

3rd  
Birthday Edition



SYDNEY  
NEWS  
DIGEST

MAY 1984.

**SHUG**  
PO BOX 149  
PENNANT HILLS  
2120. N.S.W.

REGISTERED BY AUSTRALIA POST  
PUBLICATION No. NBH5933

# 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.

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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.

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- 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.

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## 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.

programmed by  
**HELP!**  
 Crisis Line  
 992229

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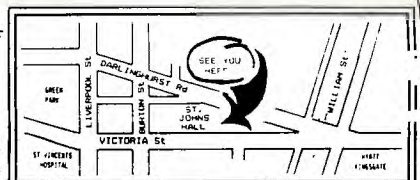
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 first Saturday  
 of the month

St. John's Hall,  
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 DARLINGHURST.



## EDITORIAL



with SHANE

Firstly, a very special warm welcome to all of the many new members to T.I.S.H.U.G., and also, I should take this opportunity to wish our group, a VERY HAPPY 3rd BIRTHDAY. Three years is a long time, in the life of a computer club, especially when the existing committee (or many of them), have been on that committee since the day this group became official.

I have seen this group grow to an almost unbelievable size of over 700 members. The print run in this, our 3rd BIRTHDAY EDITION of the SYDNEY NEWS DIGEST, has, infact grown to a total of 1,000 copies.

I hope that you like the new lay-out of this publication, which was designed by our own JIM HOWARD. Over the last few months, I have stated in this column, that it was my intention to make each issue of this publication, better than the one before. I think that if you want to get better than this one, you're going to have to have me working full time on the job (chuckle, chuckle). This issue has grown to an all time large size of 28 pages for our third birthday, and I hope that you enjoy it as much as I did, putting it together.

Within the pages of this simple little news letter, you'll find the following...

PAGE 4: Jenny's YOUNGERSET (under 18's) page.

PAGE 5: "BEFORE OPERATING" and a couple of programs.

PAGES 6 & 7: PROGRAMMING MUSIC with Russell Welham, plus a continuation of STAR CORPS game to type in from JENNY'S PAGE, which is also continued on page 8.

PAGE 8: Our new Club SHOP page. I must point out that you can now use BANKCARD to obtain all items sold there, and also you join and renew your membership.

PAGE 9: Modem COMMUNICATORS page.

PAGES 10 & 11: LETTERS TO THE EDITOR.

PAGES 12 & 13: The full low-down on our two hopeful special guests at our next meeting. One a human, and the other an almost human.

PAGES 14 & 15: Our new Supplier of TI SOFTWARE AND HARDWARE here in Australia have provided us with a CENTRE-FOLD SPREAD INTRODUCTION TO IMAGIC. You'll love to read this 2 page spread, as it will carry you on to greater heights of usefull programming with your TI-99/4(A) computer. The message is, no longer dispare, you're now in good hands.

PAGES 16 & 17: J.R.'s PAGE has grown to two, and a new column header. His article and photographs make good reading.

PAGE 18: Peter Day is back with us, for part 3 of THE BASIC'S FOR BEGINNERS, followed by ...

PAGE 19: Yet another program to type in. Dedicated to our CB & AMATEUR RADIO GUYS in this group.

PAGES 20 & 21: SOFTWARE REVIEW by Terry Phillips.

PAGE 22: REPORTS & INFORMATION on our REGIONAL GROUPS of T.I.S.H.U.G. Without these home groups, this group just could not be as helpful to our growing huge membership.

PAGE 23: News from SOFTEX, our new Australian National publication.

PAGE 24: PROGRAMMERS READ THIS. An article by Mark Nielsen on FILES FOR CASSETTE OWNERS, and continued on the next page.

PAGE 25: MONTHLY SOFTWARE AWARDS. We show you how you can earn for yourself \$\$\$\$\$\$\$\$ cash prizes, just for writing a program and sending it to us.

And our new section called THE CUT-UP (or photocopy) PAGE. Designed also by Jim Howard, this page (#27) will mae it just so much easier for you to ADVERTISE, PURCHASE CLUB ITEMS, AND JOIN or RENEW your membership, now that we have BANKCARD. We will also have re-prints of this page made available at club meetings for your convenience. Read page two, our INFORMATION PAGE, for contact addresses and phone numbers.

Hopefully, by the end of next month, this group will have it's very own MODEM BULLETIN BOARD and SOFTWARE DOWN-LOADING CENTRE available fr you to use. This telephone service is being set up right now, and all you'll need to put your computer in touch with it over the telephone lines, will be (1) Your TI-99/4 or 4(a) computer, (2) RS232 INTERFACE, (3) TELEPHONE MODEM, and (4) TERMINAL EMULATOR #2 MODULE. I would like to see all of our Technical guys in the club, attend a special AFTER MEETING meeting. To talk over plans to create and make available low cost RS232's & Modems, so that as many club members can take advantage of our new BBS CENTRE. The TECHO MEETING will commence about 4pm on the 5th of May. So, all those who can read Schematics, know how to solder, and have had experience in making up boards etc, please try to stay after the BIG MEETING. We want members who will DO not TALK ABOUT DOING, like we have seen in the past.

Once again, HAPPY BIRTHDAY, and I'll see you at the next Club Meeting.

Yours in Computing the TI WAY.

  
SHANE ANDERSEN  
\*\*\*\*\*



# Sudney News Digest



By W. M. Johnson  
(MSP 99 USERS GROUP)

**"BEFORE OPERATING."**

**READ YOUR INSTRUCTION MANUAL.**

It's not my fault, the computer made a mistake! Well for the unenlightened computers DO NOT make mistakes. The operators are the only ones capable of error.

On the other hand it was once said "to err is human, but for a royal screwup you need a computer".

At least six million times a month I get "Those joysticks I bought from you don't work". "Did you read the instructions?". "Well", says the customer "what difference does that make?".

Oh boy!! Funny thing, in Texas they say "Remember the Alamo". What they should say is "Remember the Alpha lock". Reading the instructions though is not always the answer. First the instructions have to be understandable and second they have to mean something.

When I installed my second drive, like the good boy that I am, I read the instructions carefully (several times). BUT when you get something like "Remove all cards from the expansion box". This makes a great deal of sense. I mean to say why leave all the cards in when you want to connect a plug on the back of the box. I mean doesn't every one dismantle the radio when they want to change channels on the T.V.

With the extra drive you get a manual and an ADDENDUM, the

manual tells you the best way not to connect your new drive, the addendum compounds the error.

After two hours of total failure, I decided to phone T.I. in Richmond Hill. "Ah!" said the expert "Don't take any notice of the instructions."

"But," I put in "what about the addendum?". "Well" he said in a slow drawl, "The addendum is also incorrect," "Then how do I get my \$450 drive to work?". "Well," he said "It doesn't say so in the instructions, but, all you have to do is connect it to the short cable you got when you bought the first drive."

He was right, plug it in to the short cable and it works, no dismantling, no modifications, in fact so easy a very young child could do it.

That reminds me of the time I had a tour around a computer factory. After a good look at almost everything, I noticed there was a room I had not seen.

"What's in the room with the blue door?" I asked. "Ah!" said my guide, "That's where we're experimenting with our new nine thousand H Plus". My guide stood and thought for a moment, "Well it's a computer that's so human, when ever it makes a mistake it blames the other computers".



```

100 CALL CLEAR
110 FOR I=1 TO 8
120 CALL COLOR(I,2,8)
130 NEXT I
140 CALL VCHAR(1,31,1,96)
150 CALL SCREEN(5)
160 REM - TIGERCUB CRYPTOCOD
ER BY JIM PETERSON
170 CALL VCHAR(1,3,32,672)
180 T$="THIS PROGRAM WILL CR
EATE A CRYPTOGRAM BY SUBSTI
TUTING ONE LETTER FOR A
NOTHER."
190 GOSUB 520
200 DIM A$(26,2)
210 M$="ABCDEFGHIJKLMNQRST
UVWXYZ"
220 FOR T=26 TO 1 STEP -1
230 A$(T,1)=CHR$(T+64)
240 RANDOMIZE
250 X=INT(T*RND+1)
260 A$(T,2)=SEG$(M$,X,1)
270 IF A$(1,2)="A" THEN 210
280 IF A$(T,2)=A$(T,1) THEN 2
50
290 M$=SEG$(M$,1,X-1)&SEG$(M
$,X+1,LEN(M$))
300 NEXT T
310 FOR J=1 TO LEN(T$)
320 D=ASC(SEG$(T$,J,1))-64
330 IF (D<1)+(D>26) THEN 360
340 C$=C$&A$(D,2)
350 GOTO 370
360 C$=C$&SEG$(T$,J,1)
370 NEXT J
380 T$=C$
390 C$=NUL$
400 GOSUB 520
410 IF FL=0 THEN 440
420 INPUT "PRESS<ENTER>TO TR
Y ANOTHER":Z$
430 GOTO 480
440 FL=1
450 FOR D=1 TO 500
460 NEXT D
470 CALL VCHAR(1,3,32,672)
480 PRINT "TYPE YOUR MESSAGE
OF NOT": "MORE THAN 4 LINES.
USE EXTRA": "SPACES TO A
VOID BREAKING A": "THEN ENTER
"
490 INPUT "
":T$
500 CALL VCHAR(1,3,32,672)
510 GOTO 210
520 R=5
530 C=3
540 FOR J=1 TO LEN(T$)
550 CALL HCHAR(R,C,ASC(SEG$(
T$,J,1)))
560 C=C+1
570 IF C<31 THEN 600
580 C=3
590 R=R+1
600 NEXT J
610 RETURN
    
```

```

100 REM A GLIMPSE OF REALITY
110 REM FOR COMPUTER ADDICTS
120 REM
130 REM BY PHIL WEST. TIUP.
140 REM in EXTENDED BASIC
150 CALL CLEAR
160 CALL CHAR(96,"1018183C3C
7E3C18")
170 CALL CHAR(112,"FFFFFFFF
FFFFFFFF")
180 CALL CHAR(120,"FFFFFFFF
FFFFFFFF")
190 CALL CHAR(121,"55555555
55555555")
200 CALL CHAR(122,"5D5D5D5D
5D5D5D5D")
210 CALL CHAR(128,"000011925
438FF5D")
220 H=22
230 CALL COLOR(9,16,1)
240 CALL COLOR(11,2,2)
250 CALL COLOR(12,13,1)
260 CALL COLOR(13,14,1)
270 CALL VCHAR(4,16,112,3)
    
```

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280 CALL HCHAR(4,17,112,3)
290 CALL VCHAR(4,20,112,18)
300 CALL HCHAR(22,1,120,96)
310 CALL HCHAR(3,18,112)
320 CALL HCHAR(2,17,112,3)
330 G=0
340 H=H-1
350 FOR Z=7 TO H-1
360 CALL VCHAR(Z,16,96)
370 CALL VCHAR(Z,16,32)
380 NEXT Z
390 G=G+1
400 CALL SOUND(15,(H*50),2)
410 CALL HCHAR(H,G,121)
420 IF G=32 THEN 330
430 IF H=7 THEN 440 ELSE 350
440 FOR F=3 TO 30 STEP 3
450 CALL HCHAR(7,F,128)
460 CALL VCHAR(8,F,122,14)
470 CALL SOUND(30,(F*50),2)
480 NEXT F
490 PRINT "NOW DO SOMETHING
ABOUT IT!!"
500 GOTO 500
    
```



## Programming Music

By Russell Welham (Music Co-Ordinator.)



Welcome to the May issue of the TISHUG magazine and in particular to my column, the Musicial one.

In the following listing which is written in Extended Basic, I have used the codes !@p- and !@p+ for those members who don't know what these symbols mean in a program, I will explain:- When you first RUN a program the computer does a PRE-SCAN. When you use these codes the PRE-SCAN is shortened to only the lines that require the PRE-SCAN. The difference in time in the PRE-SCAN of this program with the codes to the program without the codes is about 18 seconds.

For more information on the PRE-SCAN see page 7 of the extra booklet you received with the EXTENDED BASIC MODULE that covers the 4A. In last month's News Digest the program on page 3 the Spacecraft one. Line 220 should read CALL VCHAR & 2070 should read

```
CALL HCHAR(ROW+1,COL,130)
```

```

1 !*****
2 !* (Main Title From) *
3 !* THE LOVE BOAT. *
4 !* BY WILLIAMS & FOX. *
5 !* T.I. EXTENDED BASIC *
6 !* PROGRAM BY R WELHAM *
7 !* 12/2/1984. *
8 !*****
9
10 A1=110 : B1=117 : C1=131 : D1=147 : E1=175 : F1=185 : G1=196 : H1=208
11 A2=220 : B2=233 : C2=262 : D2=277 : E2=330 : F2=349 : G2=370 : H2=392 : I2=415
12 A3=440 : B3=453 : C3=523 : D3=554 : E3=587 : F3=622 : G3=659 : H3=698 : I3=740 : J3=784 : K3=831
13 A4=880 : B4=932 : C4=1047 : D4=1109 : E4=1245 : F4=1319 : G4=1480 : H4=1568 : I4=1661 : J4=1760 : K4=1861 : L4=1974 : M4=2099 : N4=2236 : O4=2385 : P4=2546 : Q4=2719 : R4=2904 : S4=3101 : T4=3310 : U4=3531 : V4=3764 : W4=4019 : X4=4295 : Y4=4592 : Z4=4910
14 A5=1760 : B5=1861 : C5=1974 : D5=2099 : E5=2236 : F5=2385 : G5=2546 : H5=2719 : I5=2904 : J5=3101 : K5=3310 : L5=3531 : M5=3764 : N5=4019 : O5=4295 : P5=4592 : Q5=4910
15 CALL CLEAR : CALL DELSPRITE(ALL)
16 GOSUB 162 !FOR CHAR DEFIN E
17 FOR PLAY=1 TO 2
18 CALL SOUND(V*1.5,C1,6,G1,6,G2,0)
19 !@F=
20 CALL SOUND(W+U,C1,6,G1,6,G2,0)
21 CALL SOUND(V*1.5,C1,6,G1,6,G2,0)

```

```

22 CALL SOUND(V*1.5,C1,6,G1,6,G2,0)
23 CALL SOUND(V,C1,6,G1,6,A3,0)
24 CALL SOUND(W,A1,6,G1,6,B3,0)
25 CALL SOUND(V,A1,6,G1,6,C3,0)
26 CALL SOUND(W,A1,6,G1,6,B3,0)
27 CALL SOUND(U,A1,6,G1,6,E2,0)
28 CALL SOUND(V*1.5,A1,6,G1,6,E2,0):: CALL SPRITE(#2,96,120,120,-9,0,#1,100,2,119,121,-9,0)
29 CALL SOUND(W,A1,6,G1,6,E2,0)
30 CALL SOUND(V,A1,6,G1,6)
31 CALL SOUND(W,A1,6,G1,6,E2,0)
32 CALL SOUND(W,A1,6,G1,6,G2,0):: IF FLAG=1 THEN 49
33 CALL SOUND(V*1.5,D1,6,C2,6,A3,0)
34 CALL SOUND(U+W,D1,6,C2,6,A3,0)
35 CALL SOUND(V*1.5,D1,6,C2,6,A3,0)
36 CALL SOUND(W,D1,6,C2,6,A3,0)
37 CALL SOUND(V,D1,6,C2,6)
38 CALL SOUND(W,D1,6,C2,6,A3,0)
39 CALL SOUND(W,D1,6,C2,6,C3,0)
40 CALL SOUND(W,A1,6,F2,6,C3,0)
41 CALL SOUND(V,A1,6,F2,6,D3,0)
42 CALL SOUND(U,A1,6,F2,6,D3,0)
43 CALL SOUND(W,D1,6,F2,6,D3,0):: CALL SPRITE(#2,96,120,120,-8,0,#1,100,2,119,121,-8,0)
44 CALL SOUND(U,G1,6,F2,6,D3,0)
45 CALL SOUND(V,G1,6,F2,6)
46 CALL SOUND(W,A3,0)
47 CALL SOUND(W,E2,0)
48 FLAG=1 : GOTO 18
49 CALL SOUND(V*1.5,F1,6,E2,6,A3,0)
50 CALL SOUND(W+U,F1,6,E2,6,A3,0)
51 CALL SOUND(U,F1,6,E2,6,A3,0)
52 CALL SOUND(V,F1,6,E2,6)
53 CALL SOUND(W,F1,6,A3,0)
54 CALL SOUND(W,F1,6,C3,0)
55 CALL SOUND(W,D1,6,F2,6,C3,0)
56 CALL SOUND(V,D1,6,F2,6,D3,0)
57 CALL SOUND(W+U,D1,6,F2,6,D3,0):: CALL SPRITE(#2,96,120,120,-8,0,#1,100,2,119,121,-8,0)
58 CALL SOUND(V*1.5,G1,6,F2,6,D3,0)
59 CALL SOUND(W,G1,6,F2,6,D3,0)
60 CALL SOUND(V,G1,6,F2,6)
61 CALL SOUND(V,G1,6,C3,0)
62 CALL SOUND(U,G1,6,BF3,6,6,0)
63 CALL SOUND(V,G1,6,BF3,6,6,0)
64 CALL SOUND(V,G1,6,BF3,6,6,0)

```

```

65 CALL SOUND(V*1.5,D1,6,BF2,6,D3,0)
66 CALL SOUND(V,C1,6,BF2,6,6,3,0)
67 CALL SOUND(W,C1,6,BF2,6,6,3,0)
68 CALL SOUND(W,C1,6,BF2,6,6,3,0)
69 CALL SOUND(W,F1,6,C2,6,E3,0)
70 CALL SOUND(V,F1,6,C2,6,G3,0)
71 CALL SOUND(W,F1,6,C2,6,F3,0)
72 CALL SOUND(V,F1,6,C2,6,E3,0):: CALL SPRITE(#2,96,120,120,-9,0,#1,100,2,119,121,-9,0)
73 CALL SOUND(V,F1,6,C2,6,A3,0)
74 CALL SOUND(U,F1,6,C2,6,C3,0)! RUN
75 CALL SOUND(V,F1,6,C2,6)
76 CALL SOUND(V,F1,6,C2,6,C3,0)
77 CALL SOUND(U,F1,6,C2,6,F3,0)
78 CALL SOUND(V,F1,6,C2,6,C3,0)
79 CALL SOUND(V,F1,6,C3,0)
80 CALL SOUND(V*1.5,BF1,6,AF,2,6,C3,0)
81 CALL SOUND(W,BF1,6,AF2,6,C3,0)
82 CALL SOUND(V,BF1,6,AF2,6,D3,0)
83 CALL SOUND(W,BF1,6,AF2,6,F3,0)
84 CALL SOUND(W,BF1,6,AF2,6,EF3,0)
85 CALL SOUND(W,EF1,6,BF2,6,D3,0)
86 CALL SOUND(V,EF1,6,BF2,6,F3,0):: CALL SPRITE(#2,96,120,120,-10,0,#1,100,2,119,121,-10,0)
87 CALL SOUND(W,EF1,6,BF2,6,EF3,0)
88 CALL SOUND(V,EF1,6,BF2,6,D3,0)
89 CALL SOUND(V,EF1,6,BF2,6,BF3,0)
90 CALL SOUND(U*1.5,D1,6,C2,6,D3,0)
91 CALL SOUND(W,C3,0)
92 CALL SOUND(W,A3,0)
93 CALL SOUND(V,G1,6,D2,6,BF3,0)
94 CALL SOUND(W,G1,6,D2,6,A3,0)
95 CALL SOUND(W,G1,6,D2,6,BF3,0)
96 CALL SOUND(W,FS1,6,D2,6,C3,0)
97 CALL SOUND(V,FS1,6,D2,6,BF3,0)
98 CALL SOUND(W,FS1,6,D2,6,A3,0)
99 CALL SOUND(V,F1,6,D2,6,BF3,0)!MIND
100 CALL SOUND(W,F1,6,D2,6,A3,0)
101 CALL SOUND(W,F1,6,D2,6,BF3,0)
102 CALL SOUND(V,E1,6,C2,6,C3,0):: CALL SPRITE(#2,96,120,120,-10,0,#1,100,2,119,121,-10,0)
103 CALL SOUND(V,E1,6,C2,6,A3,0)

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# Sydney News Digest

CONTINUED FROM PAGE 4



```

104 CALL SOUND(T,F1,6,C2,6,A
3,0)
105 CALL SOUND(U,D1,6,C2,6,A
3,0)
106 CALL SOUND(V,A1,6,D1,6,C
3,0)
107 CALL SOUND(V,A1,6,D1,6,A
3,0)
108 CALL SOUND(T,C1,6,G1,6,B
2,0)!LOVE
109 CALL SOUND(U*1.5,C1,6,G1
,6,G2,0):: CALL SPRITE(#2,96
,10,120,120,-8,0,#1,100,
2,119,121,-8,0)
110 CALL SOUND(V,C1,6,G1,6,A
3,0)
111 CALL SOUND(W,A1,6,G1,6,B
3,0)
112 CALL SOUND(V,A1,6,G1,6,C
3,0)
113 CALL SOUND(W,A1,6,G1,6,B
3,0)
114 CALL SOUND(U,A1,6,G1,6,E
2,0)
115 CALL SOUND(U,A1,6,G1,6,E
2,0)
116 CALL SOUND(V,A1,6,G1,6)
117 CALL SOUND(W,A1,6,G1,6,E
2,0)
118 CALL SOUND(W,A1,6,G1,6,G
2,0)!AN
119 CALL SOUND(W,D1,6,C2,6,G
2,0)
120 CALL SOUND(V,D1,6,C2,6,A
3,0)
121 CALL SOUND(W+U,D1,6,C2,6
,A3,0)!SMILE
122 CALL SOUND(U,D1,6,C2,6,A
3,0):: CALL SPRITE(#2,96,12,
120,120,-10,0,#1,100,2,1
19,121,-10,0)
123 CALL SOUND(V,D1,6,C2,6)
124 CALL SOUND(W,D1,6,A3,0)
125 CALL SOUND(W,D1,6,C3,0)
126 CALL SOUND(W,A1,6,F2,6,C
3,0)
127 CALL SOUND(V,A1,6,F2,6,D
3,0)
128 CALL SOUND(U,A1,6,F2,6,D
3,0)
129 CALL SOUND(W,D1,6,F2,6,D
3,0)
130 CALL SOUND(V*1.5,G1,6,F2
,6,D3,0)
131 CALL SOUND(W,G1,6,F2,6,D
3,0)
132 CALL SOUND(V,G1,6,F2,6)
133 CALL SOUND(V,C3,0)!IT'S
134 CALL SOUND(V*1.5,C1,6,C3
,6,G3,0)
135 CALL SOUND(V*1.5,C1,6,C3
,6,G3,0):: CALL SPRITE(#2,96
,15,120,120,-10,0,#1,100
,2,119,121,-10,0)
136 CALL SOUND(W,B1,6,C3,6,B
3,0)
137 CALL SOUND(W,A1,6,C3,6,B
3,0)
138 CALL SOUND(W,D1,10,F2,10
,D3,4)
139 CALL SOUND(V,C1,8,F2,8,D
3,2)
140 CALL SOUND(W+V,C1,6,F2,6
,D3,0)
141 CALL SOUND(V,C3,0)
142 CALL SOUND(V*1.5,C1,6,C3
,6,G3,0)
143 CALL SOUND(V*1.5,C1,6,C3
,6,G3,0)
144 CALL SOUND(W,B1,6,C3,6,B
3,0)

```

```

145 CALL SOUND(W,A1,6,C3,6,B
3,0)
146 CALL SOUND(W,C1,10,F2,10
,D3,4)
147 CALL SOUND(V,C1,8,F2,8,D
3,2)
148 CALL SOUND(W+V,C1,6,F2,6
,D3,0)
149 CALL SOUND(W,B1,6,C3,0)
150 CALL SOUND(W,A1,6,C3,0)
151 FLAG=0 :: GOSUB 181
152 !8P+
153 NEXT PLAY
154 FOR X=0 TO 24
155 CALL SOUND(V,C1,X+6,C3,
X+6,G3,X)
156 NEXT X
157 CALL SOUND(V,G3,30)
158 DISPLAY AT(1,5):"PLAY BE
AIN (Y/N)?"
159 CALL KEY(0,K,S):: IF (K<<
>89)*(K<>78) THEN 159 :: CALL
DELSPRITE(ALL):: CALL M
AGNIFY(1):: CALL CHARSET
160 IF K=89 THEN 14 ELSE STO
P
161 ! CHAR DEFINE
162 CALL CHAR(96,"183C7EFFFF
FF7F7F",98,"183C7EFFFFFFFFE
",97,"3F3F1F1F0F070301",
99,"FCFCFBFBFCFC0C080")!HEART
163 CALL CHAR(100,RPT$("O",1
6),101,RPT$("O",8)&"10204080"
,102,"0703050810204080"
,103,RPT$("O",16))!ARROW
164 CALL CHAR(120,"FFFFFFFF
FFFFFFFF")!SOLID BLOCK
165 CALL CHAR(121,"FF7F3F1F0
F070301")!BOW
166 CALL CHAR(112,"000000000
00000000")!WINDOWS
167 CALL CHAR(113,"FFE7C3B18
1C3E7FF")!PORTHOLE
168 CALL CHAR(128,"FFFFFFFF
FE7C3B1")!SHIP BOTTOM
169 CALL CHAR(129,"FFFFFFFF00
OFFFFFF")!BAND
170 CALL CHAR(136,"000000001
83C7EFF")!SEA
171 CALL SCREEN(8)
172 CALL COLOR(11,16,11,12,1
6,1,13,16,13,14,13,8)
173 CALL HCHAR(24,1,136,8)::
CALL HCHAR(24,9,121):: CALL
HCHAR(24,10,128,14):: C
ALL HCHAR(24,24,136,8)
174 CALL HCHAR(23,8,121):: C
ALL HCHAR(23,9,120,17)
175 CALL HCHAR(22,7,121):: C
ALL HCHAR(22,8,120,18)
176 CALL HCHAR(21,13,120,8)::
CALL HCHAR(20,13,120,8)::
CALL VCHAR(18,16,120,2)::
CALL VCHAR(18,17,120,2)
177 CALL HCHAR(17,16,129,2)
178 FOR I=10 TO 24 STEP 4 ::
CALL HCHAR(23,I,113):: INEXT
I
179 FOR I=13 TO 19 STEP 2 ::
CALL HCHAR(21,I,112):: NEXT
I
180 CALL MAGNIFY(3)
181 CALL SPRITE(#2,96,16,120
,120,-10,0)
182 CALL SPRITE(#1,100,2,119
,121,-10,0)
183 RETURN

```

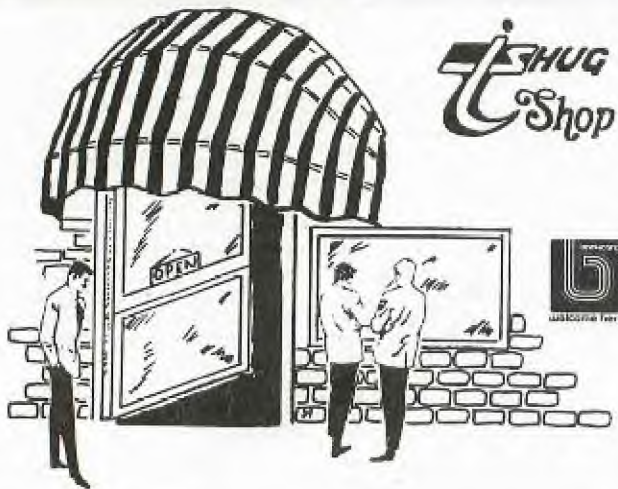


```

490 FOR RESET=1 TO 30 :: PLA
CE(RESET,1)=0 :: NEXT RESET
500 FOR RESET=1 TO 30 :: PLA
CE(RESET,2)=0 :: NEXT RESET
510 FITERS=FITERS+1 :: ASTER
S=ASTERS-1 :: SPEED=1
520 RD=0 :: CALL CLEAR :: CA
LL SCREEN(2):: ROW=INT(RND*2
3+1):: COL=INT(RND*31+1)
:: CALL VCHAR(ROW,COL,104)::
REM DRAW YOUR TRANSPORT
530 OLDROW=ROW :: OLDROW=COL
:: REM REMEMBER WHERE THE T
RANSPORT IS
540 FOR A=1 TO FITERS :: REM
DRAW FIGHTERS IN ORIGINAL P
OSITIONS
550 ROW=INT(RND*23+1):: COL=
INT(RND*31+1):: CALL GCHAR(R
OW,COL,CAR)
560 IF CAR<>32 THEN 550 :: R
EM IF IT'S NOT BLANK, FIND A
NOTHER PLACE
570 CALL VCHAR(ROW,COL,96)::
PLACE(A,1)=ROW :: PLACE(A,2
)=COL
580 NEXT A
590 FOR A=1 TO ASTERS :: REM
DRAW THE ASTEROIDS
600 ROW=INT(RND*23+1):: COL=
INT(RND*31+1):: CALL GCHAR(R
OW,COL,CAR)
610 IF CAR<>32 THEN 600
620 CALL VCHAR(ROW,COL,112)::
REM DRAW AN ASTEROID
630 NEXT A
640 CALL SCREEN(2)
650 CALL KEY(0,KEY,STATUS)::
REM DON'T MOVE UNTIL A KEY
IS PRESSED
660 IF STATUS=0 THEN 650
670 CALL SCREEN(2):: Q=1 ::
GOSUB 900
680 FOR A=1 TO FITERS :: IMO
VE THE FIGHTERS
690 IF PLACE(A,1)=0 THEN 830
700 REM FIGURE OUT HOW TO MO
VE THE FIGHTERS CLOSER TO TH
E TRANSPORT
710 FOR P=1 TO (SQR((PLACE(A
,1)-OLDROW)^2+(PLACE(A,2)-OL
DCOL)^2))/5+1
720 Q=Q+1 :: IF Q<SPEED THEN
750
730 GOSUB 900 :: ISEE IF A K
EY WAS PRESSED
740 Q=1
750 ROW=PLACE(A,1):: COL=PLA
CE(A,2):: IF PLACE(A,1)=OLDR
OW THEN 770 :: IF PLACE(
A,1)>OLDROW THEN 760 :: PLAC
E(A,1)=PLACE(A,1)+1 :: GOTO
770
760 PLACE(A,1)=PLACE(A,1)-1
770 IF PLACE(A,2)=OLDCOL THE
N 790 :: IF PLACE(A,2)>OLDCO
L THEN 780 :: PLACE(A,2)
=PLACE(A,2)+1 :: GOTO 790
780 PLACE(A,2)=PLACE(A,2)-1
790 CALL GCHAR(PLACE(A,1),PL
ACE(A,2),CAR):: IF CAR=105 T
HEN 800 :: IF CAR<>32 TH
EN 850
800 CALL VCHAR(ROW,COL,32)::
!BLANK OUT OLD FIGHTER
810 CALL VCHAR(PLACE(A,1),PL
ACE(A,2),96):: CALL SOUND(10
0,110,0)!DRAW FIGHTER
820 NEXT P
830 NEXT A
840 GOTO 680
850 IF CAR=104 THEN 1020 ! T
HEY CAUGHT YOU
860 GOSUB 1080 !FIGHTER FLOW
S UP

```

# Sydney News Digest



CONTINUED FROM PAGE 7

```

870 WRECKS=WRECKS+1 :: JF WR
ECKS=FITERS THEN 880 :: PLAC
E(A,1)=0 :: GOTO 830
880 CALL SCREEN(9):: PRINT "
        YOU ESCAPED!" :: P
RINT "        SCORE=";
SCORE :: GOTO 450
890 STOP !IF SYSTEM ERRS, IT
CRASHES HERE
900 CALL KEY(0,KEY,STATUS)!S
EE WHICH WAY TO MOVE THE TRA
NSPORT
910 IF STATUS=0 THEN 920 ::
IF KEY=69 THEN 930 :: IF KEY
=88 THEN 940 :: IF KEY=8
3 THEN 950 :: IF KEY=68 THEN
960
920 RETURN
930 IF OLDROW=1 THEN 920 ::
GOSUB 970 :: OLDROW=OLDROW-1
:: GOTO 1000
940 IF OLDROW=24 THEN 920 ::
GOSUB 970 :: OLDROW=OLDROW+
1 :: GOTO 1000
950 IF OLDROW=1 THEN 920 ::
GOSUB 970 :: OLDROW=OLDROW-1
:: GOTO 1000
960 IF OLDROW=32 THEN 920 ::
GOSUB 970 :: OLDROW=OLDROW+
1 :: GOTO 1000
970 CALL VCHAR(OLDROW,OLDCOL
,105)!DRAW SMOKE PUFF
980 CALL SOUND(100,-5,2)!ENG
INE SPUTTERS
990 RETURN
1000 CALL GCHAR(OLDROW,OLDCO
L,CAR):: IF CAR=105 THEN 101
0 :: IF CAR<>32 THEN 102
0
1010 CALL VCHAR(OLDROW,OLDCO
L,104):: GOTO 920
1020 ROW=OLDROW :: COL=OLDCO
L :: GOSUB 1060 :: CALL SCRE
EN(5):: PRINT "        YOU G
OT VAPORIZED"
1030 PRINT " THE EMPIRE IS T
RIUMPHANT!" :: PRINT "SCORE=
";SCORE :: FOR DELAY=1 T
O 1000 :: NEXT DELAY
1040 FITERS=0 :: GOTO 100
1050 REM YOU GET BLOWN UP
1060 CALL VCHAR(ROW,COL,128)
:: CALL SOUND(900,-4,0):: CA
LL VCHAR(ROW,COL,120)::
CALL SOUND(900,-5,2):: CALL
VCHAR(ROW,COL,32)
1070 RETURN
1080 REM FIGHTER BLOWS UP
1090 CALL VCHAR(ROW,COL,120)
:: CALL SOUND(900,-4,0):: CA
LL VCHAR(ROW,COL,128)::
CALL SOUND(900,-5,0):: CALL
VCHAR(ROW,COL,32)
1100 SCORE=SCORE+1 :: RETURN
    
```

## Software (Tapes)

BASIC - Vol. 1 No's 1, 2, 3, 4  
 X-BAS - Vol. 1 No's 1, 2, 3, 4  
 EDUCATION - Vol. 1 No. 1  
 MUSIC IN BASIC - No. 1  
 MUSIC IN X-BASIC - No. 1

See the April 1984 issue of the Sydney News Digest for the complete listing of programmes on these tapes.

## Software (Diskette)

BASIC - Vol. 1 No. 4  
 X-BAS - Vol. 1 No. 4  
 EDUCATION - Vol. 1 No. 1  
 Diskette software contains the same programmes as the cassette version.

NEW - NEW - NEW - NEW

HOME USE Vol. 1 No.1 is now available on tape or diskette and contains the following programmes:

Bills (Basic)  
 Cheque Account (Basic)  
 Diet Right (X-Basic)  
 Family Tree (X-Basic)  
 Freezer (Basic)  
 Fuel Usage (X-Basic)  
 Income Tax (X-Basic)  
 Pay Records (Basic)

Cost of tapes is \$3 each at meetings or \$4 each by mail. Diskettes are \$6 each at meetings or \$7 by mail.

All mail orders to:

TI-SHUG SHOP  
 P.O. Box 595  
 MARRICKVILLE NSW 2204

## Books/Magazines

Miller's Graphics Smart Programming Guide for Sprites is again available - \$8 at meetings or \$9 by post

Softex Magazine - issue No.2 - is also available for \$4 at meetings or \$5 by post

Best of 99'er containing over 200 ready to type in and run programmes is available but in limited quantities. For price and availability please enquire from Terry on (02)797.6313

Issue No. 2 of the Home Computer Magazine should be available by the May meeting date.

## Third Party Software/Hardware

The limited supplies at the April meeting sold like proverbial "hot cakes". More should be available by the May meeting date.

## Blank Diskettes Etc.

Memorex (Box 10) - \$35  
 Disk Box (Holds 10)- \$3  
 Disk Cont.(90 capacity)- \$44

The TISHUG Shop does not stock blank cassette tapes as it has been found that these can be purchased fairly cheaply at retail outlets. For example a pack of 5 C60 Greencorp tapes is currently selling in stores for \$5.99. If the club did purchase a bulk supply of blank tapes to sell to members then savings on the Greencorp special would only be minimal.

## May Software - Tape-Disk

To celebrate the arrival of further stocks of the Extended Basic Module and TISHUG'S 3rd birthday - the Group was founded during May 1981 - a "special" issue of Extended Basic Volume 2 No. 1 will be available at the May meeting. This will incorporate some pleasing graphic presentations including two excellent games - PIRING and RESCUE as well as 6 more of equal quality.

## Club Software Directory

An updated listing of the entire club software library is now available for the small cost of \$1.

ASTRO INSTANT PRINTING



TWO FAST CITY STORES

Phone 29 8288  
 FOR FAST FREE  
 PICK UP & DELIVERY!



## The Communicators

Last month in the Sydney Newsdigest COMMUNICATORS COLUMN, I told you about the multi-user modem game called SPACE EMPIRE, however, I neglected to tell you how you can log on or register for your casting roll in this fantastic new inovative game. So, here goes, (1) Dial 01921 - AUSTPAC, (2) Waite for the carrier tone then switch your modem to DATA/MODEM, (3) Waite 5 seconds then press H and <ENTER>, (4) Type PROF 7 , (5) <CTRL> P then SET?4:1 <ENTER>, (6) Type the following ?237520000 and either apply to play the game, and talk to JIM EADY about any other details you should know concerning your part in this game etc. GOOD LUCK,

MAY THE FORCE BE WITH YOU

In a recent edition of this publication, I also mentioned that we (TI.S.H.U.G.) had planned to set up our own BBS.

For those who are new to computing, a BBS is a BULLITAN BOARD SERVICE which you activate from the comfort of your own home, with the use of your TI HOME COMPUTER, and MODEM (telephone coupler). The TI.S.H.U.G. BBS will hopefully get underway by mid to late JUNE if we get the software up and running to make it all happen. The committee has just authorised our Treasurer to purchase a 128K CARD plus a few other items, which will make our very own BBS work smoothly. At the moment, we have the MODEM TECHNOLOGY UDM-1200 AUTO ANSWER MODEM, 3 DRIVES and EXPANSION SYSTEM. We will be taking on a new telephone line to receive calls into the BBS.

A member of this group has donated \$100 to be used as a cash prize for any member of

this or another TI USER GROUP, who can write the software for it. If you would like to work on such a program, and you require further information, you can write to MODEM COMP, P.O.BOX 595, MARRICKVILLE, 2204 N.S.W. Aust.

Our BBS will hopefully feature (1)LATEST NEWS AND VIEWS REGARDING YOUR TI, (2)Possible ELECTRONIC MAIL, and message retrieving, (3)And DOWN-LOADABLE PROGRAMS, almost 24 hours most days of the week.

News has gone out to other User Groups around Australia so they can participate in this contest.

With the assistance from our Technical guys here in TI.S.H.U.G., we should be able to produce some inexpensive RS232 INTERFACES, then, the only cost to you should be that of the TERMINAL EMULATOR #2 MODULE, AND MODEM. Modems range in cost from around \$199 to \$500, depending on how fancy you want to set your own receiving center on your TI COMPUTER.

We will keep you posted on this new feature of TI.S.H.U.G. within this, the COMMUNICATORS PAGE.

VISITOR STATUS IS NOW AVAILALE for you modem users, on other BBS's and R/CPM's such as THE AUSTRALIAN BEGINNING, MiCC, SYDNEY PUBLIC ACCESS and MICRO DESIGN LAB.

To log onto TAB (The Australian Beginning, follow these instructions carefully:

- (1):Dial 01921 -Austpac,
- (2):When Carrier tone sounds, switch your modem.
- (3):Waite 5 seconds then press H followed by <ENTER>.
- (4):Type PROF 7 <ENTER>
- (5):Type SET?15:1 <ENTER>
- (6):Type ?238220000

<ENTER>

Followed by your USERNAME and PASSWORD or VISITOR. If you get disconnected by AUSTPAC you can ring 1107, this is a free call.

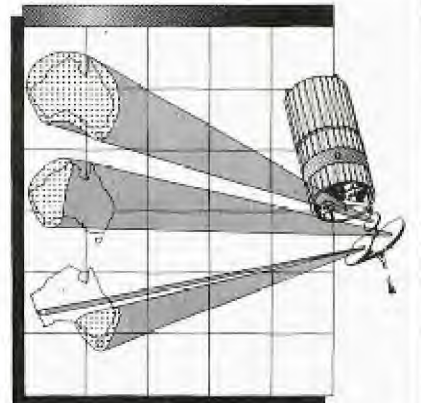
The other BBS telephone numbers are as follows...

MI COMPUTER CLUB (MiCC)  
(02)6621686  
SYDNEY PUBLIC ACCESS  
(02)8083536  
MICRO DESIGN LAB  
(02)6630151

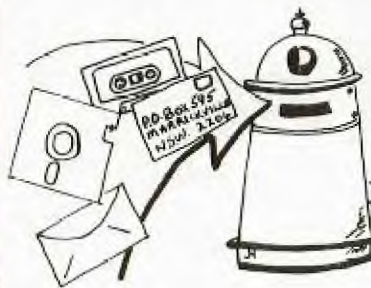
The recent MULTI-STATE CHAT MODE on TAB was a complete flop, as their system was playing something shocking, however, we are going to try it another time...SATURDAY EVENING of MAY the 19th at 7:00pm sharp for one hour only. CALLING ALL TI/MODEM USERS IN THE OTHER STATES, IF YOU HAVE A MODEM, OR KNOW OF A MEMBER IN YOUR GROUP THAT HAS ONE, WE WANT TO HEAR FROM YOU.

Take this opportunity to Join TAB AT SPECIAL CLUB RATES, so you can join us here in Sydney, for this unique telephone CHAT session.

See you on line,  
BI BI 4 NOW, "TEXPAC" on TAB or 881 on MiCC (SHANE).



## LETTERS TO THE EDITOR



This is to make a most foolhardy offer, namely to contribute on a reasonably regular basis a column or series of articles on Extended Basic. The header that came to mine was "EXTENDED TUTORIAL". But I'm not all that enamoured of it that better suggestions aren't in order.

I'm making this rash offer because I've been conned into giving talks on this subject to our local group meetings, starting at the next one on Tuesday. So if I'm getting my thoughts that much in order, I might as well write them down and share them more widely. What I have observed is almost none of the programs published in 99er or TI.S.H.U.G. News, or even the very few commercial XB programs that I've had occasion to examine in detail, make anything like full use of the power of TI XB.

The subject matter will depend on how things go at the Newcastle meetings, and I will be playing it by ear somewhat, but the interests in Newcastle should be reasonably typical. The topics I plan to talk about for a while are sub-programs, coding for speed or response, crunching program length, bugs in XB etc, etc.

Anyway let me know if this is of interest, and if so the best way to handle the details. This is being done on our TI-Writer if that helps any.

At Funnelwed Farm here we are putting the very final touches on an XB game, TEX-BOUNCE, and we will send a small ad for insertion in the Newsletter and a copy for review. The inspiration was a review in BYTE, Dec 82 of a game called Ricochet. I've no idea how it compares with the originals for Apples and other machines, as I've never seen the game running, but I think it has come out pretty well on the 99/4A, even though constrained to run with console and XB (joysticks optional) only. The talks and maybe Newsletter columns are being distilled from this hard-won experience.

BEST REGARDS  
TONY MCGOVERN

DEAR TONY, WE WELCOME YOUR CONTRIBUTIONS WITH OPEN ARMS. THE DEADLINE FOR COPY, IS AT THE CLUB MEETING FOR COPY TO BE TYPED. BUT SINCE YOU HAVE THE TI-WRITER AND DISKDRIVE, YOU CAN GET IT TO ME NO LATER THAN THE FOLLOWING FRIDAY. IF YOU HAVE A MODEM, YOU CAN SEND IT TO ME VIA THE MODEM-LINE ON THE SECOND SATURDAY OF THE MONTH. IS'NT IT NICE TO HAVE A CHOICE? "Extended Tutorial" SOUNDS GREAT. WE LOOK FORWARD TO HEARING FROM YOU. Shane.



Dear Shane,  
Here is some information many of our fellow members may find both interesting and helpful.

A large number of 99/4(A)'s are fitted with the PHA 2036 PAL ENCODER (Modulator), made by SIEL of Italy. This modulator is intended for channel 36UHF operation, but many modified units were supplied by TI for channel 2VHF operation.

This modification needs a simple internal wire change and the modification is reversible. You may even be able to install a switch to select either output - be warned, I have not tried a switch and cannot guarantee the results, try it and let us know the results.

(1) REMOVE THE 3 SCREWS HOLDING THE PLASTIC BOX TOGETHER.

(2) Remove the cover on the inner metal box by straightening 6 tabs.

(3) TO CONVERT FROM UHF TO VHF (see figure #1) UNSOLDER THE RESISTOR ON THE OUTPUT PIN, ADD A WIRE LINK AS SHOWN FROM THE OUTPUT PIN TO THE 180 ohm RESISTOR.

(4) To convert from VHF to UHF, reverse above.

(5) FOR BOTH UHF AND VHF OPERATION (see figure #2) ADD A SWITCH AS SHOWN, WIRES TO THE SWITCH AND MODULATOR ARE TO BE AS SHORT AS POSSIBLE.

### NOTE:

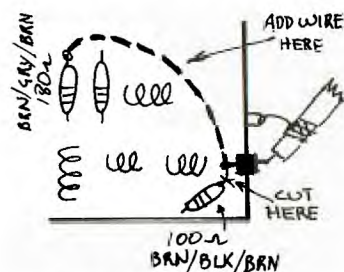
Not all parts are shown in the diagrams use the coils to locate the resistor, also, you may have to use a balun

(Dick Smith L4454 or similar) if your TV has only 300 ohm screw inputs.

Happy Computing the TI Way,

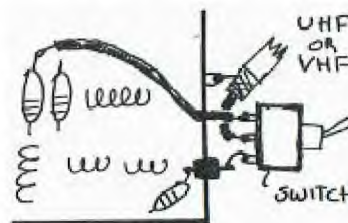
IAN ROBERTSON,  
Helensburgh.

### FIGURE NO 1



### UHF TO VHF CONVERSION

### FIGURE NO 2



### UHF AND VHF OUTPUTS

THANK YOU IAN, KEEP THOSE HANDY HINTS COMING IN.  
Shane.





Dear Sir,

I have started cataloging articles in the "National Geographics" magazine.

My idea is to have data on the articles on cassette tape such that I can search for articles containing one or more key words. I have arbitrarily chosen a format for the data storage. It occurred to me that other members may be doing the same thing with this on other magazines or books. It may well be that there is an accepted format for such data storage and a standard program to store and search for the data. If this is the case I would be pleased to get the details. If it is not the case could I give you my ideas to pass onto the membership so that a common data format and program can be adopted and duplication of work between members.

My data is arranged in INTERNAL format using records of 192 length. Each record contains five separate pieces of data:-

```
1st> Publication Number
(Numeric Variable)
2nd Data (String) MMYMY
E.G. APR83
3rd> Author (String)
4th> Title (String)
5th> Key Words (String)
```

The Publication Number was used instead of the actual name of the magazine to reduce the memory space required. The cassette containing the data would have the Publication Numbers identified if more than one magazine data was stored on the tape.

Ideally a separate tape should be used for each magazine, title but maybe several books could be catalogued on the one tape. The program can be easily modified to print the magazine name depending on the Publication Number.

The Date and Author spaces could be used for other classes of data depending on the material being catalogued, E.G. A book would not require a date but additional data may be useful as whether the book is fiction, historical, medical, etc.

My program allows for one or two key words to be used in a search of the TITLE and KEY WORDS. The program is very simple and can easily be modified to search for a particular Author or to only search for references between given dates etc. I am not very worried about the program but rather the data. If others doing similar cataloging used the same data format exchange of data would be easy and in time the group could have available data on a wide range of publications.

REGARDS  
JOHN McDONALD.

THANK YOU JOHN, FOR YOUR LETTER, MARK NIELSEN WROTE AN ARTICLE AND SAMPLE PROGRAM IN THE FEBRUARY ISSUE TO FILE NAMES AND ADDRESSES ETC ON CASSETTE, YOU MAY FIND IT HELPFUL TO GIVE YOU SOME CLUES A TO HOW TO COMPLETE THAT ONE YOU ARE WORKING ON. IT SOUNDS LIKE IT WILL BE A GREAT HELP TO MANY WHEN COMPLETED, AND YOU MAY LIKE TO SUBMIT IT AS AN ENTRY IN THE MONTHLY SOFTWARE AWARDS, AND AT THE SAME TIME BE IN THE RUNNING FOR A \$50 CASH PRIZE, PLUS ANY 3 PROGRAMS OF YOUR CHOICE FROM THE CLUB SOFTWARE LIBRARY.

Dear Sir,  
BRICKBATS and BOUQUETS

I am new to the computing fraternity (and to TISHUG) but I am getting the impression that the first attribute of a good programmer is the ability to mis-spell and mangle grammar. All contributors to the last issue of Sydney Newsdigest, with the exception of John Robinson were atrocious in spelling, punctuation, sentence construction, etc.. After counting over 40 errors in the first three pages, I gave up!

On the bouquet side, I had occasion to use the crisis line for the first time and was most courteously and efficiently helped. Many thanks,

I went to my first meeting (April) and was most impressed with the facilities available, software sales, demonstrations and the chance to talk to others about problems encountered. I was, however, upset that, despite coming early to get a seat near the front (because of

hearing problems), I was re-arranged to the rear of the hall. I missed a great deal of what was said.

All the best,  
TED McCLOSKEY.

Dear Ted,

I think that I had better answer your letter in three parts...regarding your first paragraph, I personally take the blame for any typing errors within the SYDNEY NEWSDIGEST, as most of the typing is done late at night, after a long day at work. It was my intention to produce a small newsletter, briefly giving details of the next activity and a little bit of news. Over the last 3 years, it has grown from just that, to what you see in front of you. If you would like to help with the production of it, you are welcome to come over to my home one week-night, around 9pm and I'll put you to work.

On behalf of Graem Hollis, our man behind the PROGRAMMERS CRISIS LINE, I thank you for your kind remarks. He does a fantastic job, and yet, cannot often make it to meetings because of distance. I should point out, that Graem doesn't have a disk system, so for other readers with problems regarding Disk Drives, phone another member of the committee.

Now for the third part of your letter...and to those who have not been to meetings before, I usually ask everyone in turn, to stand up and give their first name and suburb,

This is done, so other members in the hall, may hear of a fellow member who lives near them, and may want to swap club software etc. At that recent meeting, I thought that I would do something different, and asked everyone to assemble themselves in the hall, as to the part of the city they live (i.e. North, West, East South), so that when we called out our names and suburb, it would be easier to identify a person who lived near you. It was the first time I had tried that, but, so you can more easily hear and get involved with what is happening, I will try not to do it again.

Best wishes,  
SHANE.



# Get the information you want fast & easy

At our next meeting, on Saturday the 5th of MAY (2:00 PM), we are hoping to have a representative of ROYCOM SYSTEMS P/LTD. They produce the very interesting TOUCH SCREEN, which we believe can be fitted to the TI HOME COMPUTER. Here is some information about that product.



HOW DOES THE SYSTEM OPERATE ?

Imagine how easy it would be to get information if all you had to do was touch. With a Touch System from Roycom Systems, information display will never be complex again. A touch package can be creatively configured for any environment with a need to communicate ever changing information to a wide spectrum of people.

Requiring no instruction, the user simply touches the screen with a fingertip and instantly the information required is displayed. A totally new dimension to the marketing of products and services. Roycom offers several touch alternative add-on features including video, printout and graphics, as well as a marketing survey package.

A touch system can be creatively configured for any environment with a need to communicate ever changing information to a wide spectrum of people. Changes to the touch program can be quick and cost effective while animated, colourful highlights give life to virtually any message. At the same time, vital market research data can be gathered on information requested.

Each touch system comes as a self-contained, stand-alone unit. To function, all that is required is to switch on the power. Videodisk, tape or rapid printer can be added to the basic unit. Roycom is happy to assist you in designing your display package.



HOW DO TOUCH SYSTEMS WORK ?

The touch operation is simple. A person reads the text on the screen and touches the information needed. Your micro-computer based system uses this response to provide further information, start a videodisk or tape, print vouchers or handouts, or place colour graphics or test on the screen.



The screen, made from hardened glass, has invisible pads that respond to a fingertip touch. The diagram shows how these pads are aligned.

Your program displays the text, graphic or video image and then asks for a touch from the screen. When touched, the micro-computer receives this input, the program decides which action was requested and operates accordingly. Roycom has programs and samples to suit your particular application.

## ROYCOM SYSTEMS

### TOUCH YOUR APPLICATION

- |             |           |
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| ADVERTISING | TRAINING  |
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3916 Australia Square, Sydney. 2000  
(02) 27-1054

# TI-COUNT IS HERE

Available from  
Computer Wave, Sydney

or  
Lindley & Associates  
127 Crowley St.,  
Aspley, Q. 4034.  
Phone (07) 2636161.

Dealer enquiries welcome

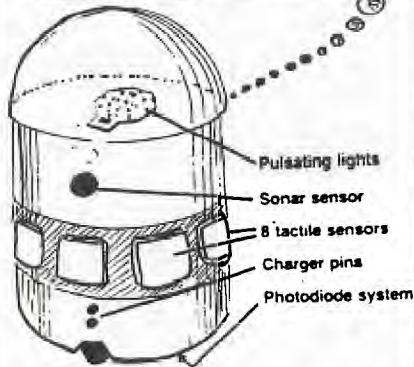
TI-Count Business Packages (Extended BASIC Cartridge, RS-232 and Printer are required, 32K Memory Expansion and second Disk drive are recommended.) Developed by Pike Creek Computer Company, Inc., these programs constitute an integrated accounting package. Thorough and professional, these programs allow the user to manage accounting information. General Ledger — PHD5097  
Accounts Payable — PHD5093  
Accounts Receivable — PHD5094  
Payroll — PHD5094  
Inventory — PHD5096  
Mail List — PHD5091

Custom designed stationery available for invoicing, statements and cheque forms.

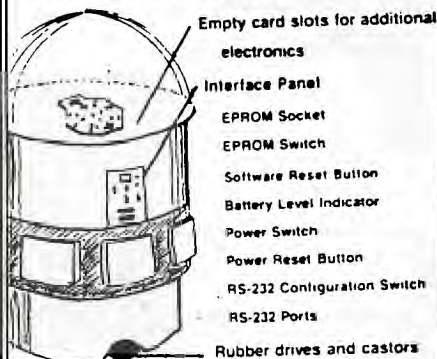
Free back-up disk with all modules upon receipt of owner registration form in choice of single or double sided disks.



HELLO, I'M RB5X...AND I WANT TO WISH T.I.S.H.U.G. A VERY HAPPY 3rd BIRTHDAY. I'LL BE SEEING YOU AT THE BIG MEETING, ON SATURDAY the 5th of MAY, at 2pm.



That's right! RB5X will be our very special BIRTHDAY treat at the next BIG club meeting. He will introduce himself to you, and show himself off, so don't miss this fun event.



Personal robots have been in our imaginations for a long time. Now they've become a reality.

The RB5X Intelligent Robot is a sophisticated engineering effort whose microelectronics and machinery can be compared to the complex make-up of humans. Like a person, RB5X consists of a collection of subsystem "organs" that work together to make the robot function and become more than the sum of its parts - except that the comparatively crude robot "organs" consist of electronic and mechanical devices.

**BRAIN** .. RB5X's brain is an on-board microprocessor - the INS8073 - that works in conjunction with the robot's software to permit the RB5X to learn from its sensory experiences. Using this self-learning software, RB5X progresses from simple, random responses to eventual prediction of future events in its environment, based on analysis to past experience. RB5X comes with 8k of memory standard, which can be upgraded with a 16k memory option.

**EYES** .. RB5X's machine counterpart to eyes is a Polaroid Rangefinder sonar system that enable the robot to recognise and navigate around obstacles in its path.

**VOICE** .. RB5X can be equipped with an optional voice/sound synthesis system, permitting programmed speech, music and a variety of sounds. Standard equipment includes a horn that can be programmed as a audio signal device.

**EARS** .. For RB5X owners who communicate with their robots, there is a voice recognition option available that allows the robot to respond to your spoken commands.

**ARMS** .. An optional robotic arm hand has five-way movement capability and is able to pick up, carry and release objects weighing 16 ounces or less. In its resting position, the arm stores completely inside RB5X's body.

**LEGS** .. RB5X's "legs" consist of two independently driven wheels and a castor-support system that enables the robot to move freely about on relatively smooth surfaces and to turn on its own radius.

**TOUCH** .. The RB5X relies on eight tactile sensors to signal contact with other objects. These bumpers can also be pressed to actuate specific programs that you feed into the robot.

**MUSCLE** .. RB5X's energy system consists of high-quality rechargeable batteries a charger nest and a special circuitry that permits the robot to sense when its batteries are low, to seek out its nest and to recharge. A battery-level indicator and battery protection circuit are standard. An optional Power Pack is also available, providing up to twice the operating time of RB5X's standard batteries.

**LANGUAGE** .. RB5X speaks Tiny BASIC but owners can communicate with the robot in simple English using Robot Control Language (tm) with Savvy (r) an optional software package.

(r) savvy is a registered trade mark of Excalibur Technologies Corp

#### HOW DOES RB5X WORK ?

Any or all the individual capabilities listed on the preceding page can be programmed in specific combinations and sequences of action using any home computer with an RS-232 communications interface. Your home computer

becomes the master "brain" that tells the robot's eyes, ears, voice, legs or arms what to do and when to do it.

You plug RB5X into the computer for instruction and then unleash it to execute your instructions. Your imagination translated through your home computer, is the medium by which the robot's many singular capabilities are crafted into specific applications. It is your own ingenuity that makes the robot become more than the sum of its parts.

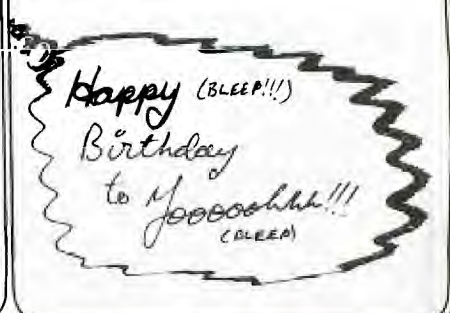
With an RB5X, the results of computer programming are not limited to a screen or a print-out; they can be seen and heard in the actions of a mobile, animated mechanism - an appealing way to sharpen programming skills and get more out of your home computer.

You can also EPROM cartridges to give RB5X instant life. These preprogrammed chips serve the same functions as a game cartridge: you plug them in, switch on the RB5X, and off it goes. An introductory EPROM is standard with each robot, and more are available from your dealer or RB Robot Corporation.

#### WHAT DOES A PERSONAL ROBOT DO ?

Within the limits of its individual component capabilities, RB5X can do just about anything you program it to do. It has been engineered to be highly versatile, offering the user great latitude in adapting it to individualized applications. It can do everything from crack jokes and be the life of your next party to cleaning rugs with its vacuuming option while you're away.

Coupled with your programming ingenuity and hardware enhancements. RB5X has the potential to provide a mobile home security function: entertain the kids and pets: come into the bedroom each morning and wake you up: serve as the perfect android butler or scarecrow or grandfather clock - and so on. The possibilities are almost limitless. RB5X becomes a walking, talking mirror of your imagination.





IMAGIC

## MICROSURGEON™

GAME PROGRAM INSTRUCTIONS

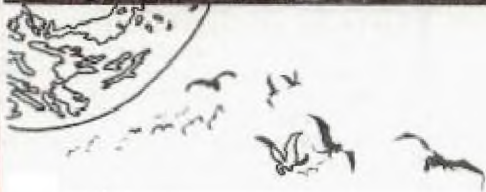


"We interrupt this broadcast to bring you live coverage from the scene of a local accident, Gus?"

"Howard, noxious vapors escaping from a disabled tanker have caused a medical emergency. Dr. Weissblut of nearby Xenon Medical Center tells us why, Doctor?"

"Gus, these fumes attack one's immunity to the simplest disorders. Tar deposits suddenly fester on the lungs, tumors grow at an alarming rate, even bacterial infections become potentially lethal. The list goes on. There's only one way to treat it: Microsurgery. We have to get inside and eliminate these conditions before they become fatal. But I'm due in the operating room. Excuse me."

"Thank you, Doctor. Back to you, Howard."



Winged warriors and tentacled terrorists from the Demon Armada shower the moon with devastating weaponry.

Only your Laser Cannon stands between them and their planned conquest of the Earth! Annihilate successive waves of demons. Then lift off in relentless pursuit of Pandemonium, the demon flagship. Outmaneuver or destroy galactic gangs of suicide patrolers flying straight from the Core of Pandemonium.

Erode the flickering shield that protects the demon base. A direct shot from your Laser Cannon through the revolving Window of Vulnerability and into the Core of Pandemonium will end their foul revolt - but not for long.

Flushed with victory, you return to the lunar surface. But you're not safe yet. Advanced waves of demons continue to pummel Moon Station Tranquility. And the Demon Armada keeps coming.

Can you destroy them this time?

And next time?

How long can you endure this punishing blitz? How many demon bases can you destroy?

Earth's safety hangs in frail balance. You must defeat them!



## "Microsurgical Staff - Emergency!"

3

You're part of a team of expert microsurgions and technicians at Xenon Medical Center. Working alone, or assisted by a skilled medical technician, you attempt to save victims exposed to this weird gas. Time works against you. You must use every bit of knowledge and instinct at your disposal.

Examine the patient's status chart. It tells you the patient's overall condition and directs you to those organs in greatest need of attention. Watch your power reserves!

The Robot Probe, the primary tool of a microsurgion, has been implanted in your patient. You control its progress through the body by remote control. Your screen displays the intricate maze of the circulatory (red arteries, purple veins) and lymphatic (orange lymph) systems. These routes carry the Robot Probe through the patient's body. Stray outside them and regions of roaming white blood cells (phagocytes) will mistake the Robot Probe for a dangerous intruder and attack!

Vital organs come into view as you steer the Robot Probe toward surgical "hot spots" - areas which need immediate medical attention: tumor, tar deposits, gall stones, viruses, bacterial infections, even tapeworms - the number and variety of diseases to be cured is staggering.

Keep track of the Robot Probe power supply. The Robot Probe is a delicate and expensive piece of equipment and must be salvaged. If power runs low before your surgical tasks are completed, race toward the eye, mouth, nose or ear. The Robot Probe can safely exit only at these points.

### Objectives:

- + Keep track of your patient's status.
  - + Eliminate disease and infection by shooting the appropriate medication from the Robot Probe.
  - + Pilot the Robot Probe out of the body before power runs out.
- "Doctor, your patient is prepped for microsurgery."  
Good luck - to you both!

IMAGIC

## DEMON ATTACK™



Earth lies in grave peril.

Winged terror screams across mute space. Legions of creatures bombard Earth's final outpost Moon Station Tranquility. Intercept and destroy these garrisons which breed destruction - or Earth is doomed!

Survive the demon attack - then go on the offensive! Your Laser Cannon lifts off the lunar surface. You seek to track down Pandemonium, flagship of the Demon Armada. Its awesome bulk seems to fill space with menace. It spews vast armies of eternal night from its fiery Core.

Attack! End the tyranny of the Demon Armada. You must prevail against monumental odds.

## INTRODUCING IMAGIC

GOOD NEWS FOR ALL

Following is an extract from Imagic Australasia's Press Release 2nd April, 1984.

Imagic Australasia has joined forces with Texas Instruments to provide ongoing support for the TI 99/4A Personal Computer.

From 2nd April, 1984 Imagic will provide Australia wide marketing and distribution services for Texas Instruments TI 99/4A software and peripherals.

"Texas Instruments Policy is to provide long term support for the TI 99/4A" commented Imagics' Managing Director, Chris Milner. "We will have available the entire T.I. software range and will be carrying sufficient stock to support the system for over three years. Although T.I. has discontinued production of the 99/4A there is an ongoing demand for software and peripherals. In fact we regard the 99/4A to be far superior in design and capabilities to many of the popular new Home Computers currently being sold."

"We have increased our Dee Why warehousing facility to handle the T.I. range and will commence distribution April 2nd." Imagic Australasia has also released several new games titles for the 99/4A system. There are conversions of Imagics' hit titles 'Demon Attack', 'Dragonfire', and 'Microsurgeon'.

"T.I. owners will be pleased to know that many of Imagics' latest releases can be readily converted to the 99/4A format. The Computers advanced 16 bit design enables conversions from Imagics' IBM P.C. Jnr format to be undertaken at minimum cost."

"Imagic will continue to source software and peripherals using our international dealer network. T.I. owners can look forward to extensive support for the life of their Computer."



A message to all T.I. 99/4A owners from Don Dennis, Director, Imagic Australasia Pty. Ltd.

"Im sure TI 99/4A owners will be glad to hear that their Computer is indeed alive and well and will now probably outlive many of the 'trendy' Home Computers that come and go in the market place."

Imagic has had a close association with T.I. in the United States only recently completing program conversion for the system.

We at Imagic Australasia will provide the ongoing support necessary for this system and just to put everyone in the picture the situation is as follows :-

As of 2nd April, 1984 all existing stock from T.I. in Australia was transferred to our two warehouses in Dee Why, Sydney. In addition two container loads of software and peripherals are on the way due to arrive approximately 1st May, 1984. These contain software and peripherals including Expansion Boxes, 32K Memory Cards, RS 232 Interface etc., all the pieces owners have been clamouring for. (Even T.I. Writers are coming - at the moment we have about fifty available ex stock).

### ONGOING SUPPORT



Due to the unusually advanced design of the 99/4A we believe this Computer is going to be around for a long time. In fact I personally believe the 99/4A will become a classic amongst Computer owners.

So T.I. owners, the news is all good, the 99/4A lives on and those of you who own one will appreciate just what a bargain you have. Imagic will be lending its full weight to those Computer Stores that got behind the 99/4A and enthusiastically supported it.

We'll be keeping them updated with product information so stay in touch. One thing we do ask all T.I. owners is to let us have your name and address for our mailing list.

The purpose of this is to create a central registry so we can circulate program updates, hardware information etc., to owners. It makes problem solving much easier for us believe me, so if you would fill in the form it will allow us to help you.

### COMING ATTRACTIONS



Super 'Demon Attack' and 'Microsurgeon'

These are two of Imagics' latest releases which will be available in May. I suggest you place your orders very early as we will only have a limited supply, (about a thousand of each).

Following will be Moonsweeper and Fathom and possibly Dragonfire. Demand in the U.S. for these titles has swamped Imagic so we don't know how much will be left for us here 'Down Under'.

Tell your T.I. Store to order early so we can gauge demand and put the weights on Imagic U.S.A. to reserve stock.

Since the commencement of the venture with T.I. things at our Dee Why offices have changed considerably particularly in our Software Development Section. Located in a deep dungeon, this department has its complement of programmers tending the usual array of Commodores, Apples etc., the team had just finished work on a new range of Commodore 64 programs and were obviously feeling very satisfied with

themselves having solved a few rather difficult graphics problems with 'Mothership'. The feeling was the crew knew it all.

Suddenly a batch of 99/4A's arrived which of course evoked the usual comments of "Whats New". Its obsolete etc., Boy were they in for a surprise

An hour later a trembling programmer was seen wandering in a daze muttering "It spoke to me". We thought for a while that maybe he'd seen the Burning Bush but no, gentle questioning revealed he'd set up the 99/4A with Speech Synthesizer and Terminal Emulator, written a three line program which converted text to speech and the team was sitting around the Computer listening to it utter words of wisdom.

Now I know thats pretty passe for you guys who own 99/4A's but for our fellows who'd been used to speechless Apples, Commodores and Atari's this was powerful medicine indeed. In fact as the days went by we found all the other systems had been ignored in favour of the 99/4A. Its almost as if they'd undergone religious conversion.

Like so many 99/4A owners the more they use it the more versatile they find it - unlike other systems.

If anyone can tell me how to get them back to work I'd appreciate it.



NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

SYSTEM \_\_\_\_\_

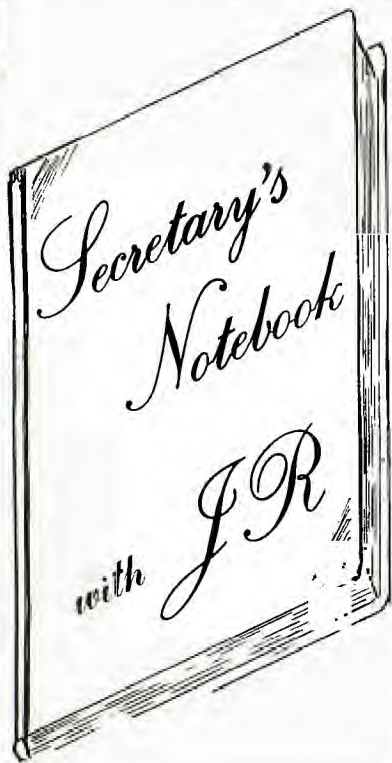
I FEEL WE WILL NEED THE FOLLOWING \_\_\_\_\_

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P.O. BOX 234.,  
DEE WHY. N.S.W. 2099.



SOFTWARE ADVISORY SERVICE  
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# Sydney News Digest



Hi There!  
A special welcome to our  
104 New Members.

From the front cover design you will know we will be celebrating our third Birthday this month. In May 1981 the TI-99/4 Home Computer User's Group of Sydney was born... the brainchild of a remarkable individual Shane Kenneth Andersen J.P. organiser extraordinaire. Let me reminisce for a few moments... In May 1981 I wandered into Nock and Kirby's on George Street looking for the Canberra Television Section. Having previously visited their outlet in Parramatta I had been impressed with the quality of the graphics of the Chess program being run on a Texas Instruments 99/4 Home Computer. The salesman had told me about a Club which had been organised by a Mr. Shane Andersen, who was offering Free Club Software, all you had to do was send him a tape and have it filled with a variety of programs... BOMBS AWAY, a cheeky war game where you choose which side you want to play... CHANGE, which apparently helped kids to know what change to give a customer for a given selling price... CRAPS, the usual dice game and the slowest game of SPACE INVADERS you could imagine!!! So here I was looking for Shane to pick up the programs having shocked my bank manager by asking for \$1500 loan to buy

the computer console and specially modified colour television set. Well I got my free programs and parted with another \$100 in exchange for "Wired Remote Controllers" and the Personal Record Keeping program. I picked up a news sheet entitled NEWS DIGEST and was told to keep in touch. In June a second newsletter was distributed to Canberra TV, The Computer Shop, Castlereagh St., and The Technical Bookshop. 500 copies of the Video Display Terminal Formatting Sheet were printed together with a club letterhead. A Constitution was drafted and suddenly Shane found he was working 20 hours a day... something had to be done. Contact had been made with individuals in Hobart, Melbourne, Adelaide Perth and Brisbane. These people, Andrew Zagni, Doug Thomas, Gerald Tan, Kevin Newnham and Alwyn Smith had agreed to become Co-ordinators and establish independent groups in their respective locations. A meeting was arranged to be held on Saturday September 5th at Shane's bachelor apartment in East Sydney.

I went along to the meeting not knowing quite what to expect. Around 25 people crammed like sardines into Shane's tiny one bedroom apartment. The children were despatched to his bedroom where they played the latest games. Shane passed a wealth of information on to the group present some of whom had travelled down from places as far away as Newcastle. At the end of the session refreshments were passed around and an announcement was made asking anyone present who was interested in serving on an interim committee should leave their name, address and telephone number in the book by the door on their way out. Six persons were foolish enough to write their names down. The first committee meeting was held on September 19th. A raffle was organised to raise some money and the Inaugural Meeting scheduled for November 7th. At that meeting the Co-ordinating committee was formed. After the General meeting the new committee met and we were informed that we had 31 Foundation Members. In July 1982 the newsletter title was changed to the Sydney News Digest. On August 27th, 1982 the First National Convention was held in Melbourne over the weekend. In September the club name was changed to TI-SHUG. A few months later a competition was held to find a unique and distinct Club Logo. The winner was

Manuel Constantinides one of The Foundation Members. As the months went by the resources of the club grew to the stage that we were able to hire a larger hall and organise All day Tutorials. Now three years down the track we are still being innovative with the establishment of a Bulletin Board to give improved access to our software library.

Here is good news for those new owners who are having problems with their tape recorders. The best recorder is back on the Australian market... The National Panasonic RQ-2309. It is available from Keith Templeton at Baulkham Hills for \$69.00.

There is a new book for TI Users entitled "GET PERSONAL WITH YOUR TI-99" by Manning and Ingalsbe. By the time that this magazine gets to you, it could be available at selected Computer Retail outlets, and priced at \$17.95. The other books I mentioned in last months column, should also have been received at Uni Co-op Bookshop.

U. G.



The APC Show was very well organised this year and we were given a lot more space for our display, which was kindly provided by TI AUSTRALIA. Our sincere thanks are extended to Colin Waite of TI for his assistance. A special thank you must be given to Chris Potts who kindly arranged transport of the display to



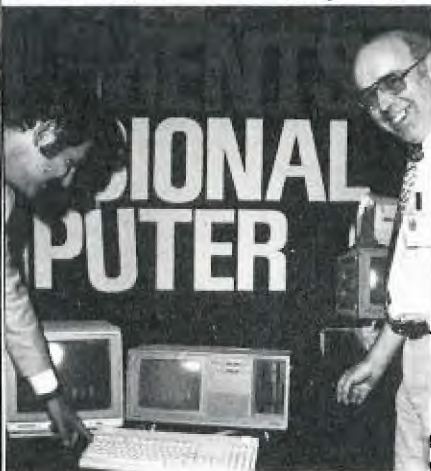


# Sydney News Digest

and from the show. Thanks to the following members who helped on the stand... a thankless and gruelling task:

Terry Phillips, Andrew Nutting, Steve Williams, Darius Battiwalla, Graeme Holliss, Peter Varga, Peter Lynden, Chris Ryan, Slawomir Jabrzemski, Lloyd Robinson, Paul Mansell.

Texas Instruments had a lot of attention from the press with their speech recognition system for their Professional Computer.



Computerwave displayed working robots which we will be seeing in more and more homes in the next few years.



Apple had an excellent display showing The Computer of the Year-LISA- and the brilliant Macintosh which in my opinion is going to give a Big Blue a run for their money.

Dick Smith showed THE CAT which is an Apple 2 look alike and very competitive. A disappointment was the Challenger an IBM PC look alike.

Along side us was AUG-the Apple User's Group, The Sorcerer's User Group and ATARI Computer Enthusiasts. The other big names were there including IBM, EPSOM, IMAGINERING, MICROSOFT, DEC, NEC and NCR. I had the pleasure meeting Bill Gates co-founder and now multi-millionaire of MICROSOFT. Surprisingly this was his first visit to Australia. He intended to spend the weekend on the Barrier Reef.

At the most recent committee meeting it was decided to purchase a automatic answering modem, a 128K card and software from the USA for our bulletin board provided it can accommodate downloading of programs. It was agreed that a dedicated telephone line be provided.

In order to provide a better service to our members it has been decided to install an automatic telephone answering service on 8480956.

A new advertising policy is under review together with a proposal to upgrade our software duplicating facilities.



Here is a little problem for you to solve : Write a program to find and display on the screen the first 100 prime numbers. The solution will be in this column in a couple of months. Send your program to me at the club address in Pennant Hills..

Running out of memory,

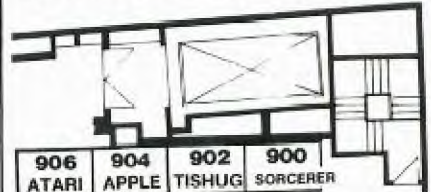
Happy Computing,

*John Robinson*

John Robinson.  
Hon. Secretary.

# PC 84

## COMPUTER CLUB CORNER



The computer club corner is doing great business at PC 84.

Terry Phillips of T.I.S.H.U.C. stand number 902 expects to recruit 30 new members by closing time today. They have been averaging about 6 new members a day, but believe today will see them reaching their total.

Terry said the Show had been great for the club as many visitors didn't know about them until they came to the show. The interest has been really high.

He also congratulated AES on the organisation this year saying that the individual stands for clubs was far better than the lay-out last year. "Visitors can easily identify each club."



## The Basics



by our guest tutor from Metropolitan Computer College, Mr. PETER DAY.

This is part three in a series of tutorials in programming BASIC FOR BEGINNERS.

If you have any questions about TI-BASIC, and would like to have them answered by Peter in his column, please send them to BASIC FOR BEGINNERS, P.O. BOX 595, MARRICKVILLE, N.S.W. 2204.

Hello, again, and welcome to episode three.

I'll start by wishing the Sydney News Digest 'Happy Birthday' on its third anniversary and by reminding you that this is your group magazine and your means not only of finding out but also of sharing your experiences with others. Why not write a short article or perhaps just a letter to the Editor? But whatever you do - communicate.

Back to BASIC. The simple programs I ended with last month had a serious drawback. If you wanted to convert not one but several temperatures then it would be necessary to enter RUN each time. It would be far better to have the program repeatedly convert temperatures until you entered some prearranged figure which tells it to stop or until some prearranged number of conversions have been performed.

Almost all programs require some sort of repeated process and, indeed, it is the ability to repeat a process which makes the computer so powerful. For this reason many computer languages have special instructions to make repetition easy to carry out.

In BASIC we can repeat a sequence of instructions by means of the FOR and NEXT instructions. The FOR is the starting point and the NEXT the ending point of the repeated code - what is called in computer jargon a LOOP.

Using the FOR we assign a starting value to a variable and specify an ending value. The following instructions are then executed until the NEXT instruction is encountered. The variable is then incremented by 1 and the program returned to the FOR instruction. This tests the variable to see if the value in the variable has yet passed the ending value. If it has not then the following

instructions are executed again until the NEXT is encountered again. This is repeated with the value in the variable increasing by 1 for each loop. Eventually the value in the variable will have passed the ending value in which case the instructions following the NEXT will be executed.

For example, suppose we wish to repeat some instructions ten times. We could use the following code -

```
FOR X=1 TO 10
code to be repeated
NEXT X
```

Here we are using a variable called X and we have specified that it starts containing a 1 and the loop is to finish when the value has passed 10. That is when it contains 11. If you follow this through you will find that the 'repeated code' has been executed ten times, which was what we wanted.

We can use the contents of the variable, X in this case, within the loop if we want to. For instance -

```
10 FOR X=1 TO 10
20 PRINT X
30 NEXT X
```

will print the numbers 1 to 10 in sequence. There are variations we can add to achieve different effects. Instead of increasing the value by 1 each time we can specify a STEP value.

```
10 FOR X=1 TO 10 STEP 2
20 PRINT X
30 NEXT X
```

This prints the numbers 1, 3, 5, 7 and 9. Note that it does not print 11 because that is past the ending value.

We can also use a negative STEP value to go backwards but we MUST then have the ending value LESS than the starting value -

```
10 FOR X=10 TO 1 STEP -1
20 PRINT X
30 NEXT X
```

This prints the numbers 1 to 10 in reverse sequence - 10, 9, 8, etc.

Each of the starting, ending and step values may be variables or, indeed, any suitable expressions. Thus we can have some code repeated a number of times which is not known when we write the program.

```
10 INPUT "HOW MANY": N
20 FOR X=1 TO N
30 PRINT X
40 NEXT X
```

will print all of the numbers from 1 to whatever number you enter.

Sometimes you will see something like this in a program -

```
FOR DELAY=1 TO 1000
NEXT DELAY
```

There are no instructions between the FOR and NEXT instructions so it seems a waste. However, the name of the variable gives the game away in this example. Since the FOR and NEXT take a finite time to execute these two lines will cause a DELAY in the execution of the program. In other words a pause. This may be to give us time to read instructions before continuing or perhaps to prevent the action in a game from being too fast. You might think of other uses.

Now, so far we have talked mostly about numbers. How to enter them, how to add, subtract, multiply and divide and how to print them. You might well ask 'how do I do other things with my computer?'. Not everyone has a computer just to perform arithmetic. Well! Whilst the computer can only cope with numbers it doesn't care what those numbers represent. They might be dollars and cents but they could just as easily be a position on a screen or the speed of a spaceship or, for that matter, anything that can be represented by a number or set of numbers. For instance, try this -

```
10 INPUT "ROW,COL":ROW,COL
20 CALL CLEAR
30 CALL HCHAR(ROW,COL,65)
```

Enter a number in the range 1 to 24 for ROW and in the range 1 to 32 for COL. The program will display a letter 'A' at the position you specify. (Don't worry about the CALL HCHAR for the present. I'll explain that in a later column). The CALL CLEAR tells the program to clear the screen and makes sure you will see the 'A'. Not terribly exciting is it? Try this then

```
10 FOR X=1 TO 32
20 CALL CLEAR
30 CALL HCHAR(12,X,65)
40 NEXT X
```

You should see an 'A' move across the screen about half way up. We can make it move down with this -

```
10 FOR X=1 TO 24
20 CALL CLEAR
30 CALL HCHAR(X,16,65)
40 NEXT X
```

or diagonally -

```
10 FOR X=1 TO 24
20 CALL CLEAR
30 CALL HCHAR(X,X+4,65)
40 NEXT X
```

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

```

5 ! DESIGN A LOG-PERIODIC
  DIPOLE ANTENNA.
  BY M TAYLOR.
  FROM ELECTRONICS AUSTRALIA
  MARCH 1984.
6 ! T.I. EXTENDED BASIC
  VERSION BY R. WELHAM.
15 CALL CLEAR
20 PRINT "*** LOG PERIODIC DIPOLES ***"
25 PRINT : "THIS PROGRAM WILL DETERMINE THE PHYSICAL PARAMETERS OF"
30 PRINT "LOG PERIODIC DIPOLES WITH EXTENDED BANDWIDTH"
35 PRINT : "THE ANTENNA WILL BE LIMITED AT LOW FREQUENCIES BY"
40 PRINT "MECHANICAL PRECISION IN CONSTRUCTION."
45 PRINT : : : : : : : INPU
T "PRESS ENTER TO CONTINUE."
:B$
50 CALL CLEAR :: PRINT "WHAT IS THE LOWEST OPERATING" :: INPUT "FREQUENCY IN MHZ?" : FL
55 PRINT : "WHAT IS HIGHEST OPERATING" :: INPUT "FREQUENCY IN MHZ?" : FH
60 CALL CLEAR :: PRINT "WHAT IS THE SCALE FACTOR," :: INPUT "0.7 TO 0.98, (ASCENDING GAIN)" : T
65 PRINT : "WHAT IS SUBTENDED ANGLE," :: INPUT "2.5 TO 45 DEGREES?" : A
100 ! CALCULATE SIGMA
105 YY=A*0.01745329 :: XX=TA N(YY) :: CO=1/XX
110 WW=1-T :: S=WW*0.25*CO :: IF S<0.05 THEN 2000
115 QQ=T/S :: IF QQ<5.4 THEN 2020
150 ! CALCULATE BAR
155 X=1-T :: Y=X*X :: BA=(Y*CO*7.7)+1.1
200 ! CALCULATE BOOM SIZE RELATIVE TO WAVELENGTH
205 B=FH/FL :: BS=B*BA
210 Z=1/BS :: L=CO*.25*(1-Z)
250 ! CALCULATE NUMBER OF ELEMENTS
255 FF=LOG(BS) :: GG=LOG(10) :: Q=FF/GG
260 R=1/T :: UU=LOG(R) :: TT=LOG(10) :: U=UU/TT
265 N=(Q/U)+1 :: M=INT(N)+1
1000 CALL CLEAR :: PRINT "THIS ANTENNA COVERS" : "FROM" ; FL ; "MHZ TO" ; FH ; "MHZ."
1010 PRINT : "THE SCALE FACTOR IS" ; T ; "AND SUBTENDED ANGLE" ; A ; "."
1020 PRINT : "THE BOOM SIZE RELATIVE TO A WAVELENGTH IS" ; L ; "."
1030 PRINT : "THE MINIMUM NUMBER OF ELEMENTS IS" ; M ; " (" ; N ; ")." : :
    
```

```

1040 PRINT "PRESS F TO END C TO CONTINUE" :: INPUT "H TO RE-START" : A$
1050 IF A$="F" THEN 5000
1060 IF A$="C" THEN 1500
1070 IF A$="H" THEN 50 ELSE 1040
1500 PRINT ! CALCULATE LENGTH OF FIRST ELEMENT
1505 RE=149962/FL
1510 ! CALCULATE LENGTH OF OTHER ELEMENTS
1520 RF=RE*T :: RG=RF*T :: RH=RG*T :: RI=RH*T
1530 RJ=RI*T :: RK=RJ*T :: RL=RK*T :: RM=RL*T
1540 RN=RM*T :: RO=RN*T :: RP=RO*T :: RQ=RP*T
1550 RR=RQ*T :: RS=RR*T
1560 ! CALCULATE FIRST ELEMENT SPACING
1570 SA=S*2*RE
1590 ! CALCULATE OTHER ELEMENT SPACINGS
1600 SB=SA*T :: SC=SB*T :: SD=SC*T :: SE=SD*T
1610 SF=SE*T :: SG=SF*T :: SH=SG*T :: SI=SH*T
1620 SJ=SI*T :: SK=SJ*T :: SL=SK*T :: SM=SL*T
1630 SN=SM*T
1650 ! CALCULATE FEEDER TERMINATION
1660 FT=37490.5/FL
1800 CALL CLEAR
1810 PRINT USING "REAR ELEMENT LEN #####. MM." : RE :: PRINT USING "FIRST SPACING" : SA
1820 PRINT USING "NEXT ELEMENT LEN #####. MM." : RF :: PRINT USING "NEXT SPACING" : SB
1830 PRINT USING "NEXT ELEMENT LEN #####. MM." : RG :: PRINT USING "NEXT SPACING" : SC
1840 PRINT USING "NEXT ELEMENT LEN #####. MM." : RH :: PRINT USING "NEXT SPACING" : SD
1850 PRINT USING "NEXT ELEMENT LEN #####. MM." : RI :: PRINT USING "NEXT SPACING" : SE
1860 PRINT USING "NEXT ELEMENT LEN #####. MM." : RJ :: PRINT USING "NEXT SPACING" : SF
1870 PRINT USING "NEXT ELEMENT LEN #####. MM." : RK :: PRINT USING "NEXT SPACING" : SG
1880 PRINT USING "NEXT ELEMENT LEN #####. MM." : RL :: PRINT USING "NEXT SPACING" : SH
1890 PRINT : INPUT "PRESS ENTER TO CONTINUE" : B$
1900 CALL CLEAR :: PRINT USI
    
```

```

NG "NEXT ELEMENT LEN #####. MM." : RM :: PRINT USING "NEXT SPACING" : SA
1910 PRINT USING "NEXT ELEMENT LEN #####. MM." : RN :: PRINT USING "NEXT SPACING" : SB
1920 PRINT USING "NEXT ELEMENT LEN #####. MM." : RO :: PRINT USING "NEXT SPACING" : SC
1930 PRINT USING "NEXT ELEMENT LEN #####. MM." : RP :: PRINT USING "NEXT SPACING" : SD
1940 PRINT USING "NEXT ELEMENT LEN #####. MM." : RQ :: PRINT USING "NEXT SPACING" : SE
1950 PRINT USING "NEXT ELEMENT LEN #####. MM." : RR :: PRINT USING "NEXT SPACING" : SF
1960 PRINT USING "NEXT ELEMENT LEN #####. MM." : RS
1970 PRINT "FEEDER TERMINATION IS" :: PRINT USING "#####. MM BEHIND REAR" : FT :: PRINT TAB(10) ; "ELEMENT."
1975 PRINT "DO YOU WISH TO SEE FIG AGAIN"
1976 CALL KEY(0,KEY,STAT) :: IF (KEY<89)*(KEY<78) THEN 1976
1977 IF KEY=89 THEN 1000 ELSE 1040
2000 CALL CLEAR :: PRINT "SIGMA ( ; S ; ) IS LESS THAN 0.05, THIS WILL DECREASE"
2010 PRINT "DIRECTIVITY AND F/B RATIO, TRY DIFFERENT ANGLE."
2015 FOR XX=1 TO 3000 :: NEXT XX :: GOTO 50
2020 CALL CLEAR :: PRINT "SIGMA GREATER THAN OPTIMUM, THIS WILL DECREASE"
2025 PRINT "DIRECTIVITY, SIDE LOBES WILL APPEAR AND ANTENNA LENGTH"
2030 PRINT " WILL BE EXCESSIVE. TRY DIFFERENT ANGLE."
2035 FOR XX=1 TO 3000 :: NEXT XX :: GOTO 50
5000 CALL CLEAR :: PRINT "PROGRAM TERMINATED AS REQUESTED." :: END
    
```





## SOFTWARE

## REVIEW



This month I have reviewed 3 programmes from KIDWARE, Box 1664, IDAHO FALLS, ID. 83401 which were obtained from that company after it was decided by the Committee to review some of their software before any firm decision was taken to import and sell to members. The programmes I have reviewed are:

MACDONALD'S FARM  
SIMON SAYS  
NUMBERS II

A 4th programme, NUMBERS I, would also have been reviewed but try as I might I cannot get their cassette to load. A review of each of the 3 that did load follows.

### 1. MACDONALD'S FARM

The scenario is farmer MacDonald standing in the doorway of his barn hoping that you can find his lost animals which have all strayed from the barn and are hiding behind different numbered fences. The object of the game is to guess which numbered fence each animal is hiding behind when the prompt "FIND THE HORSE, COW, PIG ETC." comes on the screen. Up to 9 hiding animals can be requested at the start of the game. None of the animals however are portrayed graphically. At the end of the game you are told how many guesses it took to locate the number of animals previously requested. Colors and graphics

(what there are at least) are pleasing enough as also is the musical rendition of the old children's song although it does tend to get a bit repetitious after a while. All up this is a reasonably good game which should hold the interest of the under 9'ers for some time. The programme runs in normal console BASIC.

### 2. SIMON SAYS

This game in one variety or another has been around for a long time. The object of course is to mimic colors and tones generated by the computer. The game gets progressively harder and is near impossible to play after about 12 colors have been generated unless the player has a very retentive memory. This version has large colorful graphics and it should keep the kids (and some adults) occupied for a few hours. The programme runs in normal console BASIC.

### 3. NUMBERS II

This programme provides a basis for beginning instruction in addition and subtraction. The user is given 2 choices:

\* Before and After - the child enters the numbers that are before and after the displayed number. e.g. screen

displays a 6 - user is asked "what is before 6?" then "what is after 6?"

\* Fill in Blanks - one number and 3 blanks are shown. The user fills in the blanks. e.g. \_ \_ 5 \_ An arrow points to the first blank space and the user is asked "what goes here". The arrow moves to the next blank space and repeats the question.

NUMBERS II is designed for children up to about 8 years of age. It is very user friendly, has interesting graphics and sound effects and although it is a little slow in drawing the re-defined numerals this is not a serious drawback to its educational value. This programme also runs in standard console BASIC.

All of the programmes reviewed are supplied on cassette. MacDonald's Farm and Simon Says on the one tape and the two Numbers programmes on another. No instructions accompanied the tapes I received nor were the tapes enclosed in a cassette box. I do not know if this is how KIDWARE normally supply their software but I would hope not. If the User Group were to import the above programmes from KIDWARE or others from their extensive range then it is envisaged that the final cost to members would be approximately \$16 - \$18 per tape.

Terry Phillips  
Kidware Librarian





With the introduction to this group, of TI-FORTH as Public Domain Software from TI(U.S.A), a great deal of interest in it has been created. So, here is some news that you will find most helpful... The SYDNEY FORTH GROUP has been recently established to promote the use of FORTH computer language.

FORTH is a relatively new computer language incorporating many features and techniques developed in the twenty odd years since the advent of BASIC and FORTRAN. The language is designed for portability between different microprocessors, which is handy considering the number of different machines already represented within the group.

Some of the capabilities of FORTH include:- names up to 32 characters long, calculate in any base, easy to mix high level FORTH and machine code, functions are compiled to give greater speed, yet it is an interactive language. Several standard control structures such as DO .. LOOP, BEGIN .. WHILE .. REPEAT, IF .. ELSE .. THEN are available.

The most powerful feature is its extensibility. New commands can be created out of existing commands or previously created user commands. It is also possible to define extra control structures and date types to cater for a particular application. In essence, the process of programming in FORTH consists of adding new commands to the language until a single command carries out the desired task.

Applications of FORTH range from control of Telescopes and Arcade games in real time, to word processing and financial calculations.

FORTH is a particularly good language for beginners to learn, because functions can be executed direct from the keyboard with the minimum of punctuation. Experienced programmers will find FORTH to be a useful second language.

The aim of the Group is promote the use and understanding of this language by holding regular meetings, lectures and demonstrations. The group is also developing hardware and software to enable different machines to be interfaced with each other.

For information contact Peter Tregaele, 10 Binda Road, Yowie Bay. 2228. PHONE 524-7490.

If you are interested in getting information on TI-FORTH, Please send a stamped, self-addressed envelope to John Robinson(SECRETARY), P.O.Box 149, Pennant Hills, NSW, 2120.



## TI-COUNT the GENERAL LEDGER ACCOUNTING SYSTEM

The TI-COUNT small business accounting system, only for the Texas Instruments 99/4(A) personal computer, is the innovative and cost effective way to store, retrieve, display and print financial information and documents valuable for efficient business decisions and operations. A complete general ledger accounting system, hardware and software, for as little as \$2,500.

The general ledger system instructs the user step by step through the day's activities. Each journal entry is typed into a form on the color screen. Scanned for errors and edited immediately to speed the process. Ledger accounts (up to 650) are updated on a daily basis so the business person can control purchases, receivables, and most importantly, cash. As an extra aid, an interim income

statement and balance sheet may be printed any time.

As each accounting period is closed, the general ledger system summarizes the journals and prints the unadjusted, adjusted and closing balances. Three financial statements: The Income Statements for the profit centres and business (including special schedules), a balance sheet, and the change in financial position are also printed during the closing procedure.

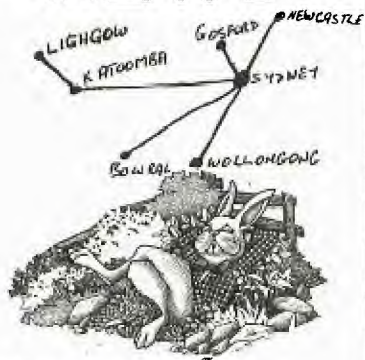
The general ledger system printouts are programs easily adapted to the individual small business user. Twenty-two special characters in each ledger account are programmed to define the financial statements, automatic journal entries and the closing procedure. The utility programs allow the user at any time to edit and print the journals. Ledger accounts can be added, printed or edited during startup and maintenance of the system. Ledger input forms are printed for easy planning of the accounting statements. Every program has been written to aid the user of TI-Count.

TI-Count general ledger accounting system includes two system disks and a ledger disk set up for the fictitious company, Long-Horn Widgets, Inc. This ledger disk serves as an example in the manual and to demonstrate the programs. A detailed operations manual is included in the package.

A more indepth review of this very powerful business software will hopefully be presented in the next issue of this SYDNEY NEWSDIGEST.



## REGIONAL NEWS



The first meeting of the Blaxland regional TISHUG group was held at the 28 Haymet St, Blaxland on Tuesday the sixth of March at 7.30pm.

The following members were in attendance:-

Robert Vines            Mark Williams  
Nick Viereckel        Ian Docherty  
Mike & Matthew Robinson  
Chris Old

John Williams and Peter Traissch also attended and expressed interest in joining the group. Hugh Rafferty, Brendon Chambers, John Lindsay and Don Gilmour were unable to attend on the night but expressed interest in, the group.

Both Nick Viereckel and myself are confident of attracting as many people again once they are contacted and become members of TISHUG. All those present expressed a reluctance to travel to Sydney for meetings after commuting to work each day !

The meeting decided that the first Tuesday of the month at 7.30pm would be the meeting time and until membership is settled the meetings will be held at the above address.

The group has a good range of ages, interests and experience with some members quite expert in various computer - related fields. There was no shortage of suggestions for activities and the meeting progressed well into the evening. Could you please notify members through the newsletter of the meeting time and if you have any advice or assistance you can offer regarding organisation, etc, I would welcome it.

Yours Sincerely  
Robert Vines.

THANK YOU ROBERT, WE HAVE DONE ONE BETTER, IN REPRINTING YOUR REPORT. KEEP UP THE GOOD WORK, AND OUR REGARDS TO FELLOW T.I.S.H.U.G MEMBERS AT YOUR REGIONAL GROUP. KEEP THOSE REPORTS COMMING IN.

### NEWCASTLE REGIONAL NEWS

Even though the heavens opened up in March, we had another turn up with 60 members getting together at our new meeting place.

We would like to thank Tony McGovern and Gary Jones for their discussions on Basic and Ex Basic. The word must be spreading as we had visitors from as far as Tamworth and Taree, together with a member from Sydney.

April is here again, the Easter Bunny has brought lots of tooth trouble for some, but with Chris Ryan and his care and maintenance lecture he'll make sure all those teething problems will be kept to a minimum.

Bye for now, may all your bugs be little ones! See you all in May.

Peter Coxon.

P.S. Dont forget 7PM  
E.H.P. Rec Room, Cebert  
Street, Mayfield 15-05-84.

### ILLAWARRA REGIONAL MEETING

There were 16 people at our last meeting, 02-04-84.

It was decided to start future meetings at 7.30PM with a half hour tutorial for those who wish to learn basic.

The meeting proper would then start at 8.00PM.

By way of involving members, a competition was suggested. It would take the form of graphic and/or sound and could be useful for the introduction of a program. The aim was to write the program in the least number of lines (suggestion, 3 lines for Extended Basic and 10 lines for Console Basic).

The next meeting will be held on 7th May 1984, at THE SHOP 4 HOME COMPUTER, WATERS WALKWAY, CORRIMAL (PH 83-3952).

R.A. MONTGOMERY.



### MOSMAN GROUP

Contact Betty Green on 969-5296 or Alan Oxenham on 938-4585.

### NEPEAN REGIONAL GROUP

Meeting held at Nepean Police Boys Club. 10 members present.

Informal meeting to discuss general structuring of club suggestions from members. Aim to supply members with programmes and projects.

Meetings will be held every fortnight.

For further information contact Malcolm Tudor on 047-333673 or Mel Copeland. (047)351340

The next regional meeting in the Baulkern Hills area, will be conducted on May the 12th (7pm) at the Retravision Store on Old Northern Road. For further details, contact LOU NEWHOUSE after hours on 6398888.

We had a record crowd at the MARRICKVILLE/ASHFIELD Regional Meeting, with 22 people at Shane's home, Unit 1/37 George St, Marrickville. Terry brought club tapes and assorted items for sale, to the meeting. I guess that's the good thing about having bot the club Librarian, and the Editor in one region. Shane conducts his on the first Tuesday of each month at 7:30pm. For further details, he can be contacted on (w)02.291631.



# Sydney News Digest

The following is a paid advert.

**SOFTEX SOFTEX SOFTEX SOFTEX**  
**SOFTEX SOFTEX SOFTEX SOFTEX**

## THE MAGAZINE

SOFTEX Magazine is published exclusively for Australian Users of the TI 99/4A Home Computer.

It contains news, programs, tips, articles of interest from here and overseas.

Subscription Rates : \$5.00 (single copy), \$25.00 (for 6 copies per annum).

## HARDWARE

"WIDGIT" and "DISK FIXER" from Navarone Industries! The Widgit allows you to plug in three modules and to switch from one to the other. Disk Fixer lets you access, and alter, sectors on your disks. \$60.00 each.

AMUST 80DT Printer: 80 cps, bi-directional, tractor or friction feed, 10" paper, character fonts include expanded, condensed, superscript, subscript, emphasized in normal or italics mode. User-definable characters and screen dump.....A very versatile printer, with parallel interface as standard, RS232 available at extra cost.

**GREAT VALUE AT \$375.00**

(including sales tax. Freight extra if applicable.)

AMUST P-98 Printer: All the features of the 80DT, with choice of pica or elite, twin belt drive, "pull-through" paper feed. One only **\$500.00**  
(including sales tax, plus freight if applicable.)

BROTHER EP-44 Electronic Printer-Typewriter

This portable, battery-powered unit can be used as a typewriter, but also has 4K of memory, and an RS232 interface. It can be used as a printer when connected to your computer, or as a typewriter. The text stored in memory can be transferred into the computer with TEII. Uses plain or thermal paper.

The best part is the price.....**ONLY \$350.00**  
(including sales tax. Freight extra if applicable.)

## PRE-LOVED PERIPHERALS

TI Stand-alone RS232 Interface, plugs into your 99/4A. It has two serial ports, so you can run a printer and a modem. No need for an expansion box. We shall supply it with a new BROTHER EP-44, cables, ready to run. **\$580.00**

TI Stand-alone Disk Controller, to be sold with a free-standing disk drive. Again, no need for the Expansion Box. Including cable, ready to run. **\$575.00**  
or, with a tandem free-standing drive, including power supply, cable. **\$880.00**

TI Stand-alone 32K Memory Expansion. Now, you can run LOGO II. No need for the Expansion Box! **\$220.00**

TI Speech Synthesizer **\$100.00**

## PRE-LOVED SOFTWARE

TI-Invaders #30 Pirate Adventure #30 Video Graphs #20 Mini-Memory #40 Personal Record Keeping #30

# SOFTEX

PTY. LTD.

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Kilsyth, Victoria, 3137.  
Phone Doug Thomas (A.H.) 03-7258178  
Wayne Worlidge 03-251832

**SOFTEX SOFTEX SOFTEX SOFTEX**  
**SOFTEX SOFTEX SOFTEX SOFTEX**

## BASIC FOR BEGINNERS (Cont;)

This is one way, and on some computers the only way to produce moving objects. Luckily the TI99 has other, better ways, but that's another story.

Perhaps this month's column has given you some ideas. I hope so. In any case - happy programming.



## MULTIPLAN

The inaugural meeting of the Multiplan special interest group was, unfortunately, not held. The second (first!) meeting should take place by the time this is printed and a report will appear in the next News Digest.

For those of you interested in learning Multiplan, remember that meetings are held on the **THIRD SUNDAY** of each month at my home -

**3/6 McDougall Street**  
**Milsons Point**

By all means contact me on

**436 1318**

if you are interested or if you would like more information.

**Peter Day.**

## FOR SALE:

So you want a printer connected to your TI without having to buy an RS232 card?

I have a TI THERMAL PRINTER for sale. All you need do is plug the printer into the peripheral port of your TI, and away you go.

You can use it for listing your programmes to paper, printing Plots. If you have the module "A-MAZE-ING", you can re-produce all of the mazes, or for that WEIGHT CONTROL AND NUTRITION module, you can print out your diet needs etc. WAS \$450, my price only \$300 with transformer supplied.

Contact HUMPHREY LINDLEY  
127 Crowley St, Aspley, QLD  
4034 or phone (07)2636161.

## programmer's READ THIS...

with MARK NIELSEN

HI IT'S ME AGAIN. WELL FIRST I HAVE TO MAKE SOME APPOLOGIES FOR SOME ERRORS IN MY LAST ARTICLE. THE FIRST ONE WAS NOT MY FAULT BUT THE EDITORS. HE THOUGHT THAT MY PROGRAM WAS IN EXTENDED BASIC AND HE PUT "EXTENDED BASIC REQUIRED" AT THE TOP OF THE LISTING, AND OF COURSE IT WOULD'NT RUN IN EXTENDED BASIC BECAUSE OF THE COLON'S IN THE PRINT STATEMENTS. SO IF YOU HAVE TYPED THE PROGRAM IN AND HAVE FOUND THAT IT WON'T WORK, JUST LOAD IT INTO BASIC AND THE PROGRAM WILL RUN.

THE SECOND MISTAKE WAS MINE. I GAVE SOME CHANGES TO USE DISK FILES AND I MADE A MISTAKE IN LINE 690. FOR PEOPLE WHO WANT TO USE DISK FILES LINE 690 SHOULD NOW READ "OPEN #1:"DSK1."&FILE\$,INTERNAL,INPUT,VARIABLE 192". SO IF YOU MAKE THIS CHANGE THE PROGRAM WILL FUNCTION PROPERLY WITH DISK FILES.

RIGHT NOW TO WHAT WE'RE HERE FOR TO LEARN HOW TO WRITE OUR OWN FILING PROGRAM. FIRSTLY YOU MUST DECIDE WHAT SORT OF DATA YOU WANT TO FILE. YOU MIGHT WANT TO KEEP A FILE ON HOW MUCH MONEY YOU HAVE IN THE BANK. RIGHT TO DO THIS YOU WILL HAVE TO WORK OUT WHAT ITEMS OF DATA YOU WANT TO KEEP TRACK OF SUCH AS THE BALANCE OF THE ACCOUNT, THE NAME OF THE ACCOUNT, THE TYPE OF ACCOUNT, DEPOSITS AND WITHDRAWALS AND SO ON. TO START THE PROGRAM YOU MUST TELL THE COMPUTER TO KEEP SOME MEMORY ASIDE TO HOLD ALL OF THIS DATA. THIS IS WHAT THE DIM STATEMENT DOES. THE BLOCK OF MEMORY IS CALLED AN "ARRAY". LINE 110 OF THE PROGRAM DIMENSIONS AN ARRAY TO HOLD 61 NAMES YOU MIGHT SAY "BUT IT ONLY HAS 60 IN THE DIM STATEMENT" THIS IS BECAUSE THE FIRST ELEMENT IN THE ARRAY CALLED "NAME\$" IS 0 THUS 0-60 IS 61 ELEMENTS, BUT I NEVER USE ELEMENT 0. I ALWAYS START AT ONE.

THERE IS ONE THING WE HAVE TO COVER. WHEN WE ENTER DATA WE WILL BE ENTERING NUMBERS IN SOME "ARRAYS" AND WE WILL BE ENTERING LETTERS IN OTHERS. THE ARRAY USED TO STORE NUMBERS DOES NOT HAVE TO HAVE A DOLLAR SIGN "\$" AS THE LAST CHARACTER OF ITS NAME, BUT WHEN WE ARE ENTERING LETTERS INTO AN ARRAY WE MUST USE THE DOLLAR SIGN "\$" THIS IS BECAUSE THE DOLLAR SIGN TELLS THE COMPUTER THAT WE ARE GOING

TO BE PUTTING LETTERS IN THIS ARRAY. THIS TYPE OF ARRAY IS CALLED A "STRING ARRAY" WHILE THE ARRAY WE TYPE NUMBERS INTO IS CALLED A "NUMERIC ARRAY". SO THE BALANCE OF THE ACCOUNT WOULD GO INTO A "NUMERIC" ARRAY. AN EXAMPLE OF THIS IS "DIM BAL(60)" THIS DIMENSIONS A NUMERIC ARRAY CALLED "BAL" TO CONTAIN 61 ELEMENTS. AN EXAMPLE OF A STRING ARRAY IS "DIM A\$NAME\$(60)" THIS STATEMENT DIMENSIONS A STRING ARRAY TO HOLD 61 ACCOUNT NAMES.

RIGHT NOW WE HAVE SET ASIDE MEMORY FOR THE DATA, WE HAVE TO PUT THE DATA INTO THE MEMORY. THERE ARE TWO METHODS THAT I USE. THE FIRST IS TO USE A "FOR NEXT LOOP" THIS STATEMENT SETS UP A VARIABLE AND INCREMENTS IT UNTIL THE DESIRED NUMBER IS REACHED. AN EXAMPLE OF THIS IS.

```
100 FOR X=1 TO 100
110 NEXT X
```

NOW THIS LOOP SETS UP VARIABLE "X" TO BE 1 THE FIRST PASS THEN X IS INCREMENTED BY ONE EACH PASS, UNTIL 100 IS REACHED. NOW TO USE THIS IN OUR FILING PROGRAM WE HAVE TO PUT AN INPUT IN BETWEEN THE FOR AND THE NEXT STATEMENT. AN EXAMPLE OF THIS IS.

```
100 CALL CLEAR
110 DIM NAME$(60)
120 FOR X=1 TO 60
130 INPUT NAME$(X)
140 NEXT X
```

RIGHT, LINE 100 CLEARS THE SCREEN. LINE 110 DIMENSIONS AN ARRAY CALLED "NAME\$" TO HAVE 61 ELEMENTS. LINE 120 SETS UP X TO START AT ONE AN INCREMENT TO 60. LINE 130 ACCEPTS DATA AND PUTS IT INTO THE ARRAY CALLED "NAME\$" IN THE "X" POSITION, SINCE TO START X=1 THEN THE FIRST NAME IS PUT INTO THE FIRST SPACE IN THE ARRAY CALLED "NAME\$", AND LINE 140 IS THE END OF THE LOOP. THAT IS THE FIRST METHOD.

THE SECOND METHOD IS TO INCREMENT "X" MANUALLY. AN EXAMPLE OF THIS IS.

```
100 CALL CLEAR
110 DIM NAME$(60)
120 X=1
130 INPUT NAME$(X)
140 X=X+1
150 GOTO 130
```

LINE 100 AND 110 ARE THE SAME AS THE LAST EXAMPLE. LINE 120 SETS "X" TO EQUAL 1 THEN 130

INPUTS DATA INTO THE ARRAY "NAME\$" ON THE "X"TH POSITION, SINCE X=1 THEN THE DATA IS PUT INTO THE FIRST POSITION. LINE 140 INCREMENTS "X" THEN LINE 150 GOES BACK TO THE INPUT AND SO ON. NOW IF WE WERE TO USE THIS AS IT STANDS WE WOULD HAVE SOME PROBLEMS. FIRSTLY THERE IS NO END TO THE LOOP, IT WILL GO ON UNTIL THE ARRAY IS FULL AND THEN YOU WILL GET AN ERROR MESSAGE AND THE PROGRAM WILL HOLT. SO WE HAVE TO HAVE A MEANS OF ESCAPE FROM THE LOOP. TO DO THIS ALL WE DO IS ADD LINE 135 THIS WOULD BE.

```
135 IF NAME$(X)="E" THEN 500
```

THIS LINE CHECKS THE DATA THAT WAS ENTERED, AND IF THE DATA WAS AN "E" THEN THE PROGRAM WOULD GO TO LINE 500. THIS IS OUR MEANS OF ESCAPE, ALL WE DO WHEN WE HAVE TYPED IN ALL WE WANT WE THEN ENTER "E" THEN PROGRAM EXITS THE LOOP.

NOW THAT WE HAVE THE DATA IN THE "ARRAY" WE HAVE TO SAVE IT TO A CASSETTE. THIS IS DONE WITH THE "OPEN" AND "PRINT" STATEMENTS. FIRST WE HAVE TO TELL THE COMPUTER WHICH DEVICE WE WANT TO STORE THE DATA ON, THIS IS DONE WITH THE OPEN STATEMENT. AN EXAPMLE OF THIS IS.

```
100 OPEN
#1:"CS1",INTERNAL,OUTPUT,FIXED
64
```

THIS LINE OPENS FILE #1 TO "CS1" THIS TELLS THE COMPUTER TO SEND THE DATA TO "CS1" AND WE WANT TO USE "INTERNAL" RECORDS (MORE ON THIS LATER), WE WANT TO OUTPUT THE DATA AND WE WANT TO USE "FIXED" LENTH RECORDS(ALSO LATER) AND WE WANT THE LENTH OF EACH RECORD TO BE 64 BYTES LONG.

NOW THAT WE HAVE TOLD THE COMPUTER WHERE TO PUT THE DATA, WE HAVE TO TELL IT HOW MANY RECORDS WE ARE GOING TO KEEP THIS IS DONE WITH OUR FRIEND THE "FOR NEXT LOOP". AN EXAMPLE OF THIS IS.

```
120 FOR N=1 TO X
```

NOW THIS IS DIFFERENT TO WHAT WE HAD BEFORE, THIS TIME WE ARE USING 2 VARIABLES INSTEAD OF ONE. WE GET THE "X" VARIABLE FROM THE FIRST PART OF THE PROGRAM, BECAUSE "X" WILL EQUAL THE NUMBER OF RECORDS THAT WE TYPED IN, SO WE USE THIS TO TELL THE COMPUTER HOW MANY RECORDS THERE ARE.

```
130 PRINT #1:NAME$(N)
```

PROGRAMMERS (continued page 25)





**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.

PROGRAMMERS (from page 24 )

THIS LINE TELLS THE COMPUTER TO OUTPUT THE "N"TH ELEMENT IN THE ARRAY CALLED "NAME\$" TO FILE #1, WHICH WAS THE FILE OPENED TO CS1. SO THE DATA IS PUT ONTO THE TAPE IN CS1.

140 NEXT N

THIS LINE COMPLETES THE LOOP.

150 CLOSE #1

THIS LINE TELLS THE COMPUTER YOU HAVE FINISHED OUTPUTTING DATA TO FILE #1 AND TELLS THE COMPUTER TO CLOSE THE FILE. THATS ALL THERE IS TO IT. TOTALLY CONFUSED?. I THOUGHT SO. NOW FOR MORE ON THE FORMAT THAT IS USED WHEN WE SEND DATA TO "CS1". THE INTERNAL FORMAT TELLS THE COMPUTER TO SAVE THE DATA IN THE MACHINES OWN LANGUAGE INSTEAD OF IN LETTERS AND NUMBERS THAT WE USE. THIS FORMAT IS FASTER AND IS ALSO MORE CONVENIENT FOR THE MACHINE.

THE LENTH OF THE RECORDS WITH CASSETTE ARE "FIXED" THIS MEANS THAT EACH RECORD IS THE SAME LENTH, NO MATTER IF WE ONLY TYPE A FEW CHARACTERS, THE COMPUTER WILL "PAD" THE RECORD UNTIL IT IS THE LENTH THAT IS SELECTED. FIXED RECORDS ARE THE ONLY TYPE OF RECORDS YOU CAN USE WITH CASSETTES, BUT WITH DISKETTES YOU CAN USE OTHER TYPES OF RECORDS, SUCH AS "VARIABLE" LENTH BUT THATS ONLY WITH DISKETTES.

TO INPUT THE DATA FROM THE CASSETTE YOU MUST CHANGE THE OPEN STATEMENT TO "OPEN #1:"CS1",INTERNAL,INPUT;FIXED 64", THE ONLY CHANGE IS THE "OUTPUT" NOW BECOMES AN "INPUT" AND INSTEAD OF USING "PRINT" WE USE "INPUT"

TO DEMONSTRATE THIS, I HAVE A PROGRAM TO INPUT NAMES FROM THE KEYBOARD AND WHEN "E" IS ENTERED THE PROGRAM WILL SAVE THE NAMES TO TAPE. IF THERE ARE ANY PROBLEMS WITH FILE PROCESSING, I STILL WORK AT COMPUTERWAVE SO CALL IN AND SEE ME AND I WILL SEE WHAT I CAN DO FOR YOU.

ALL THE BEST

M. NIELSEN

```
100 CALL CLEAR
110 DIM NAME$(60)
120 FOR X=1 TO 60
130 INPUT NAME$(X)
140 IF NAME$(X)="E" THEN 160
150 NEXT X
160 CALL CLEAR
170 OPEN #1:"CS1",INTERNAL,
OUTPUT,FIXED 64
180 FOR A=1 TO X
190 PRINT #1:NAME$(A)
200 NEXT A
210 CLOSE #1
220 END
```

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=====

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your printer, computer tables, file systems etc. This is the place for you!!

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This firm has offered the members of our user's group the very generous discount of 15% on every purchase. However this discount is on the condition that you produce your T.I.S.H.U.G. Membership card.

I found this great discount by asking around, I hope that any members who might know of any other good deals will communicate with the editor and pass on the valuable information.

Good Hunting  
Your Club Photographer  
Maurice Stewartson.



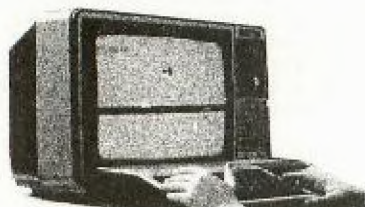
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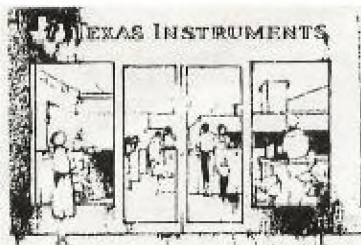
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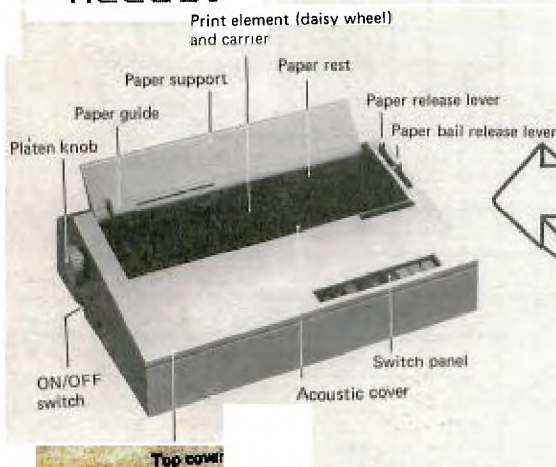
# Sydney News Digest



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