

NEWS DIGEST

Focusing on the TI99/4A Home Computer

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TisHUG News Digest

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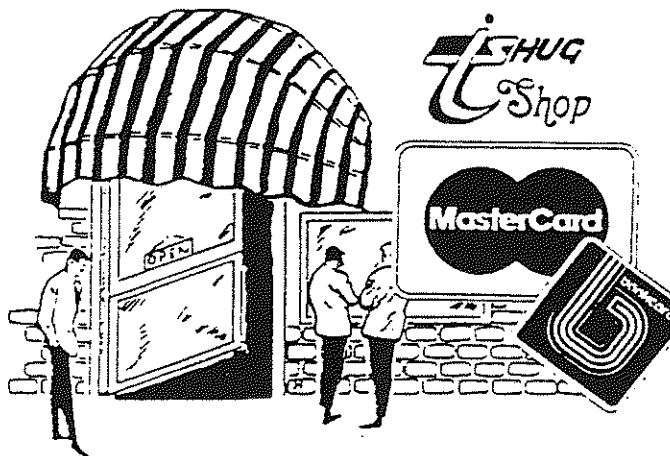
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Membership and Subscriptions
Annual Family Dues \$35.00
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TisHUG Sydney Meeting
The February Meeting will start at
2.0 pm on the 4th February 1995
at Meadowbank Primary School,
Thistle Street, Meadowbank.

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TISHUG SHOP.

with Percy Harrison.

The Christmas barbeque proved to be quite a success with approximately 45 people turning up to enjoy the festivities. We only just had enough meat to go around which resulted in a few members with good appetites being left a little disappointed as there were no second servings available. We will keep this in mind for next christmas and hopefully provide for a few extra. It is very hard to estimate just how many will turn up for this function as the 1993 barbeque was well overcatered for resulting in a waste of food. Many thanks go to the willing hands who helped out on the day with the buying and preparation of the food and the cooks who did the barbequing.

It is pleasing to note that our members are now starting to purchase their requirements for IBM compatible PC's through the shop. Although we do not make a large profit from the sale of this equipment, the extra income will benefit all members in that it will subsidise the shortfall created through the drop-off of our membership and that will at least enable us to maintain the quality of our TND Newsletter.

Larry Saunders, our software library expert, had an unfortunate accident just before the December meeting and had his leg jammed between a fork lift and an automobile. Although he was able to attend the December meeting, he had to visit his doctor early in the following week and was immediately hospitalised as complications had set in. They operated on his injured leg and drained about a pint of blood from behind the leg muscle and this resulted in him having to spend about three weeks in Auburn hospital. At the same time as he was recovering from the operation he had an attack of gout in his left hand which caused him more pain than his injured leg and required considerable medication to get it right again. Fortunately, Larry was discharged from hospital just before christmas day so he was able to share Christmas and the new year with his mum and dad who, I am sure, were overjoyed to have him home again. We all wish Larry a speedy recovery and hope that he does not have any more trouble with his leg.

Another snippet of club news is that Alf and Margaret Ruggeri have only recently returned from a holiday trip in Europe where Alf had the opportunity of meeting a host of his relatives, many of whom he had never seen before. This was Alf's first trip home to the country where he was born since his arrival in Australia as a small boy. Alf tells me that the trip was most enjoyable and what a great a welcome he and his wife received from his kinfolk in Sicily. His current project is to edit all of his video shots that he took during his trip onto video tapes. Welcome home Alf and Margaret and we are pleased that your trip was such a success.

It was also good to see Ashley Lynn on New Years day as he was down from Coonabarabran visiting his mother for a couple of days and was in need of some IBM compatible hardware so, being Ashley, he decided to do the right thing and support the club resulting in a visit to pick up the goods and to have a little natter and a cup of cha.

The Annual General Meeting resulted in one new Director, Loren West, being elected to office, replacing Bob Relyea who opted not to stand for office this year. Many thanks to Bob for handling the secretarial work over the last two years and also for his very keen enthusiasm in promoting the faithful TI and it's peripherals.

Again I would remind you that, because of the rapid fluctuation in market prices, I cannot list PC hardware and software prices but should you require anything for your PC, or a complete system, please get in touch with me and I will get back to you with a very competitive price or prices.

Bye for now.

END OF ARTICLE

TREASURER'S REPORT

by Cyril Bohlsen

Income for previous month	\$ 1639.00
Expenditure for previous month ..	\$ 1021.73
Profit for previous month	\$ 617.27
Membership accounted for \$ 175.00 of Income.	
Shop sales	\$ 1464.50 of Income.

The expenditure was made up of the following

Printing & Postage of TND	\$ 274.06
Meadowbank School Hire	\$ 50.00
Administration cost	\$ 11.20
Shop purchases	\$ 611.82
Annual BBQ	\$ 74.65

LEARN TO KNOW YOUR TI

LESSON 23

with Percy Harrison

I hope you all had a very merry christmas and that this year will bring you much happiness and goodwill to you, your family and friends. Now that the festive season is over it is time, once again, to get your heads down and tails up and get on with the next series of TI Lessons. If you have had enough please let me know as it is quite time consuming to get these lessons prepared and printed.

This year starts off with a lesson on Secret Writing and Call Key. CALL KEY is a method of requesting a single character from the keyboard. The computer polls the key and reports two things: a keystroke and a status.

There is no screen display at all. No prompt or cursor is displayed while waiting, and the keystroke, when made, is not echoed on the screen.

The utility of the CALL KEY command lies just in this fact. For example, a secret password may be received with a series of CALL KEY's without displaying it to bystanders.

Another advantage over INPUT is that no ENTER key pressing is required. This makes CALL KEY useful in "user friendly" programming.

The CALL KEY command doesn't wait for a key to be pressed. This makes it useful in action games. If you need to have the program wait for a keystroke, you must do an IF and branch back until a keystroke is detected. This is demonstrated in this lesson.

Along with saving the keystroke in a variable, the command also saves a "status" which records if this is the same or a different keystroke from the last time. It also tells whether a key is presently down or not.

If you want to get numerical values, get them as strings and convert them to numbers using the VAL() function discussed in a later lesson.

Well enough of this waffling so let's get on with the lesson.

LESSON 23 SECRET WRITING AND THE CALL KEY

THE INPUT STATEMENT

Examples: 10 INPUT A\$
10 INPUT N
10 INPUT NAME\$,AGE,DAY,MONTH\$,YEAR

The computer waits for you to type a word, sentence or number.

Then you press the ENTER key to tell the computer that you have entered the required information.

THE CALL KEY STATEMENT

The CALL KEY statement is different from INPUT.

It doesn't wait.

It looks to see if a key is being pressed. If so, it puts the ASCII number of the key into a numerical variable box.

You do not have to press enter.

CALL KEY FOR INVISIBLE TYPING

Nothing shows on the screen:

no question mark will show
no cursor will show
what you type will not show.

To see what happens, you have to PRINT the variable.

```
Run:      10 CALL KEY(O,K,S)
          20 PRINT K
          25 REM BOX HOLDS THE ASCII NUMBER
          30 GOTO 10
```

The computer prints -1 until you press a key. Then it prints the ASCII number of the character.

Try this: Hold down the "A" key

See that the computer prints "65" which is the ASCII number of the letter "A".

Try holding down different keys.

If you press too quickly, the computer may miss it. Try it!

MAKING THE COMPUTER WAIT FOR YOU TO TYPE

```
Add to the above program:
          15 IF K=-1 THEN 10
          20 PRINT K;TAB(7); CHR$(K)
```

Line 15 makes the computer keep looking until a key is pressed.

SAME KEY OR NEW KEY?

The CALL KEY(O,K,S) statement fills two variable boxes, K and S.

In the K box it puts the ASCII number of the key being pressed right now. (It puts -1 if no key is pressed).

What it puts into the S box depends on what key was pressed the time before.

In the S box it puts:

- S= 0 if no key is being pressed
- S= 1 if a new key is being pressed
- S= -1 if the same key as before is being pressed

Try this:

```
10 CALL KEY(O,K,S)
20 PRINT CHR$(K);S
25 FOR T=1 TO 200
26 NEXT T
30 GOTO 10
```

Press some keys and see when S is zero, -1 or 1.

SECRET WRITING

Use CALL KEY in guessing games for entering the word or number to be guessed without the other player being able to see it.

Run this program:

```
10 REM -----CALL KEY-----
20 CALL CLEAR
30 PRINT "PRESS ANY KEY"
40 CALL KEY(O,K,S)
41 IF K= -1 THEN 40
45 CALL SOUND(300,900,10)
47 FOR T=1 TO 1000
48 NEXT T
50 PRINT "THE KEY YOU PRESSED WAS CHR$(K)"
99 GOTO 40
```

Run this one too:

```
10 REM *** BACKWARDS ***
20 CALL CLEAR
30 PRINT "TYPE IN A 5 LETTER WORD"
35 PRINT
40 FOR I=1 TO 5
42 CALL KEY(O,L,S)
43 IF L= -1 THEN 42
44 W$=CHR$(L) & W$
46 CALL KEY(O,L,S)
47 IF S <> 0 THEN 46
48 NEXT I
```

```
50 PRINT"NOW HERE IT IS BACKWARDS"
```

```
55 PRINT
```

```
60 PRINT W$
```

Line 43 will not let the program continue until a key is pressed.

Lines 46 and 47 make sure that the key was let up before line 42 can ask about a new key. Try the program without lines 46 and 47 and see how your letters repeat!

MAKING WORDS OUT OF LETTERS

The CALL KEY command gets one letter at a time. To make words, glue the strings.

```
10 REM GET A WORD
20 CALL CLEAR
30 PRINT"TYPE A WORD, END IT WITH AN 'ENTER'."
35 W$=""
40 CALL KEY(O,L,S)
41 IF L= -1 THEN 40
50 IF L= 13 THEN 80
60 W$=W$ & CHR$(L)
62 CALL KEY(O,L,S)
63 IF S<>0 THEN 62
65 GOTO 40
80 REM WORD IS FINISHED
85 PRINT W$
```

How does the computer know when the word is all typed in? Line 40 looks to see if the ENTER key was pressed. The ASCII number of the ENTER key is "13". Line 50 branches to print the word if the ENTER key was pressed.

CALL KEY FOR NUMBERS

If you want to enter a secret number from the keyboard, you have to enter digit characters (0 to 9), glue them into a string, then use the VAL function that I will explain later in Lesson 27.

Assignment 23:

1. Write a program which has a "menu" for the user to choose from. The user makes his/her choice by typing a single letter. Use CALL KEY to get the letter. Example:

```
PRINT "WHICH COLOR? <R=RED, B=BLUE, G=GREEN>"
```

2. Write a sentence making a game. Each sentence has a noun subject, a verb, and an object. The first player types a noun (like "The donkey"). The second player types a verb (like "sings"). The third player types another noun (like "the toothpick."). Use CALL KEY so no player can see the words of the others. You may expand the game by having adjectives before the nouns.

ANSWERS TO LESSON 22

Assignment Question 22-1

```
10 REM ALPHABETICAL
12 CALL CLEAR
20 PRINT "THIS PROGRAM ARRANGES"
21 PRINT "THE LETTERS OF A WORD"
22 PRINT "IN ALPHABETICAL ORDER."
25 PRINT
30 PRINT "GIVE ME A WORD"
31 PRINT
32 INPUT W$
33 INPUT
35 L=LEN(W$)
39 K=1
40 FOR I=65 TO 65+25
41 REM TEST LETTERS IN ALPHABET
42 REM TO SEE IF THEY ARE IN THE WORD
45 FOR J=1 TO L
50 G=ASC(SEG$(W$,J,1))
55 IF G<>I THEN 60
56 H$=H$ & CHAR$(G)
57 K=K+1
60 NEXT J
61 NEXT I
70 PRINT "HERE IT IS IN ALPHABETICAL ORDER:"
75 PRINT
80 PRINT " ";H$
```

Assignment Question 22-2

```
10 REM Z=! DOUBLE DUTCH !?#
12 CALL CLEAR
25 PRINT"GIVE ME A SENTENCE"
26 PRINT
27 INPUT S$
28 PRINT
30 L=LEN(S$)
50 FOR I=1 TO L
51 L$=SEG$(S$,I,1)
52 IF L$="A" THEN 72
53 IF L$="E" THEN 72
54 IF L$="I" THEN 72
55 IF L$="O" THEN 72
56 IF L$="U" THEN 72
69 S$$=S$$ & L$
72 NEXT I
78 PRINT "HERE IT IS IN DOUBLE DUTCH"
78 PRINT
80 PRINT S$$
```

ASSIGNMENT QUESTION 22-3

```
10 REM "ON ... GOTO" SAMPLE
20 REM MAKE A MENU
```

```
22 CALL CLEAR
25 PRINT "MAKE YOUR CHOICE:"
27 PRINT
28 PRINT " <A> TAKE A NAP "
29 PRINT
30 PRINT " <B> EAT AN APPLE "
31 PRINT
32 PRINT " <C> CALL A FRIEND "
40 PRINT
42 CALL KEY(0,X,S)
44 IF X=-1 THEN 42
46 PRINT
48 X=X-64
50 ON X GOTO 60,70,80
52 GOTO 22
60 PRINT "YOUR BED IS NOT MADE!"
61 END
70 PRINT "YOUR SISTER ATE THE LAST ONE!"
71 END
80 PRINT "YOUR FATHER IS ON THE PHONE!"
81 END
```

Bye for now.

END OF ARTICLE 

GAMES AND COMPUTERS

By Daniel Harris

"Munchman" and a score of 300,000 or over: To me the game has attention grabbing capabilities (so far I've got over 240,000 which is a breakthrough). This brings me around to thinking that in todays work areas the control of many machines are through computers and wired remote controllers. Not only machines are operated by remote controllers, with todays advance in computers: cars, trucks, buses, ships and many more have some type of joy-stick control to enable the driver or operator to manoeuvre around. So playing games, is it really a wast of time, Or is it a method of training yourself for the future? Therefore I think that our Texas Instruments computer can teach us a lot more yet, apart from programming skills there are other areas like observation, supervisory and flowchart methodologies, for example, chess: It promotes patience, concentration, ability to think ahead, etc. Who knows, in the future if you are unable to get past the first screen of "Munchman" and you normally drive something.....take a sickie.

END OF ARTICLE 

TEXPAC BBS USAGE FOR 1994.

by Ross Mudie, SYSOP, 7th January 1995.

Usage of the TEXPAC BBS has fallen dramatically during 1994, in fact usage for the whole of 1994 was down to less than the usage for one month in the previous year. If usage continues to fall at the same rate there will be no point in keeping the BBS running in 12 months time. It is totally up to the club members, do you want to keep the BBS going? I am quite happy to place new material on the BBS on a regular basis, but there has been almost no new material coming forth for over two years. (A special thank you to Larry and Robert for their contributions, but we need a lot more). Can others help as well to overcome this problem?

All members of TISHUG are entitled to use the BBS, there is no additional membership fee. All that you need to do is arrange with myself, Ross Mudie for a user number, user name and password, and you can use a modem to contact the BBS. If you are already a BBS member and you have forgotten your user number or password, no problem, give me a call and I can give you the necessary details. My work phone number is 1800 021 080 home 02 456 2122. For country or interstate members, the cost of long distance phone calls has come way down with the competition between phone companies. Watch the TV adds for "specials". Call rates between 10pm and 8am and all day on Sundays are usually very reasonable.

Well, dear member, did you call your BBS in 1994? Check the call summary below. Will there be any calls to summarise next year?

TEXPAC USER DATA 01/01/94 to 30/12/94

USER NAME	CALLS	OCCUPANCY
ABEL	3	0.20
ADVENTURE	1	0.56
BIT&BITE1	3	1.54
BIT&BITE2	1	0.52
CHEMTECH	1	0.09
CHOCKY	1	0.05
DON	5	3.19
EDITOR	44	5.02
GAMES	1	1.37
GEOFF	19	4.33
GEOFFWA	13	2.12
HERBY	3	0.52
IBM_GAMES	1	0.05
LARRY	4	1.49
LIVERPOOL	2	1.12
MUSICMAN	4	0.13
NERK	2	0.40
PETER	1	0.08

RIP	2	0.24
ROB	1	0.13
SHANE	1	0.01
SHIFTY	4	1.13
SNOWY	47	2.47
SYSOP	39	33.03
TECHOTIME	21	2.28
TISHUG	3	0.23
TSU	2	0.54
VISITOR	154	2.57
VK2YGW	12	1.47
		Total users= 29
		Total calls= 395
		Total Occupancy= 72.08

END OF ARTICLE

PUZZLE

This months list of words is based around the subject of "Australia Day"

```

D M W T A I S E L D I L L N S U O R O B
N C B P E V S R V C G U W S N L E F E C
M X N J E C V D E K S B A I Q G J A V E
K G Y R A F H R U I J O A H N J R Q B A
C Q R P F T S L R E D T U A T F A T B Y
Z N E U L O N S R N P L R P U W I O I M
G S F Z C R O Z C A X H O Y A R R O Z D
H Z O M R Y R O C E S B R S X I E A B A
M X M N V T I K O U T A P Y G V C R F Q
M L S R Z Q - B B W U O A I O O I L S U
J E U P C G X I N R P N C N T O M N R
B C D I M Y E B A T Q E Y V A G Q I I P
S O L N P O L J J V S E I I G Z O E A P
R A T T Y G G A H Z N C N I P P V S H F
C U V A P 2 C V C D T H M L B H B U C Z
Y M H H N K G N Y S V G F J E O M K Q C
Z F U T S Y B S V L B F V B N K W K C A
Y Z G O R L B J Q O S Y T W L M F G R W
P P N U X A W A H U V O U L G S S K C M
B T K F Z E Y Y Y K Z Q G X W W Z I X B
    
```

Find these hidden words

In this puzzle there are (16) words somewhere, horizontally, vertically, diagonally even backwards.
GOOD LUCK!

26JANUARY	ABORIGINES	ARTHUR
BOTANYBAY	BRITAIN	BUSHRANGER
CAPTAIN	CHAINS	CONVICTS
ESCAPES	FLOGGING	LEG-IRONS
PORTJACKSON	SCURVY	SOLDIERS
SYDNEYCOVE		

This puzzle was compiled using Ashley Lynn's programme "Word Puzzle" which is available from the TISHUG shop.

The TI/Non-TI Serial Hardware Connection

By Barry Traver
1994

Since TIers live in a world where other computers exist in addition to the TI99/4A, we sometimes find ourselves in situations where we want to get our TI to communicate via RS232 either to a computer hardware device not specifically designed to work with the TI or to an IBM (or to another non TI) computer. This is not always easy to do. (Someone, I think, in fact referred to this task as a "serial killer"!)

This month's column deals with a simple homemade hardware device that can greatly simplify the operation and increase likelihood of success. As some of you know, I am a genuine technoklutz. Fortunately, however, I have a good friend, Alan Silversteen, who not only made a gadget for me but also agreed to share the instructions with me for publication in this article!

Before we move on such a description, however, let me mention how I myself found it to be very useful. In our home, we have a TI99/4A and an IBM sitting next to each other, and I have been doing my best to get them on good speaking terms. Among other things, this means figuring out how to modify TI Extended BASIC programs so that they will run in QuickBASIC on the IBM (not too difficult, as long as sprites, speech, or multi-voice music are not involved). The first necessary step, however, is to get a text LISTing of the TI XB program from the TI to the IBM, because you can't do any modifying of the program on the IBM until you've gotten the program to the IBM!

Here's the procedure. On the TI, load in a TI XB program that you want to port over to the IBM, and LIST it to disk. Now you need to get that text over from a TI disk to an IBM disk. There are a number of ways to do this. One is to use a program by Mike Dodd called PC - Transfer (currently available from Beery Miller of 9640 News). Bruce Harrison of Harrison Software also offers an inexpensive and useful product for bringing text from the TI to the IBM. A third way is to use a special cable to connect a TI and an IBM, RS232 to RS232, running terminal emulation programs on each (eg Fast Term on the TI and Pro Comm on the IBM) and doing an "ASCII upload" from the TI to the IBM.

As I said, I'm a hardware technoklutz, but my good friend and hardware guru Alan Silversteen made for me a special connector that I use to connect the two normal cables that I already have hooked up to our TI and our IBM clone. Here's the way the computers are normally set up:

TI RS232 ----- Modem #1 Modem #2 ----- IBM RS232


And here's the way it looks when I want to send a TI XB LISTing from the TI to the IBM:

TI RS232 --- SPECIALLY BUILT CONNECTOR --- IBM RS232

Note: the two computers are communicating with no need of a modem! What this means is that I can upload text from the TI to the IBM at 9600 baud with no need of a 9600 baud modem (and no need of any modem at all!). If you're used to uploading or downloading at 1200 or 2400 baud, it is amazing to see how fast that material can move across at 9600 baud! (on the IBM clone, I just capture the incoming material in a buffer and log it to disk, editing the log at leisure later.)

If you look at the preceding paragraph, you'll note that the connector I needed for this particular application involved the need of a "sex change" (hence Alan's title for his hardware description, which follows). In order to hook the two male ends of the cables together, what was necessary was to use two female DB25 connectors in the gadget he made for me. Also included in this gadget is a slide switch with two positions, "null" and "normal." As a hardware klutz, I never remember which position should be used for which application, but if it doesn't work one way, I just switch the switch to the other setting and the problem is normally solved. (Alan reassures me that I can't do any harm to my computer if I don't get it right the first time.)

Which DB25 connectors you use, of course, will depend upon what your intended application is. In my situation, two female DB25 connectors were needed, but equally useful might be a gadget with one male and one female DB25 connector (plus the same "null"/"normal" switch, of course). I think Alan mentioned, for example, the ability of hooking up the TI to a terminal using this gadget, but doubtless many possible uses involve hooking up the TI to other hardware through the serial port. This project is relatively simple, but one that you well may find invaluable.

END OF ARTICLE 

LEXMARK PRINTER

By Larry Saunders

The Lexmark IBM Excjet II inkjet printer, will operate well on the TI computer.

Up-to-date I have it working with:

Page Pro 99

TI Artist Plus

Writerease

Yet to get it right with TI Writer.

PROBLEM WITH RS232 on AT MULTI-FUNCTION CARD.

by Ross Mudie, 3rd October 1994.

I have recently added RS232 ports to an AT Multi-Function Card (AT MFC) and experienced errors in the transmission of data from the newly constructed RS232 ports. The problem was caused by errors in the documentation of the AT Multi-Function card, when it was released for members to build their own cards. This problem only applies to the RS232 part of the card. The documentation errors result in diode type 1N914 being used in place of 12 volt 400 milliwatt zener diodes for the positive and negative 12 volt power supplies. The use of a signal diode instead of the voltage regulating zener diode causes the negative 12 volt DC supply rail to produce 20 volts, which is applied to the MC145406 RS232 interface IC. In my case there appeared to be no damage to the IC. I found that the 12 volt positive supply was running at approximately 11.8 volts, even with no zener diode, due to the load on the positive 12 volt DC supply.

The original circuit diagrams drawn by Peter Schubert in 1987 were correct in this aspect. The errors appear to have crept in to the construction details which were published in the April 1990 TISHUG News Digest on pages 6 and 16. The parts list on page 6 shows "2 x 1N914" and the overlay drawing on page 16 shows 1N914 in 2 places where 12 volt 400 mW zener diodes should be specified. On the overlay drawing the diodes are located adjacent to either end of the "I/O edge connector". The diodes are shown correctly polarised in the drawing.

Everyone who has built the RS232 part of the AT MFC, using a kit of parts supplied from the club shop, is likely to have the problem unless they have already found the high power supply voltage problem and replaced the 1N914 diodes with zeners. If the incorrect components are installed and the problem is ignored, a short transient power surge on the 240 volt mains power could cause voltages on the 12 volt rails in the AT MFC RS232 which could damage components in the card or a peripheral connected to the RS232 port. This type of high voltage surge should be clamped by the correct zener diodes in the RS232 power supply. This is in addition to possible intermittent transmitted data errors.

RECOMMENDED ACTIONS.

Everyone who has built the RS232 part of the AT MFC should check if the correct diodes are installed. If in doubt bring your AT MFC to a TISHUG meeting for checking by someone who can identify if the wrong components are

installed. If replacement is necessary and you are unable to obtain the correct zener diodes, contact Percy Harrison of TISHUG shop who will arrange these for members.

The voltages on the AT MFC can be checked with a multimeter with the card installed in the Peripheral Expansion box, without the need for an extender board. The AT MFC should be installed in a PE box slot which allows the next higher numbered slot to be vacant. A convenient place to read the power supply voltages is on the pins of the MC145406 IC which is third from the front of the PE box in the top row. Pin 1 is positive 12 volts, pin 8 is negative 12 volts and pin 16 is positive 5 volts. The zero volts connection for the multimeter can be obtained on the metal case of the PE box. The range of voltages expected for the supply rails is between 9 and 13 volts for the 12 volt lines and 4.8 to 5.2 volts for the positive 5 volt rail. (Take care not to short the supply rails to anything else as damage could occur.)

END OF ARTICLE

Letter to the Editor "TISHUG News Digest"

Dear Friends,

Well, as a very proud founder of TISHUG, I eagerly await each copy of the "TISHUG NEWS DIGEST" to follow the progress of this group which holds a very special place in my heart. You have a great team of hard workers, which has made it possible for this group to continue over the year, and I hope that it does so for many more.

Another reason for this letter is to give you an insight into what I am now doing with what little spare time I have. Over the past couple of years, I have been co-running Australia's first and only national Star Trek Role Play and Information Group. I am also the editor of it's monthly newsletter, which in part, may sound a little familiar to you: "U.F.P. Star Fleet Digest".

(ED. A complete description of how this group operates will appear in next month issue of this magazine.)

I am very proud to read how your group is progressing so long after the sood ol' TI-994A computer had stopped production, and how you are keeping it alive with the latest developments and expansion cards and servicing etc.

Keep up the great work, my thoughts are with you always.

Yours in the fun of computing,
Shane K. Andersen
1st November '94

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	WED	THUR	FRI	SAT	SUN	MON	TUE	WED	THUR	FRI	SAT	SUN	MON	TUE	WED			
February 1995	1	2	3	4 TISHUG Meeting Sydney	5	6	7	8	9	10	11 TND deadline	12	13	14	15			
March 1995	1	2	3	4 TISHUG Meeting Sydney	5	6	7	8	9	10	11 TND deadline	12	13	14	15			
April 1995				1 TISHUG Meeting Sydney	2	3	4	5	6	7	8	9	10	11	12			
May 1995	MON	TUE	WED	THUR	FRI	6 TISHUG Meeting Sydney	7	8	9	10	11	12	13 TND deadline	14	15	16	17	
June 1995		1	2	3 TISHUG Meeting Sydney	4	5	6	7	8	9	10 TND deadline	11	12 Queens Birthday	13	14			
July 1995				1 TISHUG Meeting Sydney	2	3 School Holidays	4 School Holidays	5 School Holidays	6 School Holidays	7 School Holidays	8 School Holidays	9 School Holidays	10 School Holidays	11 School Holidays	12 School Holidays			
August 1995	TUE	WED	THUR	FRI	5 TISHUG Meeting Sydney	6	7 Bank Holiday	8	9	10	11	12 TND deadline	13	14	15	16		
September 1995				1 TISHUG Meeting Sydney	2	3	4	5	6	7	8	9	10	11	12	13		
October 1995	SUN	MON	TUE	WED	THUR	6 TISHUG Meeting Sydney	7	8	9	10	11	12	13	14 TND deadline	15	16	17	18
November 1995				1 TISHUG Meeting Sydney	2	3	4	5	6	7	8	9	10	11 TND deadline	12	13	14	15
December 1995				1 TISHUG Meeting Sydney	2	3	4	5	6	7	8	9	10	11	12	13		
January 1996	MON	TUE	WED	THUR	5	6	7	8	9	10	11	12	13 TND deadline	14 School Holidays	15 School Holidays	16 School Holidays	17 School Holidays	
	1 New Years Day	2 School Holidays	3 School Holidays	4 School Holidays	5 School Holidays	6 School Holidays	7 School Holidays	8 School Holidays	9 School Holidays	10 School Holidays	11 School Holidays	12 School Holidays	13 TND deadline	14 School Holidays	15 School Holidays	16 School Holidays	17 School Holidays	

	FRI	SAT	SUN	MON	TUE	WED	THUR	FRI	SAT	SUN	MON	TUE						
	17	18	19 Magazine Pasteup	20	21	22	23	24	25	26	27	28						
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CONNECTING A NON-TI COMPUTER .

by Ross Mudie, 8th October 1994.

A future requirement which arose from the Shahzada Endurance Horse Ride where I provided a Local Area Network (LAN) with a TI99/4A computer, was the need for a computer which could be used as a terminal with a screen which could be read in bright sunlight conditions. An additional condition was that the cost of such a terminal needed to be as low as possible. Youngest son Peter had recently purchased a Amstrad PPC 640 which has an inbuilt Liquid Crystal Display (LCD) screen, which becomes more readable as the light level increases, has a tiltable screen for best viewing angle and allows adjustment of the screen contrast. The PPC 640 is also capable of driving a CGA colour monitor.

Having found a computer capable of providing a daylight readable screen, the next step was to make it work with the TI99/4A LAN.

The PPC 640 operates under MS DOS and has GW Basic, for which I also happened to have a reference manual. Having enough to start I decided to have a go at writing a small GW Basic terminal program and interfacing the PPC 640 to the TI. The connections between the PPC640 serial interface and the TI99/4A RS232 port are as follows:

PPC 640 SERIAL PORT.	TI99/4A RS232.
Protective Earth.	1-->--<--1 Protective Earth.
Transmit data. out Tx	2-->-----2 Receive data. Rx (in)
Receive data. in Rx	3-----<---3 Transmit data. Tx (out)
Clear to Send in CTS	5-----<---8 Carrier Detect CD (out)
Data Term Rdy out DTR	20-->-----20 Data Term Rdy DTR (in)
Signal Earth	7-->--<--7 Signal earth.
Data Set Ready DSR In	6-<--+ 4, 6 and 8 of the PC are
Ready To Send RTS Out	4->- connected together.
Data Carr Detect DCD In	8-<--+

The hardware connection of PPC640 DTR OUT (20) to TI DTR In (20) and TI CD out (8) to PPC640 CTS IN (5) provide the Tx/Rx flow control required by the TI99/4A acting as LAN server. This operates in an identical manner to a TI99/4A terminal operating in a similar application. (A description of the handshaking is included in the article on page 11 of the October 1994 TND).

Converting from the TI Extended Basic program to GW Basic provided a few interesting problems and a few differences worthy of note.

I transferred the TI program to the PPC 640 by loading MIRROR, which is a terminal program, into the PPC 640 and using the CAPTURE function. At the TI end, the Extended Basic program was loaded into memory and then sent to the RS232 port at a data rate of 9600 bauds in Display Variable 80 file format by using LIST "RS232.BA=9600". Once the file was in memory in the PPC 640, it was saved to disk as an ascii file. The file was then renamed with a .BAS extension. GW Basic was then loaded into the PPC 640 and the MERGE command was used to merge the file into the GW Basic program space. The merge function terminated in an error after a few lines when it encountered a line which started with no line number. This line in the TI environment was longer than 80 characters. The few lines that were successfully merged were used, the rest of the program was typed in by hand and converted at type in. The lesson learnt here is to ensure that basic program lines to be transferred from TI Extended Basic to GW Basic should be less than 80 characters per line.

I really began to appreciate how good TI Extended Basic is when trying to emulate ACCEPT AT with SIZE and VALIDATE in GW Basic.

To PRINT or INPUT from a particular screen position in GW Basic, LOCATE with parameters for ROW,COLUMN specifies the start position for these statements. The third parameter in LOCATE turns the cursor ON or OFF. To get rid of random cursors flashing on the screen, set the third parameter of LOCATE to 0 when printing. To overcome unwanted scrolling of the screen by a PRINT statement when used with LOCATE in row 24 or 25, use a semicolon after the print string.

A rather interesting difference is in the use of STR\$. In TI Extended Basic, converting a positive value to a string using STR\$(X) gives a string without a leading space for the sign. The same thing in GW Basic places a leading space in front of the string which then needs to be removed if it matters (which it did for my program). If the length of the "numeric" string is unknown, the right end of the string N\$ from character 2 can be obtained with S\$=RIGHT\$(N\$,LEN(N\$)-1).

Other conversion differences that I encountered include:

TI EXTENDED BASIC	GW BASIC.
CALL CLEAR	CLS
RPT\$("- ",20)	STRING\$("- ",20)
RPT\$(" ",10)	SPACE\$(10)

```

POS(STRING$, "R", 1)          INSTR(1, STRING$, "R")
CALL SOUND(105, 1400, 0)      SOUND 1400, 2
SEG$(STRING$, START, CHARS)  MID$(STRING$, START, CHARS)

```

GW Basic LEFT\$ and RIGHT\$ are the left part or the right part of a string for a specified number of characters. This is a like a part of MID\$ (or SEG\$ in the TI).

CALL COLOR in the TI sets character sets to the colour specified. COLOR in GW basic defines all the characters printed until COLOUR is re-defined. This feature is more versatile than the TI and also allows flashing text by adding 16 to the colour value.

When using COM port, (serial port), with an application which takes some time to respond, (the TI server when its is busy handling another terminal) the COM port will time out after about a second. I couldn't change the timing of the COM timeout as expected after reading OPEN "COM in the GW Basic book. The way that this was handled was to set up error handling with "ON ERROR GOTO Line No" and "RESUME Line No" to retest the INPUT #x or PRINT #x associated with the COM port operation.

When concatenating strings (joining strings together), TI Extended Basic uses the ampersand (&) where GW Basic uses the plus symbol (+).

GW Basic uses the single colon(:) as a the statement separator in multi-statement lines, where the TI uses a single colon in PRINT or DISPLAY to print on the next line and the statement separator is a double colon (::).

The width of the screen in GW Basic can be either 80 or 40 characters. The 40 character screen changes the size of the characters making them bigger and chunkier. Considering that I was emulating the TI on the PPC640 screen, I used WIDTH 40 . When ending the program a WIDTH 80 was used to return the screen to 80 columns for ease of program editing.

Editing program lines in GW Basic is quite different to TI Extended Basic. To edit a single line use EDIT (Line Number) followed by ENTER. Once the line has been edited press ENTER with the cursor somewhere in the line to save the line.

Line numbers can be changed by just over typing the line number with a new number. The old line is not affected by the creation of the new line number and if the action being taken is to move a program line to a new number, it is necessary to delete the old line by just typing in the line number to be deleted and pressing ENTER.

To edit a range of lines, first use LIST number-number. Just list enough lines to fill the screen as lines which scroll off the screen can not be edited.

Delete takes out the character at the cursor position and moves the rest of the line one place left. Be very careful how long you hold down the delete key when doing multiple deletes because the the keyboard buffer stores auto-repeated deletes more quickly than they are deleted off the screen which can result in more characters being deleted than required. Backspace deletes the character to the left of the cursor.

Remember to press ENTER when a GW B#c line has been edited with the cursor somewhere in the line, if you want to save it. To change a line number, just overtype the line number with a new number and save the line, the old line will be unaffected. If you end up with two versions of the same line number on the screen, take care not to press enter in the version of the line which is not required or it will be saved. You can move around the screen with the arrow keys without saving lines. When you have finished editing move the cursor into a blank line before typing RUN or other commands.

Just like TI Extended Basic, you can put the program name in a line at the start of the program in a REMark statement. When you want to save the program edit the line and delete the line number and the REM and press ENTER. This will execute in immediate mode and save your program. My save line for the program I developed was: 100 REM SAVE "TIMEKEEP",a . GW Basic by default saves on the A: drive and the ",a" forces the program to be saved in ascii format.

The connection of the PPC 640 to the TI and re-writing from TI Extended Basic to GW Basic was an interesting exercise. Even though the TI is slower, its Extended Basic is a very easy language to work with compared to GW Basic.

The program which I have developed, the interconnection of computers and the ideas which I have presented in this article, should be applicable with any MS DOS PC machine running GWBasic.

PRINTING VARIABLES AFTER BREAK

by Ross Mudie, 8th October 1994.

I often wondered why I couldn't print values in variables when a program ended execution in a sub program.

Extended Basic sub programs have their own group of variables, separate from the main program and other sub programs. This means that the same variable name can be used in the main program and again in any sub program without affecting each other's contents, providing that they are not linked through the CALL and SUB parameter

GWACCEPT

by Ross Mudie, TISHUG, 8/1/95.

Two members have asked for a routine like TI Extended BASIC "ACCEPT AT" for use with GW BASIC. The subroutine which follows is one which I have developed for use with GW BASIC on a PC after being totally dissatisfied with what I found available in GW Basic.

The subroutine does not exactly emulate ACCEPT AT, but rather some of my own variations. It can also be used like CALL KEY with a cursor and beep by specifying SIZE=1 and WFE=0. The variable WFE is Wait For Enter. Basically when WFE is zero, the routine exits without waiting for ENTER to be pressed as soon as the specified size is reached. The variable TONE allows the frequency of the BEEP prompt to be specified.

Remember that the routine is a SUBROUTINE and not a SUBPROGRAM. This means that variables used in the subroutine will be global and affected by using the same variable name elsewhere in your program.

GWACCEPT has not been worked over to try to make it a totally all singing and all dancing program. If it doesn't work as you want it to do, then modify it to do what you want.

There is also another subroutine called TRIM starting at line 9000 which I use to trim off trailing spaces when a negative SIZE is specified and the size buffer is not completely filled.

If you are reading this file in the TND and you want a copy of the file without typing it in by hand, then download a copy off the club's TEXPAC BBS.

```

8000 REM GWaccept save "GWACCEPT",a
8010 ' Ross Mudie 8/1/95
8020 ' ROW=Screen Row : COL=Screen Column
8030 ' SIZE=Number of characters permitted clears
      window.
8040 ' Negative SIZE does not clear window
8050 ' VALIDATE$="123DEF" 'Gives a validate string. Use
      also with DIGIT UALPHA

8060 ' DIGIT=1 for numeric digits the contents of
      VALIDATE$ otherwise DIGIT=0
8070 ' UALPHA=1 to convert lower case alpha to upper
      case, otherwise UALPHA=0
8080 ' TONE=frequency of prompt signal on for 104
      milliSeconds
8090 ' WFE=1 to Wait For Enter key to be pressed.
8100 ' If WFE=0 then subroutine is exited as soon as
      specified SIZE is reached
8110 ' Return string is in variable S$

```

```

8120 ' Return variable UD will contain 13 if ENTER is
      pressed.

```

```

8130 ' UD will contain -1 if up arrow is pressed and +1
      if down arrow is pressed

```

```

8140 '
8150 ' Typical use:
8160 ' ROW=4 : COL=1 : SIZE=10 : VALIDATE$="ABCDEF12345"
      : UALPHA=1 : DIGIT=0 : TONE=1400 : WFE=0 : GOSUB 8000
8170 ' Return variables are S$ and UD
8180 '
8190 K$=INKEY$ ' Swallow one key press before prompt
8200 MSIZE=0 : XX=0 : UD=0 : INSERTFLAG=0 : IF SIZE=0
      THEN SIZE=1
8210 IF SIZE>0 THEN LOCATE ROW,COL,0 : PRINT
      SPACE$(SIZE); ' Clear size window

```

```


8220 LOCATE ROW,COL,1
8230 IF TONE THEN SOUND TONE,2 ' Prompt beep
8240 IF SIZE<0 THEN NEGSIZE=SIZE : SIZE=ABS(SIZE) :
      MSIZE=SIZE+1 : XX=SIZE
8250 FOR X=1 TO SIZE
8260 IF X>SIZE THEN X=SIZE ' Prevent over size
8270 IF XX>SIZE THEN XX=SIZE ' Prevent over size
8280 IF X<1 THEN X=1 : XX=1 ' Prevent too far left
8290 LOCATE ROW,COL+X-1,1 : IF X>MSIZE THEN MSIZE=X '
      Set the actual size
8300 K$=INKEY$ : IF K$="" THEN 8300 ' Actual Key scan
8310 IF K$=CHR$(13) THEN UD=13 : GOTO 8660 ' Enter key
8320 IF ASC(K$)=8 THEN X=X-1 : XX=XX-1 ELSE 8360 '
      Destructive back space
8330 IF X<1 THEN 8510 ' Prevent going too far left
8340 FOR Z=COL+X TO COL+MSIZE-1 : LOCATE ROW,Z-1,0 :
      PRINT CHR$(SCREEN(ROW,Z));
8350 NEXT Z : PRINT " " : GOTO 8500
8360 IF LEN(K$)<2 THEN 8520 ' Key pressed is not a
      control character
8370 IF ASC(RIGHT$(K$,1))=75 THEN X=X-1 : GOTO 8510 '
      Left arrow
8380 IF ASC(RIGHT$(K$,1))=77 THEN X=X+1 : GOTO 8510 '
      Right arrow
8390 IF ASC(RIGHT$(K$,1))=72 THEN UD=-1 : GOTO 8660 ' Up
      arrow key
8400 IF ASC(RIGHT$(K$,1))=80 THEN UD=1 : GOTO 8660 '
      Down arrow key
8410 IF ASC(RIGHT$(K$,1))=83 THEN XXFLAG=0 ELSE 8480 '
      Delete char
8420 FOR Z=COL+X-1 TO COL+XX-2 : LOCATE ROW,Z,0 : PRINT
      CHR$(SCREEN(ROW,Z+1));
8430 XXFLAG=1
8440 NEXT Z
8450 IF XXFLAG THEN XX=XX-1
8460 LOCATE ROW,Z,0 : PRINT " ";
8470 GOTO 8500
8480 IF ASC(RIGHT$(K$,1))=82 THEN INSERTFLAG=1 : BEEP '
      Insert
8490 GOTO 8280 ' Non defined control key
8500 MSIZE=MSIZE-1

```

```

8510 INSERTFLAG=0 : GOTO 8260
8520 IF UALPHA AND (K$>="a" AND K$<="z") THEN
K$=CHR$(ASC(K$)-32) ' Make upcase
8530 IF DIGIT AND (K$>="0" AND K$<="9") THEN 8590 '
Digits only
8540 IF VALIDATE$="" THEN 8580 ' Skip if no validate
8550 FOR Z=1 TO LEN(VALIDATE$) : IF
K$=MID$(VALIDATE$,Z,1) THEN 8590 ' Validate
8560 NEXT Z
8570 SOUND 200,2 : GOTO 8290 ' Sound for invalid
character
8580 IF DIGIT AND (K$<"0" OR K$>"9") THEN 8570
8590 IF INSERTFLAG=0 THEN 8620 ' Insert
8600 FOR Z=COL+MSIZE-1 TO COL+X STEP-1 : LOCATE ROW,Z,0
: PRINT CHR$(SCREEN(ROW, Z-1)) ' Move 1 char right from
cursor
8610 NEXT Z : MSIZE=MSIZE+1 : IF MSIZE>SIZE THEN
MSIZE=MSIZE-1 ' Increase MSIZE
8620 XX=XX+1 : LOCATE ROW,COL+X-1 : PRINT K$; ' Show key
press
8630 IF XX<X THEN XX=X
8640 IF WFE=1 AND X=SIZE THEN 8260 ' Wait for enter?
8650 NEXT X
8660 S$="" : IF NEGSIZE THEN XX=ABS(NEGSIZE)
8670 FOR Z=1 TO XX : S$=S$+CHR$(SCREEN(ROW,COL+Z-1)):
NEXT Z 'Read off screen
8680 VALIDATE$="" : SIZE=1 : DIGIT=0 : UALPHA=0 : WFE=0
: NEGSIZE=0
8690 RETURN
9000 ' Subroutine to trim off trailing spaces when
GWACCEPT has been used with a negative size eg, GOSUB
8000 : GOSUB 9000
9010 FOR TRIM=LEN(S$) TO 1 STEP-1
9020 IF RIGHT$(S$,1)=" " THEN S$=LEFT$(S$,TRIM-1) ELSE
9040
9030 NEXT TRIM
9040 RETURN

```

END OF ARTICLE 

FROM THE SYSOP

I would like to wish all TISHUG members a very happy 1995 and I look forward to at least a few of the members providing some contributions for the BBS.

A different selections of files and programs has been loaded on 7/1/95.

Usage of the BBS has fallen drastically in 1994, it looks like this BBS will close down in 1995 if usage continues to decline.

Ross Mudie, SYSOP, 7/1/95.

KEEP THOSE PRINT HEADS CLEAN

By Chuck Reinhard
of the Long Island TI994A User Group.
Retyped by Loren West

It takes only three things to get good, dark print from your printer:

- 1.A properly adjusted printer
- 2.A good ribbon
- 3.A clean print head

The guide for the fine printer wires gradually gets clogged with a mixture of lint, ink and oils from the ribbon. As this dirt builds up and dries out, the pin wires drag in the guide. The result is you get light, low-contrast print even from a new ribbon. The following is a procedure for cleaning the print head that is quick, simple, and does not require removal of the head.

Obtain an aerosol can of colour TV cleaner (Radio Shack 164-2320) or equivalent. Make sure the label states that it contains silicone, that it will not harm plastic and that it has a plastic tube to plug into the spray nozzle.

Power-off the printer. Leave paper in the printer, but remove the ribbon. Gently move the print head to the middle of the carriage.

Cut a two-inch square from a lint free cotton handkerchief. Fold the cut cloth over on top of itself a couple of times until it is about the width of your printer ribbon and four layers thick.

Insert the cloth into the print head exactly where the ribbon was, between the pin guide and the ribbon shield. The cloth should not fit too tight.

Insert the tube into the aerosol spray cap. Put the end of the tube in contact with the cloth next to the pin guide of the print head and give a short, quick press to wet the cloth.

Turn on the printer and send a page of print to the printer (self-test can be used). Now, move the cloth a little to one side so that you have a clean spot. It may be necessary to give the cloth another shot of fluid and print out another page.

Remove the cloth from the print head and print a page without the ribbon. If you see any printing on the paper, put the cloth back into the print head and repeat the whole process.

Finally, install the ribbon and enjoy the improved print.

END OF ARTICLE 

- Go Print the graph
- Quit Return to Graphics menu
- Quit Exit from all menus

4.9.9 PrintTo commands

- Printer Output to a printer
- Range Define the range to be printed
- Border Fix border rows or columns
- Linefeed Advance printer one line
- PageAdv Advance one page
- Options Set print margins, header, footer, setup, page length
- Adjust Set printer and spreadsheet equal to Top Of Page
- Go Print the selected range
- Quit Exit from all menus

4.9.10 USER command

- USER Set up user defined functions

4.9.11 Exit command

- Exit Leave AsEasyAs

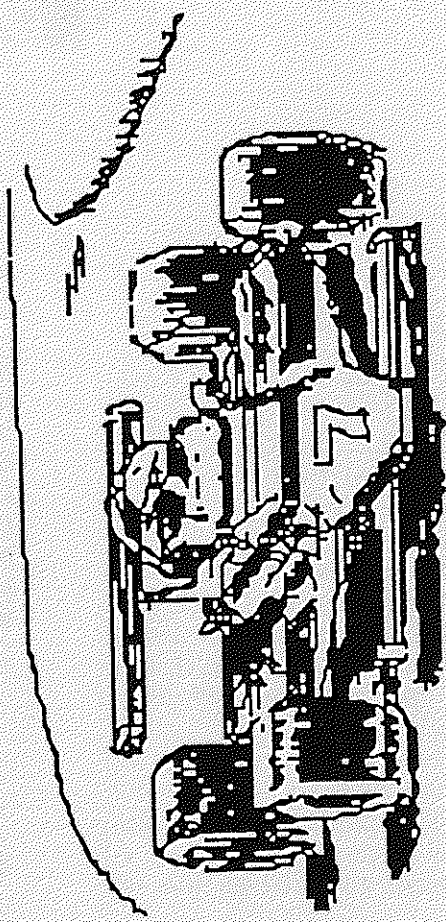
Note: The Exit command doesn't confirm that changes should be saved. Therefore, if you want to store changes, select the "File" option.

For Further Information Contact:

You should register your AsEasyAs program so you can receive a manual, technical support and other information. To do this contact:

Trius, Inc.
Suite 2D - 3
231 Sutton Street
North Andover, MA 01845

You can call Trius at 508-0794-9377 for latest version, pricing, orders and other information on AsEasyAs.



REGIONAL GROUP REPORTS

Meeting Summary For FEBRUARY

Central Coast 11/02/95 Saratoga
 Glebe 09/02/95 Glebe
 Hunter Valley 05/02 12/02/95
 Illawarra 07/02/95 Keiraville
 Liverpool 10/02/95 Yagoona West
 Sutherland 17/02/95 Jannali

CENTRAL COAST Regional Group

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

GLEBE Regional Group

Regular meetings are normally on the Thursday evening following the first Saturday of the month, at 8pm at 43 Boyce Street, Glebe. Contact Mike Slattery, (02) 692 8162.

HUNTER VALLEY Regional Group

The Meetings are usually held on the second or third Sunday of each month at members homes starting at 3pm. Check the location with Geoff Phillips by leaving a message on (049) 428 617. Please note that the previous phone number (049) 428 176 is now used exclusively by the ZZAP BBS which also has TI support. Geoff.

ILLAWARRA Regional Group

Regular meetings are normally held on the first Tuesday of each month after the TISHUG Sydney meeting at 7.30pm, at the home of Geoff Trott, 20 Robsons Road, Keiraville. A variety of investigations take place at our meetings, including Word Processing, Spreadsheets and hardware repairs. Contact Geoff Trott on (042) 29 6629 for more information.

LIVERPOOL Regional Group

Regular meeting date is the Friday following the Tishug Sydney meeting at 7.30 pm. Contact Larry Saunders (02) 644-7377 (home). After 9.30 PM or at work (02)602 3312 Liquorland Liverpool West for more information.

*** ALL WELCOME ***

10th February 1995

My Place : 34 Colechin st. Yagoona West

Bye for now Larry.

Liverpool Regional Co-Ordinator

SUTHERLAND Regional Group

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

TISHUG in Sydney

Monthly meetings start promptly at 2pm (except for full day tutorials) on the first Saturday of the month that is not part of a long weekend. They are held at the MEADOWBANK PRIMARY SCHOOL, on the corner of Thistle Street and Belmore Street, Meadowbank. Cars can enter from Gale Street and park in the school grounds. Regular items include news from the directors, the publications library, the shop, and demonstrations of monthly software.

FEBRUARY MEETING - 4th FEBRUARY

MARCH MEETING - 4th MARCH

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

March - 11th February

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

DID YOU KNOW?

By Robyn West

Most of us have played the "PARSEC" game and listened to the soft, mystery voice guiding us through. The makers thought that people would relate to a female's voice rather than a male's voice. The voice belongs to a young lady named "Aubree Anderson".

Aubree was born in North Carolina, and at the time of her sound recording she was a junior at Texas Tech, doing a major in Geology. Parsec was the only sound recording that Aubree had made at the time.