing it at the end of your series...

```

DATA 71,82,69,69,84,73,78,71,
83,32
FOR Y=10 TO 19
READ L
CALL HCHAR(9,Y,L)
NEXT Y
    
```



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HINTS

```

50 ! *****
100 ! * ACCEPT AT EXPANDED *
110 ! * WRITTEN BY *
120 ! * ED YORK *
130 ! * WRITTEN ON *
140 ! * NOVEMBER 13, 1983 *
150 ! * THIS PROGRAM WAS *
160 ! * DESIGNED TO SHOW *
170 ! * HOW YOU CAN GET *
180 ! * A TRUE 32 COLUMN *
190 ! * ACCEPT AT IN BOTH *
200 ! * CONSOLE BASIC *
210 ! * AND EXTENDED BASIC *
220 ! * I HAVE NOT ALLOWED *
230 ! * FOR THE PROGRAM TO *
240 ! * USE THE FUNCTION *
250 ! * KEY TO ERASE ANY *
260 ! * LETTER ON THE LINE *
270 ! * SEE THE ARTICLE *
280 ! * ABOVE FOR THE *
290 ! * CHALLENGE. *
295 ! *****
300 CALL CLEAR
310 CALL CHAR(96,"7F")
320 CALL HCHAR(13,1,96,32)
330 FOR A=1 TO 32
340 CALL KEY(0,B,C)
350 IF C<1 THEN 340
360 IF B=13 THEN 420
370 IF LEN(A$)=32 THEN 450
380 A$=A$&CHR$(B)
390 CALL HCHAR(12,A,B)
400 NEXT A
410 GOTO 340
420 A$=""
430 CALL HCHAR(12,1,32,32)
440 GOTO 330
450 A=32
460 GOTO 340
    
```

```

100 !*****
110 !* MEMORY PEEKER *
120 !* WRITTEN BY *
130 !* ED YORK *
140 !*CINN-DAY USER GRP*
150 !*****
160 CALL CLEAR :: CALL INIT
:: A=-32767 :: DISPLAY AT(1,
6):"MEMORY ASCII CHR"
170 FOR B=3 TO 22 :: CALL PE
EK(A,C):: DISPLAY AT(B,6):A;
"=" :: DISPLAY AT(B,15)S
IZE(-3):USING "###":C :: GOS
UB 200
180 DISPLAY AT(B,19):"=" ::
DISPLAY AT(B,21):USING "###"
:CHR$(C):: A=A+1 :: NEXT
B
190 DISPLAY AT(24,2):"PRESS
ANY KEY TO CONTINUE" :: CALL
KEY(0,C,D):: IF D=0 THE
N 190 ELSE 170
200 IF C<100 AND C>10 THEN D
ISPLAY AT(B,15)SIZE(-1):"0"
:: RETURN
210 IF C<10 THEN DISPLAY AT(
B,15)SIZE(-2):"00" :: RETURN
220 RETURN
    
```

```

50 ! =====
100 ! ELECTRONIC BILLBOARD
BY R. WEGENER
110 ! MESSAGE APPEARS
FROM RIGHT
120 ! ONE LETTER AT A TIME
130 ! MAXIMUM LENGTH =30
CHARACTERS,
INCLUDING SPACES
135 ! =====
140 M$="DON'T LEAVE HOME WIT
HOUT IT !"
150 CALL CLEAR
    
```

```

160 L=LEN(M$)
170 LTR=INT(32-L)/2
180 FOR I=1 TO L
190 FOR J=3] TO LTR+1 STEP -
1
200 CALL HCHAR(22,J,ASC(SEG$
(M$,I,1)))
210 CALL HCHAR(22,J+1,32]
220 NEXT J
230 LTR=LTR+1
240 NEXT I
250 CALL KEY(0,K,D)
260 IF D<1 THEN 240
270 END
    
```

```

50 !#####
100 ! ELECTRONIC BILL BOARD
No.2 . . BY R.WEGENER
105 ! X-BASIC
107 ! 28 SPACES BETWEEN
QUOTES IN LINE 110
110 A$="WELCOME TO TI,S,H,U,
G.AUST."
120 B$="FOUR SCORE AND SEVEN
YEARS AGO, OUR FOREFATHERS
BROUGHT FORTH ON THIS CO
NTINENT *** ETC. YOU GET TH
E IDEA !"
130 C$=A$&B$&A$ :: D=LEN(B$)
+28
140 CALL CLEAR
145 FOR I=1 TO D+1
150 DISPLAY AT(23,1):SEG$(C$
,I,28)
160 NEXT I
170 CALL KEY(0,K,R)
180 IF R<1 THEN 170
190 END
    
```

```

100 REM#####
# COLOR BONANZA #
# BY ED YORK
    
```

```

110 REM# CIN-DAY USER GROUP#
120 REM# IN BOTH BASICS. #
#####
130 CALL CLEAR
140 FOR A=40 TO 136 STEP 8
150 CALL CHAR(A,"55AA55AA55A
A55AA")
160 NEXT A
170 FOR B=2 TO 14
180 CALL COLOR(B,1,1)
190 CALL VCHAR(1,2*B,24+8*B,
22)
200 CALL VCHAR(1,2*B+1,24+8*
B,22)
210 NEXT B
220 FOR C=2 TO 14
230 CALL SCREEN(INT(16*RDND)+
1)
240 FOR D=2 TO 14
250 CALL COLOR(D,D,C)
260 NEXT D
270 CALL KEY(0,E,F)
280 IF F<1 THEN 270
290 NEXT C
300 GOTO 220
    
```

```

100 REM *****
110 REM * COMPUTER MAGIC *
120 REM *BY CHICK DEMARTI*
130 REM * LA99ERS *
140 REM *****
150 CALL CLEAR
160 PRINT "I CAN READ YOUR M
IND": "JUST THINK OF A NUMB
ER": : :
170 PRINT "GOT IT?":"GOOD, N
OW ADD 3 TO YOUR":"NUMBER- T
HEN DIVIDE IT BY 5": : :
:
180 PRINT "HERE COMES THE HA
RD PART":"NOW MULTIPLY IT BY
5, THEN":"DIVIDE THAT B
Y 5 AND ADD 4": : : :
    
```

```

190 INPUT "TELL ME...WHAT D
O YOU HAVE?":B
200 FOR Q=1 TO 5
210 CALL SOUND(400,110,30,11
0,30,1105,30,-4,2)
220 CALL SOUND(360,110,30,11
0,30,1171,30,-4,2)
230 PRINT :
240 NEXT Q
250 C=(B+1-5)*5/8*5-3
260 PRINT "THE NUMBER YOU WE
RE THINKINGOF WAS": : : ;TAB
(15):C : : :
270 INPUT "RIGHT (Y/N)?:":R$
280 IF R$="Y" THEN 350
290 IF R$="N" THEN 300 ELSE
270
300 PRINT "???? NO ???": : :
:"CAN'T BE !!!!!":"TRY YOUR
CALCULATIONS AGAIN!": : :
: :
310 INPUT "PRESS ENTER WHEN
READY":N$
320 CALL CLEAR
330 PRINT "THINK OF THE SAME
NUMBER": :
340 GOTO 170
350 PRINT "NATURALLY...I'M A
COMPUTER":"WANT TO TRY AGAI
N?"
360 INPUT "(Y/N): ":Y$
370 IF Y$="Y" THEN 380 ELSE
410
380 CALL CLEAR
390 PRINT "THINK OF A NUMBER
": : : :
400 GOTO 170
410 CALL CLEAR
420 PRINT TAB(11);"BYE NOW":
: : : : :
430 END
    
```

```

100 ! CURTAIN
110 ! WRITTEN BY
120 ! ED YORK
130 CALL CLEAR :: CALL SCREE
N(5):: FOR A=96 TO 111 :: CA
LL CHAR(A,"FF"): NEXT A
:: FOR B=1 TO 14 :: CALL CO
LOR(B,16,5):: NEXT B
140 FOR C=1 TO 16 :: CALL VC
HAR(1,C,95+C,24):: CALL VCHA
R(1,33-C,95+C,24):: NEXT
C :: FOR D=111 TO 98 STEP -
1 :: CALL CHAR(D,"")
150 FOR E=1 TO 25 :: NEXT E
:: NEXT D :: CALL CHAR(112,"
FF"):: CALL HCHAR(1,1,11
2,32):: CALL HCHAR(24,1,112,
32)
160 FOR F=2 TO 22 STEP 2 ::
DISPLAY AT(F,1):" TI.S.H.U,
G.BBS AUSTRALIA" :: NEXT
F :: GOTO 160
    
```

```

100 REM CURTAIN in TIBasic
110 REM WRITTEN BY
120 REM ED YORK
125 REM CINCINNATI-DAYTON
USER GROUP
130 A$=" TI.S.H.U.G.BBS (02)
5600926 "
140 CALL CLEAR
150 CALL SCREEN(5)
160 FOR A=1 TO 14
170 CALL COLOR(A,16,5)
180 NEXT A
190 FOR B=1 TO 16
200 CALL CHAR(95+B,"FF")
210 CALL VCHAR(1,B,95+B,24)
220 CALL VCHAR(1,33-B,95+B,2
4)
230 NEXT B
    
```

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```

240 FOR C=111 TO 98 STEP -1
250 CALL CHAR(C,"")
260 NEXT C
270 CALL HCHAR(1,1,97,32)
280 CALL HCHAR(24,1,97,32)
290 FOR E=2 TO 22 STEP 2
300 FOR F=1 TO LEN(A$)
310 CALL HCHAR(E,F+2,ASC(SEG$(A$,F,1)))
320 NEXT F
330 NEXT E
340 GOTO 340
    
```

```

100 REM GUY TI BASIC *MSP U
G
110 CALL CLEAR
120 CALL SCREEN(8)
130 REM FACE TALKING
140 CALL CHAR(48,"FF99002400
3C2418")
150 REM FACE SMILING
160 CALL CHAR(49,"FF99002400
2418")
170 REM TORSO
180 CALL CHAR(56,"18183CFF3C
3C3C3C")
190 REM LEGS
200 CALL CHAR(57,"3C3C242424
2424E7")
210 REM RIGHT ARM
220 CALL CHAR(58,"04040407")
230 REM LEFT ARM
240 CALL CHAR(59,"202020E")
250 REM LEFT ARM WAVING
260 CALL CHAR(60,"0C1830E")
270 CALL COLOR(3,2,16)
280 REM FACING FRONT
290 CALL HCHAR(10,16,49)
300 CALL HCHAR(11,16,56)
310 CALL HCHAR(12,16,57)
320 CALL HCHAR(11,15,58)
330 CALL HCHAR(11,17,59)
340 REM WAVING LEFT HAND
350 FOR I=1 TO 10
360 CALL HCHAR(11,17,60)
370 CALL SOUND(25,40000,30)
380 CALL HCHAR(11,17,59)
390 CALL SOUND(25,40000,30)
400 NEXT I
410 REM TALKING
420 MSG$="Hello, My Name Is
GUY!"
430 FOR I=1 TO 22
440 CALL HCHAR(10,16,48)
450 CALL SOUND(25,40000,30)
460 CALL HCHAR(8,I+5,ASC(SEG$(MSG$,I,1)))
470 CALL HCHAR(10,16,49)
480 CALL SOUND(25,40000,30)
490 NEXT I
500 FOR T=1 TO 1500
510 NEXT T
520 CALL HCHAR(8,1,32,30)
530 GOTO 350

100 !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
110 ! LOAD PROGRAM
120 ! BY CHRIS RYAN !
130 ! (ADAPTED BY D WHITE)!
140 !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
150 CALL CLEAR
160 OPTION BASE 1 :: DIM PG$(20)
170 OPEN #1:"DSK1.",INPUT ,R
RELATIVE,INTERNAL
180 INPUT #1:N$,A,A,C
190 DISPLAY AT(1,1)ERASE ALL
:"DISKNAME=";N$:"AVAILABLE="
;C;"USED=";A-C
200 R,D=0
210 FOR R=4 TO 22
220 INPUT #1:P$,A,B,B
230 IF LEN(P$)=0 THEN 290
240 IF ABS(A)<>5 THEN 220
250 DISPLAY AT(R,1):CHR$(R+6
1)&".
    
```

```

260 DISPLAY AT(R,4):P$
270 PG$(R-3)=P$
280 NEXT R
290 CLOSE #1
300 DISPLAY AT(24,1):"PRESS
LETTER OR ENTER TO END"
310 CALL KEY(0,K,S):: IF S<1
OR(K<>13 AND(K<65 OR K>R+60
))THEN 310
320 IF K=13 THEN STOP
330 K=K-64
340 DISPLAY AT(24,1):"RUN "
PG$(K)
350 !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
360 I FROM 99'ER
370 ! BY A.KLUDGE
380 ! READS HIGHEST LINE
390 ! NUMBER @ -31952.
400 ! THEN READS ADDRESS
410 ! OF ACTUAL STATEMENT
420 ! USES ADDRESS TO
430 ! OVERWRITE "-----"
440 ! IN "RUN" STATEMENT,
450 ! THEN WRITES LENGTH
460 ! BYTE.
470 !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
480 CALL INIT :: CALL PEEK(-
31952,A,B):: CALL PEEK(A*256
+B-65534,A,B):: C=A*256+
B-65534 :: A$="DSK1."&PG$(K)
:: CALL LOAD(C,LEN(A$))
490 FOR I=1 TO LEN(A$):: CAL
L LOAD(C+I,ASC(SEG$(A$,I,1)
)):: NEXT I :: CALL LOAD(
C+I,0)
500 RUN "DSK1."
    
```

Now here's another little program to help understand the deeper and inner working of animation. This one uses the same principal printing one over the over. This program also uses sprites so it will only run in Extended Basic.

```

10 REM FOR USE IN EXTENDED
BASIC ONLY
20 REM *****
30 REM * ANIMATION *
40 REM * BY **
50 REM * IAIN JOHNSON *
60 REM *****
70 CALL CLEAR
80 DIM P$(16)
90 CALL COLOR(13,13,1,14,13,1,
10,13,1)
100 CALL SCREEN{Z}::CALL
COLOR(1,4,2)
110 CALL COLOR(5,16,1)
120 FOR H=143 TO 128 STEP -1::
READ K$::CALL CHAR(H,K$)::
NEXT H
130 CALL CHAR(96,"FFFFFFFFFFFF
FFFFFFFFFFFF9999C0C0FFFFFFFFFFFF
FFFFFFFFFFFF00000000")
140 CALL CHAR(100,"F0F0F0F0F3F3
F3F3F3F3F3F30000303000000000F0
F03030FFFFFFFF000000303")
150 CALL CHAR(112,"0000000087C
1C0FF000107000000000000000008
0C0F8FF0C080")
160 CALL CHAR(120,"000001067FF
FFF0C00000000000000000F00808F
EFFFF060000000")
170 CALL CHAR(65,"000000001",
66,"04",67,"000000000000001")
180 FOR H=1 TO 75::CALL HCHAR(
INT(RND*22)+1,INT(RND*32+1,))INT
(RND*32+1),INT(RND*3)+65)::NEXT
H
190 FOR H=128 TO 135::P$(H-127
)=RPT$(CHR$(H)&CHR$(H+8),14)::
NEXT H
    
```

```

200 FOR H=128 TO 135::P$(H-119
)=RPT$(CHR$(H+8)&CHR$(H),14)::
NEXT H
210 CALL MAGNIFY(3)
220 CALL CHAR(40,"000000000000
000000000000FFFFFFFF0000000000
0000000000000000000000000000")
230 CALL SPRITE(#4,96,15,169,
120,#5,100,15,169,136,#3,40,5,
159,122)ITRUCK
240 CALL CHAR(104,"FFFFFFFFFFFF
FFFFF")::CALL HCHAR(24,1,104,
32)IBORDER
250 CALL SPRITE(#8,112,11,38,
38,0,6,#7,112,14,29,34,0,6,#9,
112,9,20,30,0,6,#9,112,9,47,34
,0,6)IPLANES
260 CALL SPRITE(#10,112,10,56,
30,0,6)IPLANES
270 CALL SPRITE(#2,120,7,177,
240,0,-25)ICARS
280 CALL SPRITE(#1,120,5,177,
210,0,-22)
290 FOR J=1 TO 16::DISPLAY AT
(23,1):P$(J)::NEXT J
300 GOTO 290
310 DATA 0808081C3E3E7F7F,040
4040E1F1F3F3F,020202070F0F1F1
F,0101010307070F0F,0000000103
030707,000000001010303,00000
0000000101,0
320 DATA 0,00000000000008080,0
0000008080C0C0,00000080C0C0E
0E0,8080800C0E0E0F0F0,404040E
0F0F0F8F8,20202070F8F8FCFC,10
1010387C7CFEFE
    
```

The following hints have been taken from the 99'er Magazine, with thanks, but are only a few, of what is available from the No.2 issue.

CONVERTING TRS 80 TO TI-99/4

TRS 80	TI-99/4
CLS	CALL CLEAR
FIX	INT
INKEY\$	CALL KEY
INPUT #-	INPUT #1
LEFT\$(A\$,N)	SEG\$(A\$,1,N)
MID\$(A\$,N1,N2)	SEG\$(A\$,N1,N2)
RANDOM	RANDOMIZE
RIGHT\$(A\$,N)	M=LEN(A\$)-N+1
	SEG\$(A\$,M,N)
RND(N)	INT(N*RND+1)
STOP	BREAK
?	PRINT
	REM

Here now is an example of Code Translation From TRS-80 BASIC to TI BASIC

```

120 FOR I1=1 TO N1
130 IF IZ(I1)<>0 THEN PRINT
"THIS ITEM DROPPED";ID$:GOTO
160
140 IF K$=K1$ THEN IF C1(I1)=0
GOTO 160 ELSE C2=10*C1(I1)+200
150 DX=C3-C2
160 NEXT
    
```

Translated to:-

```

120 FOR I1=1 TO N1
130 IF IZ(I1)=0 THEN 140
132 PRINT "THIS ITEM
DROPPED";ID$
134 GOTO 160
140 IF K$<>K1$ THEN 150
142 IF C1(I1)=0 THEN 160
144 C2=10*C1(I1)+200
150 DX=C3-C2
160 NEXT I1
    
```



REVIEW with RAY

RAY REVIEWS TEX-BOUNCE FROM FUNNELWEB FARM

The game of TEX-BOUNCE (TX-B for short) challenges your ability to predict the course of a puck as it bounces around a field of obstacles rotating them as it hits them. Besides it's lots of fun just to watch it happening. The game allows two players to compete, or a single player may choose the computer as opponent. Options which need different strategies may be selected. TX-B makes things harder for the player who is ahead in any game, and if the winning margin is too large TX-B handicaps the winner further. Either joysticks or keyboard may be used at any stage in playing TX-B without you having to make an explicit choice. Cues for inputs use colour, shapes and sound so the game can be played on a B&W TV also.

GETTING STARTED

TX-B requires only the console and Extended Basic. If you have a disk drive attached, but no memory expansion TX-B won't fly. If so, turn off the disk drive before firing up the computer. Loading from cassette will take almost 3 min since the program is over 11.5 Kbytes long. RUN the program and press ENTER for each option.

THE GAME

The playing field now shows 12 bats which flip at a right angle when hit by the puck.

Each player has an Upper and Lower launcher with a supply of pucks. The arrow at bottom centre always shows whose turn it is. A single player against the computer always has the right side and first turn. The top line of the screen invites you either to shoot a puck by pressing FIRE or else expects a direction input (keys or joystick) to show you wish to move bats around. Press FIRE this time.

Use direction input to choose. Later on, if only one is available, it won't bother to ask this.

Now watch the action !! A point is registered every time the puck hits a bat. More points are scored every time the puck hits the barriers at

the opponent's end, and deducted when you hit your own barriers. If you hit the opponent's launcher you gain 10 points and the launcher is disabled for 2 whole turns.

If you hit your own launcher you lose 5 points and its use for one turn. If the puck lands in the bonus cup your other launcher is credited with an extra puck (sometimes more).

Suppose you now think you need a better layout of bats. Then choose to Move. The bats will change colour, and those which match your arrow colour (magenta for right, red for left) may be moved. Use the 8 directions to move the marker around. It beeps as well when it's on target so that you can tell a movable bat even on a B&W TV.

Press FIRE to Mark a bat to be moved. Then indicate one of 4 directions and if possible the bat will move. In any one turn a bat can only be moved once, and further moves in the same turn automatically go in the direction of the first move, if free to do so. The computer only fires and does not move bats.

When one of the players has no pucks left or both launchers blocked the first game of a match is over. To continue the match press ENTER and a new screen is generated. The winning player in the previous game finds the loser's side has one less barrier, reducing the winner's scoring chances.

If the winning margin is too large, the winner's penalty for hitting the opponent's barriers increases. What happens to the puck when it come to the hole in the boundary? Don't worry, Gonzo will take care of it. The game continues until all barriers on one side are removed and the match winner is declared. Choice of new options starts a new match.

THE OPTIONS

If no number is entered before ENTER is pressed the first option is automatically taken. Some options allow 3 choices, but if 3 is entered for the others, the choice defaults to 1, the first choice listed in that option.

1. If MOVE OR SHOOT is selected your tactics in placing moves must allow for your opponent having the next shot.
2. MOVE ANY means that either player may move any bat, but only 3 bats may be moved in

one turn. Players should have the good sense not to persist in merely undoing each other's moves.

3. RANDOM places the bats with random directions at random positions on the screen. The players do not necessarily receive the bats in a uniform pattern at either end, giving the same starting point for every game.

4. Since the BONUS TARGET terminates a shot, the highest scores will be obtained in its absence. When present it shifts across the screen from turn to turn in a predictable pattern.

5. ALL BARRIERS makes for a longer game and Gonzo can sleep through the first game of a match.

6. ERASE removes the alignment grid from the screen making it more difficult to predict the path of the puck.

7. PARTIAL load starts each game with only 3 pucks for each launcher instead of 5. It makes the game shorter and also influences strategy, as there is less room for long term plans.

8. With SINGLE ONLY, hitting any launcher removes the block from any previously hit, so that only one can be out of action at any one time.

9. Choose TI RESPONDS and the computer will take the left side, firing pucks but not moving any bats.

10. RECONSIDER takes you back to the start of the options. CHANGE SCREEN is like PROCEED except that it toggles the screen between light and dark background. The game always wakes up with a light background which is generally easier on the eyes, but the dark screen is more spectacular in a dark room.

SPECIAL KEY

FCTN-1 (Delete) may be used for a number of purposes during the game.

A. If it is being held down when the program starts executing, the title sequence is shortened by omitting music and advice screen. Prescan time is 7 seconds.

B. A game in progress may be cancelled by hold down FCTN-1 (Delete) as the message "JOY-MOVE ELSE FIRE" flashes up for a player's turn. This can be handy if you want to experiment with a new ENTER OWN pattern each time.

C. It allows you to exit from a move sequence if desired or needed, but terminates the moving for that turn.

A WORD FROM THE PROGRAMMERS

This game is written in Version 110 of Extended Basic. Two differences will be apparent if the older V.100 is used.

A. The program makes extensive use of the Prescan Switch Command of V.110 so that the interval between RUN and the titles appearing is only 7 seconds. With V.100 the delay is what one would normally expect for such a long program.

B. The puck travels, without distress in coincidences, at almost the maximum speed for sprites. This required intricate coding, and the puck is slowed down when run under V.100.

The development of this program would have been almost impossible instead of merely difficult without that most powerful feature of Extended Basic, the user-defined sub-program. At times it is running a sub-program 3 levels deep. In fact the sub-programs make it so simple that the main program logic takes only 7 lines of code. The lines following merely fill out the details.

```
100 CALL CLEAR :: OPTION BASE
etc etc
110 CALL TITLES
120 CALL CHOICE(...)
130 CALL NEWGAME(...)
140 CALL TURN(W,...):: IF W
THEN 140
150 CALL GAMEND(W,...):: ON W
GOTO 130,120,160
160 DISPLAY ERASE ALL :: END
```

We can only trust that you get as much delight from this game as we have had fun and hard work in writing, debugging and player-proofing the code.

PROGRAM PURCHASE

The game is available for \$20 on cassette, individually recorded from the computer on a recorder of bandwidth adequate to ensure good recall.

W & E McGovern
215 Grinsell St,
KOTARA, N.S.W. 2288.

MONTHLY SOFTWARE AWARDS

Each month, we conduct a SOFTWARE COMPETITION, all entrants receive a selection of any three of their choice from the Library, and can, if chosen to be the winner of that month's contest, win up to \$50 CASH...Here are the details---

THE AWARD OF THE MONTH: For the best program supplied, which will have a value of \$50 Entries will be limited to financial T.I.S.H.U.G. members, and anyone can enter.

THE JUNIOR AWARD OF THE MONTH: For original entries by our YOUNGER SET under 18 members. These must be written by you, and MUST WORK (you loose points for program bugs - infact, that goes for all entries in every category). The prize will be \$30 per month, unless JENNY of YOUNGER SET is conducting another JUNIOR SOFTWARE AWARDS, then the prizes could be even more in value.

ROOKIES AWARD OF THE MONTH: For any member of this group who has had his or her computer for less than 6 months. The prize will be \$20.

Like all competitions, there are conditions and rules, which are as follows:

(1)The entry must be of your own work, not a copy of someone elses program.

(2)The program must run on any commercially available TI-99/4 or 4A equipment which is available in Australia.

(3)All entries are available for distribution as FREE CLUB SOFTWARE.

(4)Entries must be forwarded to our LIBRARIANS

ADDRESS: P.O.BOX 595,
MARRICKVILLE, N.S.W. 2204 or
handed to TERRY PHILLIPS at
the MONTHLY MEETING.

(5)The initial Judging panel will consist of three Committee Members, who have not submitted any entries for that contest.

(6)If this judging panel feels there is no entry of sufficient standard, or if the number of entries is insufficient, they will defer judging for a month. This means Awards will only apply to good quality entries. If the panel has entries which have potential, but are not 'robust' and so are not suitable for distribution, they will advise the entrant and suggest possible modifications.

(7)The panel will select the 3 best entries in each class for presentation to the next MONTHLY MEETING. (YOU WILL THEN BE THE FINAL JUDGE). If there are more than three(3) outstanding entries in any group, they may, at their discretion increase the number.

(8)No one entry may win more than one award.

So, there you have it. You may have noticed, that over the past couple of months, there has been no judging of these awards. The reason is, that there has been very little response. We don't want to believe that you have no talent for writing programs, and we are sure that you are interested in receiving all that wonderful money, SO, LET'S GET CRACKING and get those wonderful works of art you have designed, which you call a program.

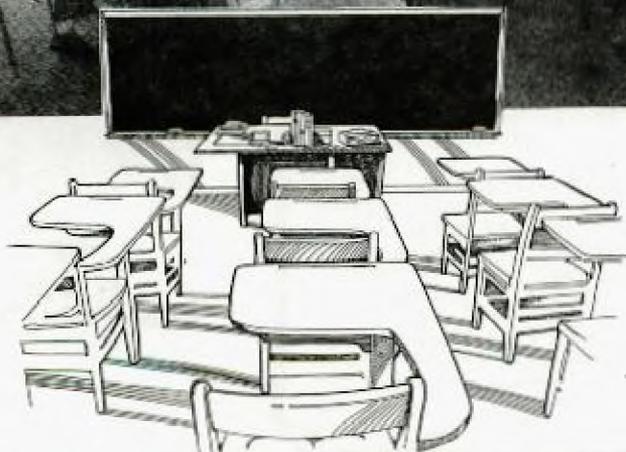
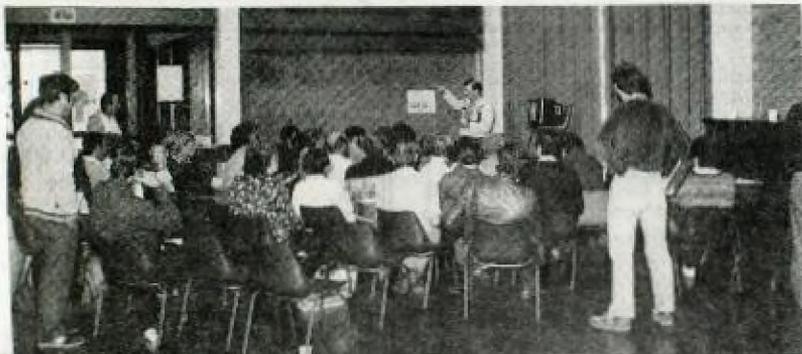
WELL, THE MASSES HAVE CHOSEN THE WINNER OF THE RECENT CLUB SOFTWARE AWARD. THE WINNER IS KEN WILLIAMS, FOR HIS EDUCATIONAL PROGRAM ENTITLED SOLARSYSTEM. Ken will be presented with a cheque for \$50.00 at the July Meeting, and he, along with all of the other entrants, will each have the opportunity of selecting any three programs of their choice from the CLUB LIBRARY. Congratulations Ken. So far, we have received about 20 entries for this next set of Judging, they will be checked out at the next COMMITTEE MEETING, where your committee will try to brake it down to 3 of the best, ready for you to be the Judge of the final winner.

REMEMBER:THE NEXT CLUB MEETING will be held, once again, at St.Johns Church Hall, Victoria St, Darlinghurst (2pm-4:30pm) on SATURDAY JULY 7th. SEE YOU THERE for a full afternoon of special guests and a lot of happenings.



TEXAS
INSTRUMENTS
Creating Useful Products
and Services For You

Sydney News Digest



If you have the Memory Expansion Unit attached to your computer, you can increase the execution speed of your TI Extended Basic Programs.

Simply include the following statements:-

```
CALL INIT :: CALL LOAD(-31878, 0)
```

near the beginning of your program. These statements disable all sprite motion. To move sprites, change the 0 in the CALL LOAD statement to a number from 1 to 28, for the number of moving sprites with which you want to work. For example, the statement:-

```
CALL LOAD(-31878,3)
```

allows Sprites 1,2 & 3 to move. The CALL LOAD should be executed after any CALL DELSPRITE(ALL) statements and at the beginning of execution.

If a program state thus:

```
310 IF D=6 OR D=7 THEN 313
```

this can be achieved:-

```
310 IF (D=6)+(D=7) THEN 313
```

N.B. The PLUS SIGN PERFORMS A LOGICAL 'OR'

If a program states:-

```
440 IF A<>0 AND A<>1 THEN 450
```

this can be achieved by:-

```
440 IF (A<>0)*(A<>1) THEN 450
```

N.B. THE STAR PERFORMS A LOGICAL 'AND'

NOW YOU CAN CHECK A PROGRAM TO SEE - HOW MUCH MEMORY IT USES & HOW MUCH BYTES OF MEMORY IS LEFT... USING THIS ULTRA SMALL SUB-ROUTINE AS FOLLOWS:-

1. Enter your program into the computer. Do not use lines 1 & 2 (If already used RES & ENTER).
2. Add these lines to the program.
A. A=A+8
B. GOSUB 1
3. RUN the program. After a few seconds, the program stops running, and the message *MEMORY FULL IN 1 is displayed.
4. Type the following imperative command:-
PRINT 14800-A;"BYTES USED":A;
"BYTES REMAINING"
5. When you press ENTER, your computer tells you the approx; number of Bytes of RAM used etc.

NOTE :: Be sure to delete 1 & 2 before you RUN your program.

Sydney News Digest

DEBUGGING YOUR BUGS BY DAVID STOREY

The program that follows is full of bug's. It is your job to find them. The program when running will show a bird like animal fly up the screen then it will clear the screen and start over again.

As this is a new column the second part which would normally deal with the debugging of the program from the month before will deal with the bugs only this month, as there wasn't any program last month.

My definitions of bugs are spelling errors, typing errors, and programming errors.

The debugging part of this column will also be dealt with at the meeting. When debugging this program the things to look for are:-

1. Spelling errors.
2. Typing errors.
3. Programming errors.

Spelling errors includes statements that were not typed as per the syntax. Typing errors include "I" instead of "i" a "o" instead of a "0".

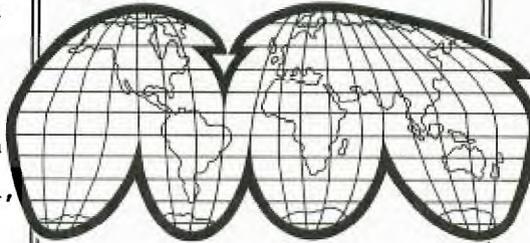
Programming errors are using a statement out of sequence or values too small or too big. This type of bug is the one programmers make most often.

At the meetings we will deal with editing, tracing the program to find the problems also answer some of your questions about programs you are working on that you are having problems with.

This section of the meeting will be mainly discussion and I will not be using a computer, so if you have a problem bring it on paper. This article is directed to the beginner, and I will deal with only Basic and Extended Basic.

```
100 REM THIS PROGRAM HAS
110 REM BEEN INSTALLED WITH
120 REM SEVERAL BUG'S
130 REM IT IS YOUR JOB TO
140 REM FIND THEM
150 REM CH99/USERS GROUP
160 REM BY D.STOREY
170 REM APRIL 30 1984
180 REM
190 REM
200 CALL CLAER
210 CALL CHAR(160,"00006698I8
362400")
220 CALL CHAR(161,"0042A5I8I8
362400")
230 CALL CHAR(162,"BI422418I8
3C2400")
```

```
240 FOR ROW=25 TO 1 STEP 1
250 FOR CHAR=160 TO 162
260 CALL HCHAR(ROW,16,CHAR)
270 CALL SOUND(-60,-5,0)
280 NEXT ROW
290 NEXT CHAR
300 RETURN
310 END
```



GET IN CONTACT WITH A TI HOME
COMPUTER USER GROUP

U.S. INTERNATIONAL USERS' GROUP

INTERNATIONAL 99/4 USER GROUP
P.O.BOX 67,
BETHANY, OK 73008.
PHONE 0011-1-4059481023

U.S. LOCAL USERS' GROUPS

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USERS' ASSOCIATION.
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DEL MAR, CA 92014.

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TI SOFTWARE EXCHANGE
POST BOX 63
2080 KAPELLEN BELGIUM
PERSON TO CONTACT: MR COPENS
TEL: 031.65.05.97
(ON THURSDAY AFTERNOON ONLY)

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NEDERLAND

SOFTWARE DEPARTMENT
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Sydney News Digest

RINGWRAITH'S LAIR REVIEWED

Ringraith's Lair is a non-graphic adventure game on disc. The objective is to find your way through a series of mazes and slay the Ringraith.

The game is taken from "Lord Of The Rings" by R.R. Tolkien and various creatures such as Orcs, Enls, Wizards, Trolls, ETC can be encountered. Some are friendly and you make friends with these. The others are to be slain. Be careful of trying to make friends with "unfriendlylies" as they might slay you and prematurely end your game.

Hazzards and traps abound. Some lead to instant death and some only wound. If wounds are suffered during an encounter, they should be healed prior to the next fight if possible as wounds weaken you and make it harder to beat an opponent. Healing potions and salves are located throughout the mazes.

Treasures and weapons are located throughout the mazes. You must choose carefully which to take with you. You are limited to five treasures an one weapon as a weapon discarded cannot be retrieved. Likewise a treasure dropped is lost.

To successfully complete the maze you must rescue the Princess Aralon, located the Staff Of Power and finally slay the Ringraith.

There are four levels of difficulty from easy to deadly and three mazes to negotiate.

The maze setouts and locations of Treasures, Weapons, Traps, ETC do not alter from one level of difficulty to the other, but the degree of difficulty in passing "unfriendlylies" does of course.

If the game is necesssfully negotiated, your character and score can be saved for re-use in a subsequent game. However, if you are killed in a subsequent game your character is lost and you must start again.

It is strongly recommended that the instructions be carefully read prior to starting the game.

As the 3 mazes remain constant it is possible to plot them to assist in future runs through the game.

I found the game addictive, challenging and good value, and would recommend it for devotees of adventure games.

TAKEN FROM THE HOUSTON USERS GROUP MAGAZINE HUG

EDITOR'S ROM

Many of you probably noticed that the April 1984 issue of "COMPUTE" Magazine had ONLY one program for the TI 99/4A in addition to C.Regena's column. I called the magazine to see if this was what we were to expect in future issues.

They told me that they determine the number of programs to include for a particular computer by the number ads they have for hardware and software for the computer. They said that they didn't have too many TI related advertisers in April. This is why there were not many programs.

You always hear that magazines say the the reason they do not have much on TI is because people won't submit programs for it. I found out (in "COMPUTE"'S case) the real reason. It is a shame that magazines such as this one consider it's readership when deciding what to include in their publication, but after-all, they are in business to make money and advertising pays their salaries.

Maybe we should let their advertising sales department know how many of us read "COMPUTE" and suggest they try to sell more TI 99/4A related ads. They probably believe that no one is going to make third party hardware and software for the TI. Or they are just ignoring the fact. Whatever the case, I hope "COMPUTE" realizes how many "TI subscribers" they have.

BILL



Steve Davis Publishing has announced the existence of some errors in the first printing of the First Edition of Introduction To Assembly Language For The TI Home Computer by Ralph Molesworth.

1. In the middle of Page 112, " SG2" should be "MSG2"
2. Parts of lines 11 & 12 of the listing on page 25 are reversed.

They should be:-

```
11 START MOV R11,@SAVRTN
      LWPI WSPREG
```

3. The "PBASIC" routine on pages 115 & 121 should be:-

```
PBASIC MOVR *R2+.R1  MOVE ONE
                        BYTE OF
                        MESSAGE
                        TO R1
AB @OFFST.R1 ADJUST
                        FOR BASIC
BLWP @VSWB WRITE ONE
                        BYTE
INC R0 INCREMENT
SCREEN
ADDRESS
DEC R3 DECREMENT
CHARACTER
COUNT
JNE PBASIC IF NOT
ZERO. DO
IT AGAIN
RT ELSE
RETURN
```



GEMINI PRINTER TIPS

This program enables you to LIST programs in the condensed print mode.

The same can be incorporated in your programs if you need a print line longer than 80 characters. Thanks to David Sholmire for supplying this information.

```
1 REM
2 REM
3 REM PROGRAM FOR LISTING
4 REM IN CONDENSED MODE
5 REM
6 REM
7 REM
100 CALL CLEAR
110 OPEN #1:"PIO".VARIABLE 140
120 PRINT #1:CHR$(15)
```


THE CUT PAGE



ELECTRONIC BULLETIN BOARD SERVICE (TISHUGBBS)
 P.O. Box 595, Marrickville, New South Wales, Aust. 2204

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- (2)ELECTRONIC MAIL(Messages to fellow Users),
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() I would like to join the BBS SUB-COMMITTEE with ()Typing of News/()Views files, ()Preparing software blocks, Other: _____.

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Signed _____

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COMMENTS: _____

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