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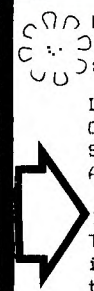
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RENEWAL TIME AT T.I.S.H.U.G.

SYDNEY NEWSDIGEST



OCT '83 - \$1



**NEXT MEETING > SECOND SATURDAY OF OCTOBER
8th OCTOBER (2pm) St. John's Church Hall**

DUE TO THE PUBLIC HOLIDAY ON THE FIRST SATURDAY OF THIS COMING MONTH
OUR MEETING DAY IS ON THE
SECOND SATURDAY AND HAVE WE GOT A GOOD ONE FOR YOU.
All you need to bring is yourself plus PEN & PAPER...read all about it on page 3

IT'S RENEWAL TIME FOR MANY OF YOU !!!

Take a look at your MEMBERSHIP CARD,
if it has either SEPT. or OCT'83 on it, we urge you
to send us your renewal \$20 NOW, as you could miss out on your next issue of the
SYDNEY NEWSDIGEST

SEE THE RENEWAL FORM ON THE BACK P. 16,14+2

Newsletter of TI Sydney Users' Group



Editorial with Shane

MINUTES

By J.R.



Before I get into the meaty side of the news, there are a few items which you will want to know about...

TWO NEW REGIONAL MEETINGS..

ON SUNDAY THE 9th (day after our next BIG meeting) I have been asked to be the guest speaker at the LIVERPOOL REGIONAL GROUP. This will be their first session, so if you live near or around the Liverpool area come on along and have some fun.

It will be conducted at 19 CHEERYBROOK AVE, LANDSVALE (2pm sharp). For further details contact Alex Exton on 7277061.

The other new meeting will take place on the Wednesday evening after our next big meeting for those in or around GOROKAN. For further details, contact RUSSELL WELHAM at either (w)043-521595, (h)043-924000. The meeting will be at his home... 20 Avonlea Ave Gorokan.

Just in case you typed in the program called SUCCESS FORMULA from the last issue of the 99'er magazine and found an error, perhaps this will make it all right...ON PAGE 48, line number 2920 change the RESTORE line to read RESTORE 5830. HOPEFULLY ALL WILL BE O.K. Thanks to Russell for contacting me about that.

Due to the public holiday this week-end, the Club Meeting will be held the following week. I should mention that the following month (our A.G.M.) will also be held on the second Saturday of NOVEMBER.

All you need to bring with you for this very unique afternoon of family sharing, will be

- [1]: A PEN or quill with ink
- [2]: A NOTE PAD to take down notes!!!!!!
- [3]: ANY PROBLEMS YOU HAVE ABOUT PROGRAMMING or COMPUTING.

We're going to have on stage, a PANEL OF GUEST PROGRAMMERS, along with an overhead projector, ready to answer your questions, or share with you some interesting routines to enhance your programmes!

OUR GUEST PANEL will consist of:

- GRAEME HOLLISS from the Programmers Crisis Line
- ANDREW NUTTING Education/Communications Div.
- PETER LYNDEN Educational Co-Ordinator Author
- DAVID LIELL Programming tip-ster
- JOHN ROBINSON Club Secretary supreme.

We have had well received half yearly tutorials (next one planned for FEBRUARY), but you'll really enjoy this informal PANEL OF PRO'S.

So, all this coming week, write down the things you are having problems with related to computing, bring your notes along to the next meeting with enough paper to write down the brilliant replies. SEE YOU THERE, at St. John's Church Hall Victoria St, Darlinghurst between the Kings Cross Fire Station and St. Vincent's Hospital (2pm to 4:30pm).

I recently had the phone put on specifically to be used for MODEM COMMUNICATION at home. Andrew came over and showed me how to use my new CICADA300 modem. A demonstration of this equipment will be given at my regional meeting on the first Tuesday of this month. We now have 6 or 7 members in our club with modems and are able to access the free data bases in Sydney, as well as MiCC, AUSTRALIAN BEGINNING OVERSEAS SYSTEMS via Satellite. If you are interested in MODEM/COMPUTER COMMUNICATION please contact

Enclosed with this issue are membership cards for 1983-1984. If there is no card with the newsletter then you have either not renewed or you received yours at the last meeting or by separate mail recently. Quite a large number of memberships are due for renewal NOW. This will be your last newsletter if we do not receive your renewal form and membership fee of \$20.00 by the end of October. So do it now!!!

We have had several complaints about the loading of the Club Software Tapes BASIC Vol.1 No.1 and EXTENDED BASIC VOL 1. No.1. If you are experiencing difficulty a tip is to remove the remote control jack and reduce the tone level, or both, on your tape recorder. I found that these two actions enabled me to load both tapes without any difficulty.

Hanley Armstrong writes that he is having problems loading a Basic program. I think he may be loading this through the Extended Basic cartridge. Remember character sets 15 and 16 are not available in Extended Basic.

Here's a tip for all those budding programmers who accidentally type OLD CSI, hit <ENTER>, and suddenly realise they want to SAVE the program they have worked on for the last few hours - no worries, just SHIFT E, hit <ENTER>, get an ERROR MESSAGE and start again.

COMMITTEE ROUNDUP:

At meeting #22 held on August 30th final proofs of the Constitution were checked and format of the publication decided. Your executive agreed to purchase a loudspeaker system for use at our general meetings. We are investigating the costs of an overhead projector. A decision is expected at the next meeting on the tape/disk supplier.

We are now looking forward to receiving NOMINATIONS for the CO-ORDINATING COMMITTEE for 1983-84. Nomination forms are provided elsewhere in this newsletter. Terry Phillips has recently been nominated to be Club Librarian since he has just purchased a disk system from Computerwave.

Keep those renewals rolling in,

Happy Computing,

John Robinson.

Andrew, John R, Manual C, Graeme S, Andrew W, or myself.

Here is a list of the FREE DATA BASES available in Sydney...

Mi Computer Club... (02)6621686

SOFTWARE TOOLS.... (02)9971836

(this one is a CP/M Data Base and so to get on you should type DDT as the password to get on)

MICRO DESIGN LAB... (02)6630151

TELECOM BBS..... (02)6630138

SYDNEY PUBLIC ACCESS (02)8083536

AWA DATABASE..... (02)9224656

Plus of course, all those you know who have modems connected. I'll share more information about PROTOCOL etc in the next issue of SYDNEY NEWSDIGEST.

BY FOR NOW

Shane

FOUNDATION

Questions and Answers About the 128K Card

Q. I don't program at all. I just use programs like Multiplan™ and TI-Writer™. I hope that if I buy the 128K card, I'll be able to work on spreadsheets and documents that are four times larger than those that fit in 32K. Is that how it works?

A. Yes, but not using those particular programs. You see, those programs were written to use only 32K. We have no way of modifying them to use 128K. Of course, similar programs could be written to use all the available memory, and then you would have exactly what you want.

Q. What will happen if I plug in a 128K card and try to run Multiplan, TI-Writer, or something similar?

A. It will behave just as if you only had a 32K card. For example, if you run Extended Basic and type "SIZE", the computer will tell you that you have "11840 BYTES OF STACK FREE, 24488 BYTES OF PROGRAM SPACE FREE."

Q. Why is that? You'd think that the computer would be able to tell how much memory is available and to use all of it.

A. Well, the TI computer can only address 32K bytes of expansion memory at a time. The way that Foundation provides 128K is by making it look to the computer like four separate 32K cards, only one of which is turned on at a time. This technique is called "bank switching".

Q. Would you summarize the reasons for getting a 128K card instead of a 32K card?

A. The best reason for getting the 128K card is that you write programs and you need more memory than 32K. If you don't write programs yourself, the best reason for getting a 128K card is that you want to be able to take advantage of large-memory programs as they become available. We are working on several ourselves, and we are also talking to several third-party software houses about writing and adapting software to use the extra memory.

Q. What kind of programs are you working on?

A. Well, the first and most important is called a "disk emulator". It allows you to read and write files from memory as if they were on a very fast disk. It provides a new device called "DSKX". You can OPEN files on it then INPUT and PRINT to them, all at memory speeds.

Q. It sounds like this disk emulator is pretty important. Are you sure it can be done in the time frame you're talking about? Also, how much will it cost?

A. It will cost less than forty dollars, and it will be available this summer. It's a very straightforward piece of software; nothing really exotic is involved.

Q. It sounds like I always need the DSR option. Is that true?

A. If you're a really excellent assembly-language programmer who already has a Mini-Memory™ module, you could get along without it. But otherwise you should definitely get it.

Q. I already have a 32K card. Can I use the 128K card in addition to it?

A. Unfortunately, the answer is no. There is no way to turn off the 32K card, so it always "collides" with the active bank of the 128K card. If you want the 128K card, you'll have to put an ad in the paper and sell your 32K card.

David Liell, member of T.I.S.H.U.G., plans to bring this fabulous card into the country, but due to Customs and freight charges, the 128K card will cost just over \$400.00. If you are interested in obtaining this card, please write to DAVID C/- SYDNEY NEWSIGEST P.O. Box 595 MARRICKVILLE, N.S.W. Aust. 2204

Q. When will that be available?

A. This summer. I should mention that in order to run the disk emulator, you need to specify that you want the "DSR option" when you order your 128K card. This costs an extra \$10. It provides several extra chips on the board that support what is called a "Device Service Routine".

Q. What other programs will be available?

A. We are talking to several companies about spreadsheet programs, word-processing software, and games. Also, notice that with just the disk emulator you can do many interesting things. For example, it's incredible how much faster you can back up a disk if you only have a single disk system.

Q. How do I use the 128K card with Basic?

A. Well, again you should get the DSR option. It comes with a little program called MEM96 that lets you use 96K of add-on memory as if it were a relative file of 64 byte records. Meanwhile, the remaining 32K is available as a regular 32K expansion memory.

Here's a sample Basic program:

```
1. OPEN #1: "MEM96"  
2. A$ = "This is a message."  
3. PRINT #1, REC 10 : A$  
4. INPUT #1, REC 10 : B$  
5. PRINT B$
```

The above program will print "This is a message." If you put all your data in MEM96, you can access it at memory speeds while saving all the space it would take up in your program. By the way, the 96K pseudo-file "MEM96" is available to regular Basic as well as Extended Basic, which is a distinct advantage.

Q. Well, even if I remove all data, my BASIC programs are still too big. Can 128K help?

A. Sure. When the disk emulator comes out, you'll be able to copy programs from disk into the disk emulator. Under Extended Basic, you can use "RUN" as a program statement to execute programs on the pseudo-disk. So effectively, you'll be able to have 128K worth of programs in memory at the same time; you'll just have to break them up into several programs that chain from one to the next.

Foundation 128K Card Specifications

Memory size:	131,072 bytes
Components:	4164 Dynamic RAM, TMS 450 0 A DRAM controller, 74 LS TTL SSI and MSI
Packaging:	Metal case with indicator light. Plugs into TI peripheral expansion box.
Speed:	200 nsec at chip level. Full bus speed at bus level.
Mapping:	4 banks of 32K bytes, each mapped as > 2000 to > 3777 > A000 to > FFFF Bank selection via SBO and SBZ instructions.
DSR option:	provides additional 2K bytes of device service routines, selected by SBO and SBZ instructions.
Software:	DSR option includes a device service routine for pseudo-device MEM96, which accesses 128K banks 1, 2, and 3 as a file of 64 byte records.



SOFTWARE

I REM TED BROWN SPRINGFIELD MO.

100 REM**FLIGHT PLANNING PROGRAM

110 PRINT "ANSWER EACH QUESTION
AND PRESS 'ENTER'"

120 PRINT :

125 INPUT "PRESENT AIRPORT NAME?" :P\$

126 INPUT "DESTINATION AIRPORT NAME?" :D\$

130 PRINT "ENTER LAT AND LONG IN
DE- GREES AND MINUTES. EXAMP
LE: 37,15"

135 PRINT :

140 INPUT "ENTER YOUR PRESENT LA
TITUDE AND PRESS ENTER." :D,M

145 PLT=D+(M/60)

150 INPUT "PRESENT LONGITUDE" :D,
M

155 PLG=D+(M/60)

160 INPUT "DESTINATION LATITUDE"
:D,M

165 DLT=D+(M/60)

170 INPUT "DESTINATION LONGITUDE"
:D,M

175 DLG=D+(M/60)

180 INPUT "WIND DIRECTION (DEGRE
ES)? " :WD

190 INPUT "WIND VELOCITY (KNOTS)?
" :WV

200 INPUT "TRUE AIRSPEED (KNOTS)?
" :TA

210 INPUT "FUEL ON BOARD? (GAL)
" :FU

220 INPUT "FUEL CONSUMPTION (GPH)
?" :FC

230 INPUT "AVE. MAG. VARIATION
ALONG ROUTE? EX: 6,E " :MV,M\$

231 PRINT :

232 IF M\$="E" THEN 234 ELSE 240

234 MV=-MV

240 AB=ABS((PLT-DLT)*60)

250 BC=(ABS(PLG-DLG)*60)*(COS((P
LT+DLT)/114.59155))

260 DIS=SQR((AB^2)+(BC^2))

270 ALPHA=ATN(BC/AB)*57.296

280 IF PLT<=DLT THEN 290 ELSE 33
0

290 IF PLG<=DLG THEN 300 ELSE 31
0

300 TC=ALPHA+270

310 TC=90-ALPHA

320 GOTO 360

330 IF PLG<=DLG THEN 340 ELSE 35
0

340 TC=ALPHA+180

345 GOTO 360

350 TC=180+ALPHA

360 ANG=ABS(TC-WD)

362 IF ANG<180 THEN 363 ELSE 365

363 DF=180-ANG

364 GOTO 380

365 IF ANG>180 THEN 366 ELSE 368

366 DF=ANG

367 GOTO 380

368 IF ANG=180 THEN 372

369 IF ANG=0 THEN 374

372 GS=TA+MV

373 GOTO 375

374 GS=TA-MV

375 WCA=0

376 DF=0

377 GOTO 393

380 X=(WV*SIN(DF/57.296))/TA

390 WCA=ATN(X/(SQR(1-X^2)))*57
.296

391 C=180-WCA-DF

392 GS=(TA*SIN(C/57.296))/SIN(DF
/57.296)

420 IF WD<TC THEN 430 ELSE 440

430 GOTO 600

440 IF WD<TC+180 THEN 450 ELSE 4
60

450 GOTO 620

460 IF WD>TC+180 THEN 470 ELSE 4
80

470 GOTO 600

480 IF WD=TC THEN 490 ELSE 500

490 GOTO 640

500 IF WD=TC+180 THEN 510 ELSE 5
20

510 GOTO 640

520 IF WD<TC THEN 530 ELSE 540

530 GOTO 620

540 IF WD>TC-180 THEN 550 ELSE 5
60

550 GOTO 600

560 IF WD<TC-180 THEN 570

570 GOTO 620

600 TH=TC-WCA

605 WCA=-WCA

610 GOTO 650

620 TH=TC+WCA

625 WCA=+WCA

630 GOTO 650

640 TH=TC

645 WCA=0

650 MH=TH+MV

660 EFT=(DIS/GS)+.3

670 EF=FC*EFT

680 FR=FU-EF

690 PRINT "FROM " :P\$

700 PRINT "TO " :D\$

710 PRINT "TRUE COURSE " :TC

720 PRINT "WINDS " :WD;" DEGREES

AT " :WV;" KNOTS"

730 PRINT "WIND CORRECTION ANGLE
=" :WCA

740 PRINT "TRUE HEADING=" :TH

750 PRINT "MAGNETIC VARIATION=" :
MV

760 PRINT "MAGNETIC HEADING=" :MH

765 PRINT

770 PRINT "***NOTE: DEVIATION MU
ST BE ADDED OR SUBTRACTED TO OBT
AIN COURSE HEADING***"

773 PRINT :

775 PRINT "TYPE 'CON' AND PRESS
ENTER WHEN YOU ARE READY TO CO
N- TINUE."

776 BREAK

780 PRINT "GROUND SPEED=" :GS;" K
NOTS"

790 PRINT "DISTANCE=" :DIS;" NAUT
ICAL MILES"

800 PRINT "EST. FLIGHT TIME=" :EF
T;" HOURS"

810 PRINT "EST. FUEL BURNED=" :EF
;" GAL"

820 PRINT "EST. FUEL RESERVE=" :F
R;" GAL"

825 PRINT :

830 INPUT "DO YOU WANT TO TRY AN
OTHER ALTITUDE? (Y OR N) " :A\$

840 IF A\$="Y" THEN 180 ELSE 850

845 PRINT :

850 INPUT "DO YOU WANT TO TRY AN
OTHER DESTINATION? (Y OR N) " :B\$

860 IF B\$="Y" THEN 160 ELSE 870

870 PRINT "HAVE A SAFE FLIGHT!!!
!!"

910 END

You may have noticed in last months SYDNEY NEWSDIGEST, A program entitled ... HALLELUJA CHORUS, which seemed to come to an abrupt end once you run it. Well, the answer is we only printed half the program, so here's the other half. You may notice that it sounds even better once you add it to the rest of last months listing.

```
100 CALL CLEAR
110 CALL SCREEN(13)
120 CALL COLOR(9,5,5)
130 FOR A=1 TO 5
140 CALL HCHAR(A,1,96,32)
150 NEXT A
160 CALL COLOR(9,16,16)
170 FOR B=7 TO 12
180 CALL HCHAR(B,1,96,32)
190 NEXT B
200 CALL COLOR(9,9,9)
210 FOR C=14 TO 19
220 CALL HCHAR(C,1,96,32)
230 NEXT C
235 GOTO 120
240 GOTO 240
```

```
1290 CALL SOUND(T16,C,5,EH,5,AH,
5)
1300 CALL SOUND(T8,D,5, FH,5,AH,
5)
1310 CALL SOUND(T8,C,5,EH,5,AH,
5)
1320 CALL SOUND(T8,40000,5)
1330 CALL SOUND(T16,C,5,EH,5,AH,
5)
1340 CALL SOUND(T16,C,5,EH,5,AH,
5)
1350 CALL SOUND(T8,D,5, FH,5,AH,
5)
1360 CALL SOUND(T8,C,5,EH,5,AH,
5)
1370 CALL SOUND(T8,B,5, DH,5,AH,
5)
1380 CALL SOUND(T8,E,5, DH,5, GH,
5)
1390 CALL SOUND(T4,A,5, CH,5,AH,
5)
1400 CALL SOUND(T8,A,5, CH,5,AH,
5)
1410 CALL COLOR(1,11,16)
1420 CALL SOUND(T8,40000,5)
1430 CALL SOUND(T16,C,5,EH,5,AH,
5)
1440 CALL SOUND(T16,C,5,EH,5,AH,
5)
1450 CALL SOUND(T8,C,5, FH,5,AH,
5)
1460 CALL SOUND(T8,C,5,EH,5,AH,
5)
1470 CALL SOUND(T8,B,5, DH,5,AH,
5)
1480 CALL SOUND(T8,E,5, DH,5, GH,
5)
1490 CALL SOUND(T4,A,5, CH,5,AH,
5)
1500 CALL SOUND(T8,A,5, CH,5,AH,
5)
1510 CALL SOUND(T8,40000,5)
1520 Y=2
1530 CALL COLOR(1,9,16)
1540 GOTO 530
1550 CALL SOUND(T2,6L,5, DH,5,EH,
5)
1560 CALL COLOR(1,6,16)
1570 CALL SOUND(T4,AL,5, CH,5,EH,
5)
1580 CALL COLOR(1,4,16)
1590 CALL SOUND(T8,AL,5, CH,5,EH,
5)
1600 CALL COLOR(1,5,16)
1610 CALL SOUND(T8,AL,5, DH,5,EH,
5)
1620 CALL COLOR(1,9,16)
1630 CALL SOUND(T1,DL,5, F,5, DH,5
)
1640 CALL SOUND(T2,DL,5, F,5, DH,5
)
1650 CALL COLOR(1,4,4)
1660 INPUT "WOULD YOU LIKE TO HE  
AR IT AGAIN? (YES/NO) " :Z$
1670 IF Z$="YES" THEN 100
1680 END
```


SOFTWARE - continued

RESISTOR EDUCATION #1

(TI BASIC)

```
10 REM RUSSELL HANSON ROCHESTER
MN, 55901
20 CALL CLEAR
30 ROWA=6
40 COLMA=8
50 ASRES=54
60 RES2=57
70 LENGTH=8
80 REM RESISTOR CIRCUIT
90 CALL CHAR(104,"000000C0633610
08")
100 CALL CHAR(105,"08183060C0603
010")
110 CALL CHAR(106,"000000FF00000
000")
120 CALL CHAR(107,"0808080808080
808")
130 CALL CHAR(108,"FFFFFFFFFFFF
FFF")
140 GOSUB 260
150 GOSUB 510
160 COLMA=COLMA+9
170 GOSUB 360
180 COLMA=8
190 ROWA=15
200 GOSUB 460
210 PRINT "RESISTOR EDUCATION P
ART 1"
220 PRINT "BY RUSS HANSON,ROCHES
TER MN"
230 FOR DELAY=1 TO 800
240 NEXT DELAY
250 GO TO 560
260 REM HORIZONTAL RESISTOR SUB

270 CALL HCHAR(ROWA,COLMA,108)
280 CALL HCHAR(ROWA,COLMA+1,106,
2)
290 CALL HCHAR(ROWA,COLMA+3,104,
4)
300 CALL HCHAR(ROWA,COLMA+7,106,
2)
310 CALL HCHAR(ROWA,COLMA+9,108)
320 CALL HCHAR(ROWA-1,COLMA+4,82
)
330 CALL HCHAR(ROWA-1,COLMA+5,61
)
340 CALL HCHAR(ROWA-1,COLMA+6,AS
RES)
350 RETURN
360 REM VERTICAL RESISTOR SUB
370 CALL VCHAR(ROWA,COLMA,108)
380 CALL VCHAR(ROWA+1,COLMA,107,
2)
390 CALL VCHAR(ROWA+3,COLMA,105,
4)
400 CALL VCHAR(ROWA+7,COLMA,107,
2)
410 CALL VCHAR(ROWA+9,COLMA,108)
420 CALL VCHAR(ROWA+5,COLMA+1,82
)
430 CALL VCHAR(ROWA+5,COLMA+2,61
)
440 CALL VCHAR(ROWA+5,COLMA+3,RE
S2)
450 RETURN
460 REM HORIZONTAL LINE SEGMENT
LENGTH VARIABLE
470 CALL HCHAR(ROWA,COLMA,108)
480 CALL HCHAR(ROWA,COLMA+1,106,
LENGTH)
490 CALL HCHAR(ROWA,COLMA+LENGTH
+1,108)
500 RETURN
510 REM VERTICAL LINE LENGTH VAR
IABLE
520 CALL VCHAR(ROWA,COLMA,108)
530 CALL VCHAR(ROWA+1,COLMA,107,
LENGTH)
540 CALL VCHAR(ROWA+LENGTH+1,COL
MA,108)
```

```
550 RETURN
560 CALL CLEAR
570 PRINT " RESISTOR COLOR C
ODES": : : :
580 PRINT "THE RESISTANCE VALUE
OF RESISTORS CAN BE READ FROM TH
EIR COLOR BANDS ": :
590 PRINT "THE FIRST TWO BAND
S ARE DIGITS AND THE THIRD IS
THE MULTIPLIER ": :
600 PRINT "TO CALCULATE THE RESI
STANCE CHANGE THE FIRST TWO COLO
RED BANDS TO THEIR NUMBER VALUE"
610 PRINT "THEN ADD THE NUMBER O
F ZERDES THAT THE THIRD BAN
D CALLS FOR ": :
620 INPUT "PRESS ENTER TO CONTNU
E ":RS
630 CALL CLEAR
640 PRINT "THE COLORS HAVE NUMBE
RS": : :
650 PRINT "BLACK =0"
660 PRINT "BROWN =1"
670 PRINT "RED =2"
680 PRINT "ORANGE=3"
690 PRINT "YELLOW=4"
700 PRINT "GREEN =5"
710 PRINT "BLUE =6"
720 PRINT "VIOLET=7"
730 PRINT "GRAY =8"
740 PRINT "WHITE =9": :
750 PRINT "EXAMPLE: RED BLUE DRA
NGE IS 2(REDD) 6(BLUE) 000(ORANGE
IS 3 ZERDES) MAKING 26000 OHMS"
: :
760 PRINT "ON THE FOLLOWING PROB
LEMS ENTER THE RESISTOR VALUE"
770 PRINT "IF YOU GIVE UP ENTER
ING 111 WILL GIVE THE ANSWER AND
999 WILL END THE PROGRAM"
780 INPUT "PRESS ENTER TO BEGIN
":RS
790 REM RESISTOR COLORS
800 CALL SCREEN(8)
810 CALL CLEAR
820 RANDOMIZE
830 FOR K=1 TO 3
840 N=INT(RND*10)+1
850 VALUE(K)=N-1
860 FOR I=1 TO N
870 READ RING(K)
880 DATA 2,13,7,11,12,4+6,14,15,
16
890 DATA BLACK,BROWN,RED,ORANGE,
YELLOW,GREEN,BLUE,VIOLET,GRAY,WH
ITE
900 NEXT I
910 RESTORE 890
920 FOR I=1 TO N
930 READ COLRS%(K)
940 NEXT I
950 RESTORE 880
960 NEXT K
970 RESISTOR=(VALUE(1)*10+VALUE(K
2))*10*(VALUE(3))
980 PRINT "COLORS ";COLRS%(1);"
";COLRS%(2);" ";COLRS%(3)
990 PRINT "WHAT IS THE RESISTANC
E? ":
1000 ROW=8
1010 COLM=4
1020 CALL CHAR(96,"000000FF")
1030 CALL CHAR(97,"FFFFFFFFFFFF
FFF")
1040 CALL CHAR(136,"FFFFFFFFFFFF
FFFF")
1050 CALL CHAR(144,"FFFFFFFFFFFF
FFFF")
1060 CALL CHAR(152,"FFFFFFFFFFFF
FFFF")
1070 REM WIRE
```

```
1080 CALL HCHAR(ROW+2,COLM,96,5)
1090 CALL HCHAR(ROW+2,COLM+20,96
,5)
1100 REM RESISTOR BODY
1110 CALL COLOR(9,5,1)
1120 CALL HCHAR(ROW,COLM+5,97,15
)
1130 CALL HCHAR(ROW+1,COLM+5,97,
15)
1140 CALL HCHAR(ROW+2,COLM+5,97,
15)
1150 CALL HCHAR(ROW+3,COLM+5,97,
15)
1160 CALL HCHAR(ROW+4,COLM+5,97,
15)
1170 REM BANDS OF COLOR
1180 CALL COLOR(16,RING(1),RING(
1))
1190 CALL VCHAR(ROW,COLM+6,152,5
)
1200 CALL COLOR(15,RING(2),RING(
2))
1210 CALL VCHAR(ROW,COLM+8,144,5
)
1220 CALL COLOR(14,RING(3),RING(
3))
1230 CALL VCHAR(ROW,COLM+10,136,
5)
1240 INPUT REST
1250 IF REST=111 THEN 1340
1260 IF REST=999 THEN 1360
1270 IF RESISTOR=REST THEN 1300
1280 PRINT "TRY AGAIN"
1290 GOTO 1240
1300 PRINT "CORRECT!"
1310 FOR DELAY=1 TO 600
1320 NEXT DELAY
1330 GO TO 790
1340 PRINT "THE RESISTANCE WAS "
(RESISTOR
1350 GO TO 1310
1360 PRINT : : :
1370 PRINT "PRACTICE MAKES PERFE
CT"
1380 END
```

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with over 50,000 MEMBERS
worldwide - within...

**International
99/4
Users-Group**



Overseas Membership...\$18.00

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

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

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*** MUSIC *** - by Richard De La Cruz

The following program was written by Richard De La Cruz, one of our own Group members who lives at the Top End of Australia. Obviously, there are no other entertainments to distract him from programming as Richard is churning out some fine material. The program is written in Extended Basic and for the 4A as the print statements were written using the Alpha Lock up. However, our antique typewriter will not type in this mode, so Richard I do hope you will forgive me for changing it.



"Sure you can become a systems analyst if you want to. But tell Daddy, what is a systems analyst?"



"This problem was my life's work. I planned to devote my remaining years to it. It's just been solved in four seconds."

```

100 CALL CLEAR :: CALL SCREEN(12)
110 ON WARNING NEXT
120 PRINT "***** FUNTUNES *****"
130 PRINT :: ::
140 PRINT "BY RICHARD DE LA CRUZ"
150 PRINT :: ::
160 PRINT " JABIRU N.T. "
170 PRINT :: ::
180 PRINT :: ::
190 PRINT "ENTER NOTES AS NUMBERS
(O TO 40) WHICH CORRESPONDS TO (L
OW C TO A VERY HIGH NOTE) INCLUDE
S SHARPS & FLATS"
200 PRINT :: ::
210 PRINT :: ::
220 PRINT "USE SPACE BAR TO SEPAR
ATE NOTES. MAX OF TWO CHARACTERS
PER NOTE. (IE 11 22 23 34*2 7 9 0
5 0 15 ETC), UP TO 5 LINES OF INP
UT"
230 PRINT :: ::
240 PRINT "BE SURE OF NO MORE THA
N TWO CHARS! PER NOTE."
250 PRINT :: ::
260 PRINT " PLEASE WAIT A MOMENT "
270 OPTION BASE 0
280 DIM Z(50)
290 FOR N=0 TO 50
300 R=2*(1/12)
310 Z(N)=131*R^N
320 ...: N
330 DISPLAY AT(23,1):"ANY KEY TO BEGIN"
340 CALL KEY(O,K,S):: IF S=0 THEN 340
350 CALL CLEAR :: CALL SCREEN(4)
360 INPUT "NOTES":T$
370 PRINT ::
380 PRINT ::
390 INPUT "SPEED (50 TO 150)" :D
400 PRINT :: ::
410 FOR Y=1 TO LEN(T$)
420 CALL SOUND(D,Z(VAL(SEG$(T$,Y,2))),
3,Z(VAL(SEG$(T$,Y,2)))+3,5,-3,8)
430 NEXT Y
440 PRINT ::
450 PRINT " REPEAT SAME TUNE ?? (A)"
460 PRINT :: ::
470 PRINT "INPUT NEW TUNE ?? (B)"
480 PRINT :: ::
490 PRINT "END PROGRAM (C)"
500 PRINT :: ::
510 PRINT :: :: :: ::
520 ACCEPT VALIDATE ("ABC"):R$
530 IF R$<>"A" THEN 540 ELSE 390
540 IF R$<>"B" THEN 550 ELSE 360
550 CALL SCREEN(2) :: FOR T= 1 TO 200
:: NEXT T
560 END
    
```

EXTENDED BASIC

T.I.B.U.G.

TIPS from DAVID LIELL

BASIC, like all computer languages has a set of rules and definitions. The main components are-

COMMANDS like RUN, LIST

PROGRAM STATEMENTS like GOTO, READ

DATA STATEMENTS like A\$, POCKET_MONEY

This month we will look at Data Statements.

There are two types of computer data; one is called STRING and the other is called NUMERIC. Anything can be included in STRING data but NUMERIC data can include only the numbers from 0 to 9 in various combinations. STRING data is mainly used for alphabetic information, and this includes the letters of the alphabet plus all the special symbols such as + - = etc. STRING data is mainly used for printing, report heading, instructions to users, etc. Numeric data is used for calculations.

Try the following STRINGS...

```
100 PRINT"THIS IS A STRING CONSTANT"
```

```
RUN
```

```
110 A$="THIS IS A STRING VARIABLE"
```

```
120 PRINT A$
```

```
RUN
```

BASIC allows both constants and variables. A constant is something you will probably only use once in your program. If you need to use the string more than once, use a variable. STRING variables are identified by a \$ sign, which must be the last character in the name. The maximum length is 15 characters, including the \$. There are other rules also, and these are explained in the USERS REFERENCE GUIDE page II-11. NUMERIC variables may be almost any combination of letters and numbers up to a maximum of 15 characters, except that the last character may NOT be a \$. Some examples of NUMERIC variables are...

```
110 GIFTS = 0
```

```
120 DAYS = 1
```

```
130 COUNT = 10
```

SEE HOW meaningful names are used for variables. This is a good programming practice to develop. It will help you debug your program later if you can read it like a letter.

The next thing you will probably want to do is to use constants and variables in your program to work out a sum. Maybe, how much pocket money you will earn by Christmas holidays. To do this, that is to perform arithmetics, you will need to write EXPRESSIONS. An expression is the name given to a computer sum. It will consist of the constants and variables which we have just learnt joined together with things called OPERATORS. Arithmetic operators have special signs, similar to those used in Algebra.

They are + (addition), - (subtraction), * (multiplication), / (division), ^ (exponentiation). Lets look at some expressions...

```
100 A = 6
```

```
110 B = 4
```

```
120 C = 20
```

```
130 D = 2
```

```
140 PRINT A*B/2
```

Enter this program and RUN it. You should get "12" as the output. So you see now how to perform arithmetic on your computer. Two points to watch. Firstly, variables may be positive or negative, if we wanted to make A negative, we would follow the same rule as Algebra and write...

```
100 A = -6
```

The second rule also follows Algebra, that is the order of the variables in an expression is important to the computer. The rules are nicely defined in the URG page II-13. Please look them up and look at the examples on this page. It is important to understand these rules for later.

Now lets get back to that POCKET MONEY problem. Let TOTAL be the answer. Let WEEKLY be our weekly allowance and let the number of weeks to Christmas be 15. So our simple program will read...

```
100 WEEKLY = 8
```

```
110 TOTAL = WEEKLY * 15
```

```
120 PRINT WEEKLY
```

```
RUN
```

WHAT answer did you get? I'm sure that everyone got 120. Wow! Christmas will be great this year. ONE LAST POINT before we leave this subject. You may express numbers using scientific or "E" form. This can be very useful when working with very small or very large numbers. A number in "E" notation consists of the number followed by "E" followed by the power of ten. Some simple examples...

```
1000 (103) = 1E3
```

```
145 (1.45 * 102) = 1.45E2
```

Unless you are into Maths, don't worry too much about this. I have included it mainly for those who have done some Algebra and may want to try it out.

GOOD PROGRAMMING

David Liell

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CHARLIE'S PAGE



Editorial Comment
by Charles LaFara
President, International 99/4
Users-Group

International
99/4
Users-Group



LETTER

LOSSES CONTINUE TO MOUNT FOR HOME COMPUTER MANUFACTURERS

Second quarter losses among home computer manufacturers surpassed the 1/2 billion dollar mark last week with no relief in sight as the aggressive price wars continued. Adding to the already-high anxiety level in this industry, aroused by losses of \$183 million at TI, \$310 million at Atari, and \$24 million at Mattel, is the impending introduction by IBM and Apple of home computer products priced in the under-\$1000 category.

Of the six major suppliers in the home computer business, observers say only Commodore has yet to be touched by plunging profits. Although Tandy, (Radio Shack) reports growth in its computer business overall, sources say its home computer line, the Color Computer, is showing sales volumes less than expected. Timex, a privately-held company, has according to industry observers seen sales of its TS-1000 home computer come to a virtual halt.

The next act in the comedy of errors by home computer manufacturers is anticipated to take place in September when TI should begin a massive inventory clearance to ready the introduction of its 99/8 home computer, sources say. Industry analysts concede that the wars between TI and its competitors are far from being over.

When asked by Consumer Electronics about the industry outlook for the next two months, William Turner, recently departed TI Consumer Group president, lamented, "Profits in 1983 will be tough. The cost simply has not come down as fast as the prices came down." What an ironic statement from Mr. Turner, who pioneered the \$100 rebate a year ago, which started the price war chain reaction. Mr. Turner went on to concede that the key to success of his chief rival, Commodore, has been their ability to keep a better price/cost spread in the balance of the industry.

Major retail companies who have spoken to us over the past several weeks are still analyzing and reviewing products for the Christmas season. Large retailers such as Sears, Child's World, Toys 'R' Us, and Montgomery Ward are looking for home computer products that will not only influence store traffic, but also corporate bottom line profits.

Like Texas Instruments, Atari and Commodore are still holding sizable amounts of inventory that they must phase out in order to make way for inventory of second-generation machines. Commodore is faced with inventory liquidation of over 250,000 VIC-20s which set on distributor shelves and show little sign of movement. Mattel, meanwhile, is still mulling over the possibility of phasing out their Aquarius I computer keyboard, which it fears may be doomed when the enhanced version, the Aquarius II, is introduced.

The major concern among home computer manufacturers right now is the future of the Coleco ADAM home computer system. Coleco is hoping to start shipments later in August for the home computer/game/word processing system that it says will retail for approximately \$600. Many industry analysts, however, feel that Coleco will not be able to bring ADAM to the marketplace prior to the first quarter of 1984, although Coleco's president, Arnold Greenberg, claims that some 1/2 million units which are still unbuild have been ordered by retailers.

Shifts in corporate management to top-level executives with consumer marketing expertise such as the recent moves made at Mattel, Apple and Atari would indicate that the home computer business is far from dead. Although 1/2 billion dollars in losses during the second quarter of 1983 is awfully hard to swallow for many investors, a 2 1/2 year old industry which increased its sales 500-fold during the last year must be doing something right in some areas.

GROUP PRESIDENT RESIGNS AT TI

Sources within Texas Instruments confirmed a report that William J. Turner, head of the Consumer Products division, has left the company to take a new post with Automated Data Processing, Clifton, NJ.

Reports of Turner's eminent departure from TI had been circulating since just before the June Consumer Electronics Show and were specifically denied by Turner and other TI executives to within a day of his resignation.

Although no successor to Turner has been named, Jerry R. Junkins, executive vice-president of TI Corporate, has been filling in during Turner's absence. Junkins is also in charge of the Data Systems group which developed and markets the TI Professional Computer.

TI President, J. Fred Bucy, has established an office at the Lubbock facility of the Consumer Group and will devote some portion of his time to the direct supervision of the home computer. Although total details of this latest restructuring have yet to be announced, a TI employee told a Users Group reporter that unless sales and profit pictures improve, heads will continue to roll.

Turner joined TI in 1980, leaving Digital Equipment Corporation. Prior to that, he was with Sylvania, where he was a systems engineer for military simulation equipment. He holds a degree in both Engineering and Marketing. While at TI, Turner was responsible for lowering the retail price of the 99/4A home computer from \$799 to its current, under-\$100 price level.

Turner also championed software strategy which threatened third-party publishers with legal action if they introduced products for the 99/4A in solid-state modules. According to Turner, such publishers would have to violate one or more of TI's patented technologies in order to create 99/4A compatible

To reinforce this position, TI shows software at the June Consumer Electronics Show.

Criticism from third-party publishers and discouraging software support still contribute to TI's inability to bring to market a low-cost line.

TI EMPLOYEES SHOWBIZ AGENCY

What do actors and actresses like Mary McCormack have in common with Texas Instruments? They're all clients of a Hollywood public relations firm of Rogers and Cowan.

TI recently retained the agency to handle a series of results will be the TI Home Computer first television appearance will take place on "The Dick Cavett Show" and Cowan's Corporate Division President Dick Cowan.

The Product Placement Division, located in Los Angeles, is also handling other Texas Instruments products in films. Two of the areas in which their company plans to expand is in television. Formerly, TI handled all of its public relations, but president, Fred Bucy's idea to solicit help from Rogers and Cowan handles such accounts as Ford, R. J. Reynolds, and Workout Tapes).

Mr. Taylor said, "We have 27 corporate divisions and now our Corporate Division manager is Fred Bucy."

Rogers and Cowan is a 40-year old public relations industry. Sources indicate that it is the fifth-largest in the world, also has offices in New York, Washington and Los Angeles.

TI will continue to use in-house press releases for its products directly by TI's president, Mr. Bucy. The new television and movie contracts.

One TI official said, "Hopefully Rogers and Cowan will position our products in as many places as possible. The way they should be."

LOTUS 1-2-3 NOW AVAILABLE FOR TI PR

Lotus 1-2-3 will be made available to most dealers as the result of an agreement reached between Lotus and TI.

TI will distribute Lotus 1-2-3 for its computer point-of-sale video tape and merchandising information. Dealers will receive training from qualified TI representatives. Marketed for the past six months for other major manufacturers.

SOFTWARE CATALOG UPDATE DELAYED

The expected release of a Software Exchange catalog has been delayed for approximately 60 days. The space on our mainframe computer, the TI Bus, is up 43 megabytes of disk space in only six months.

Although an additional 43 megabyte drive is being added, we are not expecting to take delivery until the updated catalog pages as soon as possible.

20TH CENTURY FOX DUBIOUS REGARDING

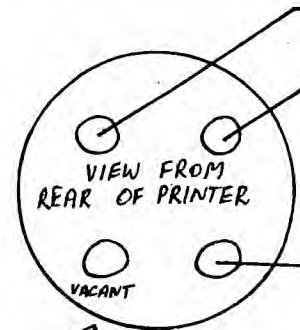
Although Texas Instruments continues to market M*A*S*H, sometime later this month, 20th Century Fox has plans concerning this game for other major manufacturers.

Although the game has been on the market for a long time, it has had great difficulty in penetrating the market. Slashed a month ago, and a new promotion campaign is being developed to be disappointing to both parties.

A TI employee recently told the Users-Group that the game is selling well, but their planned release is still being delayed. At the Consumer Electronics Show in June, our opinion is that a better game came along.

TANDY PRINTER PL

A few months ago, we printed a program in conjunction with the TANDY Color Printer. This program came to us with the help of the TI Users-Group. They have now provided us with the connection. All you need is your



SOCKET ON "RADIO SHACK" P

new version of the 99/4A that would not run third-party
 e retailers for TI being so hard on third-party vendors
 Several industry sources also blame Turner for the
 peripheral products promised in January.

Moore, Sylvester Stallone and Robert Redford, have in
 now business and they're all represented by the
 wan.

lic relations for its Home Computer division. The first in
 appearance in movies and on television. The 99/4A's
 Matt Houston series early this fall. According to Rogers
 aylor, "TI will be in every episode."

rbank, CA, will also work on getting the 99/4A and
 now on to explain that television and films are only two
 visibility exposure for TI products. Texas Instruments
 ouse, and a company spokesman said it was TI's
 e big entertainment agency, whose Corporate Division
 ucci, Home Box Office and Karl Video (Jane Fonda

nts. We started developing a corporate arm about four
 up 35% of our total business."
 ations company basically catering to the entertainment
 ic public relations firm in the country. Rogers and Cowan
 ndon.

s and PR people. However, they will be scrutinized
 ncy will focus primarily on consumer press and allied

owan will bring us into the 20th century. They will be
 ssible. We have never really pushed our products the

SSIONAL

an 300 Texas Instruments Professional Computer
 ween Lotus and Texas Instruments.
 to dealers in an introductory offer which will include
 as well as a national advertising campaign. The TI
 onnel that have been trained at Lotus headquarters.
 es, Lotus 1-2-3 has a suggested retail price of \$495.

Library Catalog update scheduled for September 1 has
 son for the delay is because we have run out of disk
 s Systems 672. "It is hard to believe that we have filled
 ," said Mike Ray, IUG DP manager.

s been ordered from Texas Instruments through a local
 or several weeks. We apologize for the delay, and will
 e possibly can.

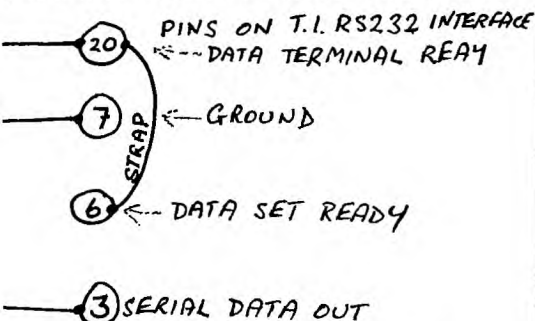
M*A*S*H SUCCESS

e high hopes for its release of the video game cartridge,
 y Fox says that it is seriously re-evaluating its position
 es including VCS cartridges for the Atari 2600 and

nce April and had a multi-million dollar advertising
 he marketplace. Even when prices on M*A*S*H were
 ng a T-shirt to intended buyers was offered, sales
 9th Century Fox and retailers throughout the country.
 hat they are aware that the M*A*S*H package is not
 chedule. From demonstrations which we saw at the
 was it was a module we could pass on until something

FTER

ram to be used
 15 COLOR GRAPHICS PRINTER (\$349.95rrp)
 mpliments of TI.U.P. (TI Users of Perth)
 Schematic to make that all important
 , and RS232 plus of course this printer.



OPEN #1: "RS232.BA=600"

```

100 CALL CLEAR
110 CALL CHAR(33,"0000000103070F
1F")
120 CALL CHAR(34,"0FCF7FFFFFFF
FF")
130 CALL CHAR(35,"FCFCFEFFFFFF
FF",36,"0000000080C0E0F0")
140 CALL CHAR(37,"0001030707070F
1F")
150 CALL CHAR(38,"70FCFEFFFFFF
7F",39,"001C3FFFFFFF")
160 CALL CHAR(40,"FFFFFFF7F7F7F
FF",41,"00E0F0F8FFFFFF")
170 CALL CHAR(42,"0000000080C0F0
FC",43,"0C1E3FFF7F3F3F3F")
180 CALL CHAR(44,"000080C0E1F9FF
FF",45,"0000046FFFFFFF")
190 CALL CHAR(46,"00000C0FFFFFFF
FF",47,"F60F3F3F359F8F9F")
200 CALL CHAR(48,"000080C0C0C0E0
E0",49,"081C3C9E0F0F1F7F")
210 CALL CHAR(50,"3F8E7C3811071F
3F",51,"7F3F7FFFFFFF")
220 CALL CHAR(52,"FFFFFFF7F7F7F
7E",53,"FCFCF8F0E0C08000")
230 CALL CHAR(54,"3F1F3FFFFFFF1
E0",55,"FFFFFFF7F7F7F07")
240 CALL CHAR(56,"9F8F870017C8FF
FF")
250 CALL CHAR(57,"E0F0F000080C0
E0")
260 CALL CHAR(58,"7F7C0010030F1F
3F",59,"3F7F7FFFFFFF07")
270 CALL CHAR(60,"EFCFC8F8F0E0E0
C0",61,"7E7CF80000000000")
280 CALL CHAR(62,"07070303030301
01",63,"E0E0E0E0E0C00000")
290 CALL CHAR(64,"100000070F0F1F
3F",65,"01000080E3FFFFFF")
300 CALL CHAR(66,"FF7F3F7FFFFFFF
FF",67,"FFFFFFF7F7F7F07")
310 CALL CHAR(68,"C0C08080000000
00",69,"FFFFFFF7F7F7F")
320 CALL CHAR(70,"FFFFFFF7F7F7F0
E0",71,"C080000000000000")
330 CALL CHAR(72,"3F3F7FFFFFFF3F1F
0F",73,"FFFEFCF8F0E0C000")
340 CALL CHAR(74,"FFFFFFF7F7E3C1C
08",75,"FFDF8F0200000000F8E08000
00000000")
350 CALL CHAR(76,"E8E08000000000
00",77,"0F07070301010000")
360 CALL CHAR(78,"F0FCF8FCFEFF7F
3F",79,"F0E0400000000000")
370 CALL CHAR(80,"0F0E0000000000
00",81,"FF7F3F1F0F0F1F1F")
380 CALL CHAR(82,"FFFFFFF7F7F7F0
FC",83,"E0C00061C0800000")
390 CALL CHAR(84,"00000F0F87C3E
00",85,"1F0F030000000000")
400 CALL CHAR(86,"FFFFFFF8FCFCFCF
7F",87,"E0E0E0E0F8FCFEFF")

```

WORLD MAP

by Steven & Jim



```

410 CALL CHAR(88,"1F1F1F1F1F1F0F
07",89,"FCF8F8F0F0E0E0C0")
420 CALL CHAR(90,"03071F7FFFFFFF7F
3F",91,"0486CEFEFEFEFEFE")
430 CALL CHAR(92,"7F7F7F3F3F3F1F
1F",93,"0703010000000000")
440 CALL CHAR(94,"C0800000000000
00",95,"1F0E0C0000000000")
450 CALL CHAR(113,"FF7F3E3C18001
810",122,"80000206163060C0")
460 CALL CHAR(123,"1F1F1F1F3F3F7
F7F",124,"FFF1FCF8F810C807")
470 CALL CHAR(125,"7F7E7C7870783
C1C")
480 CALL CHAR(126,"000000000000
000",120,"FFFFFFF7F7F7F")
490 CALL CLEAR :: FOR C=0 TO 12
:: CALL COLOR(C,4,1)
500 CALL SCREEN(2):: NEXT C
510 DISPLAY AT(1,1):"~~~~~"
~~~~~"
520 DISPLAY AT(2,1):"~~~~~!";CHR
$(34):"#$~~~~~"
530 DISPLAY AT(3,1):"~*%*(xxx)*
+,-,/\0~"
540 DISPLAY AT(4,1):"~123xxxxx45
67xx89~"
550 DISPLAY AT(5,1):"~::xxxxx(=~
~)xxx?~"
560 DISPLAY AT(6,1):"~*0ABxxxCD~"
~*ExFG~"
570 DISPLAY AT(7,1):"~*HxxIJKL~"
~*MNO~"
580 DISPLAY AT(8,1):"~*PQR~*ST~"
~*UVW~"
590 DISPLAY AT(9,1):"~*XY~*Z[~"
~*xyz~"
600 DISPLAY AT(10,1):"~*]~~~~_sz
~~~~C!~"
610 DISPLAY AT(11,1):"~~~~~"
~~~~~"
620 DISPLAY AT(12,1):"~~~~~"
~~~~~"
630 REM PLACE SCREENDUMP ROUTINE
HERE.
632 REM
634 REM
636 REM
1000 GOTO 1000

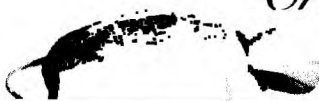
```

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tests for you to type in from I.U.G.

```

0001 *****
0002 * PROGRAM #1 *
0003 *****
0004
0005 * IDIOT BENCHMARK 1.0 *
0006
0007 * COUNTS FROM 1-1000
0008 * NUMBERS SCROLL UP SCREEN
0009 * EXECUTES IN 45 SEC
0010
0011 *****
0012 * MINIMEM MODIFICATION: *
0013 * REMOVE LINES 22-23 *
0014 * REPLACE "@VMBW" WITH ">6028" *
0015 * REPLACE "@VMBR" WITH ">6030" *
0016 * REPLACE LINE 24 WITH *
0017 *BF EQU >7100 *
0018 * REPLACE LINE 25 WITH *
0019 *CT EQU BF+736 *
0020 *****
0021
0022 DEF RN
0023 REF VMBW,VMBR
0024 BF BSS 736
0025 CT BSS 4
0026
0027 * INITIALIZE COUNTER CONSTANTS
0028 RN LI 4,>3A00 "10"
0029 LI 5,>3030 "0"
0030 LI 6,>3100 "1"
0031 LI 7,>0100
0032
0033 * INITIALIZE COUNTER
0034 MOV 5,@CT INIT COUNTER
0035 MOV 5,@CT+2
0036
0037 * PRINT COUNTER
0038 LI 0,736
0039 LI 1,CT
0040 LI 2,4
0041 BLWP @VMBW
0042 JMP IN
0043
0044 * SCROLL SCREEN
0045 PT LI 0,32
0046 LI 1,BF
0047 LI 2,736
0048 BLWP @VMBR
0049 CLR 0
0050 LI 2,740
0051 BLWP @VMBW
0052
0053 * TEST FOR END
0054 CB @CT,6
0055 JNE IN
0056
0057 * ENABLE INTERRUPTS
0058 *AND WAIT FOR "QUIT"
0059 LIM1 2
0060 JMP $
0061
0062 * INCREMENT COUNTER
0063 IN AB 7,@CT+3
0064 CB @CT+3,4
0065 JNE PT
0066 MOV 5,@CT+3
0067 AB 7,@CT+2
0068 CB @CT+2,4
0069 JNE PT
0070 MOV 5,@CT+2
0071 AB 7,@CT+1
0072 CB @CT+1,4
0073 JNE PT
0074 MOV 5,@CT+1
0075 AB 7,@CT
0076 JMP PT
0077 END
    
```

```

0001 *****
0002 * PROGRAM #2 *
0003 *****
0004
0005 * IDIOT BENCHMARK 2.0 *
0006 * IMPROVEMENTS:
0007 *NUMBERS ARE SCROLLED
0008 *IN CPU RAM.
0009 *SCREEN IS PRINTED
0010 *DIRECT TO VDP.
0011 *LEADING ZEROS ARE REMOVED
0012 * EXECUTES IN 5 SEC
0013
0014 *****
0015 * MINIMEM MODIFICATION: *
0016 * REMOVE LINES 23-24 *
0017 * REPLACE "@VMBW" WITH *
0018 *">6028" *
0019 * REPLACE "@VMBR" WITH *
0020 *">6030" *
0021 *****
0022
0023 DEF RN
0024 REF VMBW,VMBR
0025 JMP RN
0026 BF BSS 92
0027 CT BSS 4
0028
0029 * INITIALIZE SCREEN CONSTANTS
0030 RN LI 4,>3A00 "10"
0031 LI 5,>3030 "0"
0032 LI 6,>3100 "1"
0033 LI 7,>0100
0034
0035 * FILL BUFFER WITH SPACES
0036 CLR 0
0037 LI 1,BF
0038 LI 2,92
0039 BLWP @VMBR
0040
0041 * INITIALIZE COUNTER
0042 MOV 5,@CT
0043 MOV 5,@CT+2
0044 JMP AD
0045
0046 * SCROLL BUFFER
0047 PT LI 8,46
0048 LI 9,BF
0049 MV MOV @4(9),*9+
0050 DEC 8
0051 JNE MV
0052
0053 * PRINT BUFFER
0054 LI 8,24
0055 LI 0,>0E40
0056 LI 1,BF
0057 PR MOV 0,@>8C02
0058 SWPB 0
0059 MOV 0,@>8C02
0060 INC 1
0061 MOV 1+,@>8C00
    
```

```

0062 AI 0,32
0063 MOV 1+,@>8C00
0064 SWPB 0
0065 MOV 1+,@>8C00
0066 DEC 8
0067 JNE PR
0068
0069 * TEST FOR END
0070 CB @CT,6
0071 JNE AD
0072
0073 * PRINT 4 DIGIT COUNTER
0074 LI 0,717
0075 LI 1,CT
0076 LI 2,4
0077 BLWP @VMBW
0078
0079 * PRINT "DONE"
0080 LI 0,748
0081 LI 1,TX
0082 LI 2,6
0083 BLWP @VMBW
0084
0085 * ENABLE INTERRUPTS AND
0086 *WAIT FOR "QUIT"
0087 LIM1 2
0088 JMP $
0089 TX TEXT '*DONE*'
0090
0091 * INCREMENT COUNTER
0092 AD AB 7,@CT+3
0093 CB @CT+3,4
0094 JNE PT
0095 MOV 5,@CT+3
0096 AB 7,@CT+2
0097 CB @CT+2,4
0098 JNE PT
0099 MOV 5,@CT+2
0100 AB 7,@CT+1
0101 CB @CT+1,4
0102 JNE PT
0103 MOV 5,@CT+1
0104 AB 7,@CT
0105 JMP PT
0106 END
    
```

```

0001 *****
0002 * PROGRAM #3 *
0003 *****
0004
0005 * IDIOT BENCH MARK 3.0 *
0006 * IMPROVEMENT: BUFFER IS
0007 * DISCARDED RATHER THAN SCROLLED
0008 * EXECUTES IN UNDER 3 SEC
0009
0010 * BUFFER LENGTH EXCEEDS MIMIMEM
0011 * CAPACITY
0012
0013 DEF RN
0014 REF VMBW,VMBR
0015
    
```

....CONT->

OUR NEXT BIG MEETING...
 SATURDAY the 8th OCTOBER
 yes...the second saturday
 see Editorial on page 2
 for all the details


```

0016 CT BSS 4
0017 BF BSS 4010
0018
0019 * INITIALIZE COUNTER CONSTANTS
0020 RN LI 4,>3A00 "10"
0021 LI 5,>3030 "0"
0022 LI 6,>3100 "1"
0023 LI 7,>0100
0024
0025 * FILL 23 BUFFER LINES
0026 * WITH SPACES
0027 CLR 0
0028 LI 1,BF
0029 LI 2,92
0030 BLWP @VMBR FILL BF WITH SPACES
0031 LI 10,BF+92
0032 LI 11,BF
0033
0034 * INITIALIZE COUNTER
0035 MOV 5,@CT INIT COUNTER
0036 MOV 5,@CT+2
0037 JMP AD
0038
0039 * MOVE COUNTER TO BUFFER
0040 PT MOV @CT,*10+
0041 MOV @CT+2,*10+
0042
0043 * PRINT BUFFER
0044 LI 8,24
0045 LI 0,>0E40
0046 MOV 11,1
0047 PR MOVB 0,@>8C02
0048 SWPB 0
0049 MOVB 0,@>8C02
0050 INC 1
0051 MOVB *1+,@>8C00
0052 AI 0,32
0053 MOVB *1+,@>8C00
0054 SWPB 0
0055 MOVB *1+,@>8C00
0056 DEC 8
0057 JNE PR
0058 AI 11,4
0059
0060 * TEST FOR END
0061 CB @CT,6
0062 JNE AD
0063
0064 * PRINT 4 DIGIT COUNTER
0065 LI 0,749
0066 LI 1,CT
0067 LI 2,4
0068 BLWP @VMBW
0069
0070 * ENABLE INTERRUPTS
0071 *AND WAIT FOR QUIT
0072 LIM1 2
0073 JMP $
0074
0075 * INCREMENT COUNTER
0076 AD AB 7,@CT+3
0077 CB @CT+3,4
0078 JNE PT
0079 MOVB 5,@CT+3
0080 AB 7,@CT+2
0081 CB @CT+2,4
0082 JNE PT
0083 MOVB 5,@CT+2
0084 AB 7,@CT+1
0085 CB @CT+1,4
0086 JNE PT
0087 MOVB 5,@CT+1
0088 AB 7,@CT
0089 JMP PT
0090 END

0001 *****
0002 * PROGRAM #4 *
0003 *****
0004
0005 * THE ULTIMATE COUNTER(?) *
0006
0007 * COUNTS TO 10,000 IN .8 SECONDS
0008
0009 *****
0010 * MINIMEM MODIFICATION *
0011 * REMOVE LINES 18-19 *
0012 * REPLACE "@VMBW" *
0013 *WITH "@>6028" *
0014 * REPLACE "@VMBR" *
0015 *WITH "@>6030" *
0016 *****
0017
0018 DEF RN
0019 REF VMBW,VMBR
0020 JMP RN
0021 CT BSS 6
0022
0023 * MOVE PROGRAM INTO HI-SPEED RAM
0024 RN LWPI >83F0
0025 LI 1,LD
0026 LI 2,>8300
0027 LI 3,234
0028 TP MOV *1+,*2+
0029 DEC 3
0030 JNE TP
0031 B @>8300
0032
0033 * INITIALIZE COUNTER CONSTANTS
0034 LD LI 4,>3A00 "10"
0035 LI 5,>3030 "0"
0036 LI 6,>3100 "1"
0037 LI 7,>0100
0038
0039 * INITIALIZE COUNTER
0040 MOV 5,@CT
0041 MOV 5,@CT+2
0042 MOV 5,@CT+4
0043 JMP AD
0044
0045 * PRINT COUNTER DIGITS ON CARRY
0046 RS SWPB 0
0047 MOVB 0,@>8C02
0048 SWPB 0
0049 MOVB 0,@>8C02
0050 NOP
0051 RL MOVB *1+,@>8C00
0052 DEC 2
0053 JNE RL
0054
0055 * INCREMENT COUNTER
0056 AD LI 0,>4000+370
0057 INC @CT+5
0058 CB @CT+5,4
0059 JEQ ND
0060
0061 * PRINT COUNTER WITHOUT CARRY
0062 SWPB 0
0063 MOVB 0,@>8C02
0064 SWPB 0
0065 MOVB 0,@>8C02
0066 NOP
0067 MOVB @CT+5,@>8C00
0068 JMP AD
0069
0070 * PERFORM DIGIT CARRY
0071 ND MOVB 5,@CT+5
0072 AB 7,@CT+4
0073 DEC 0
0074 LI 1,CT+4
0075 LI 2,2
0076 CB @CT+4,4
0077 JNE RS
0078 MOVB 5,@CT+4
0079 AB 7,@CT+3
0080 DEC 0
0081 DEC 1
0082 INC 2
0083 CB @CT+3,4
0084 JNE RS
0085 MOVB 5,@CT+3
0086 AB 7,@CT+2
0087 DEC 0
0088 DEC 1
0089 INC 2
0090 CB @CT+2,4
0091 JNE RS
0092 MOVB 5,@CT+2
0093 AB 7,@CT+1
0094 DEC 0
0095 DEC 1
0096 INC 2
0097 CB @CT+1,4
0098 JNE RS
0099 MOVB 5,@CT+1
0100 AB 7,@CT
0101 DEC 0
0102 DEC 1
0103 INC 2
0104 CB @CT,4
0105 JNE RS
0106 MOVB 5,@CT
0107 JMP RS
0108 END

```



CHARLES CHOU wants to sell the following modules..

PARSEC for \$40, ALPNER \$40, YAHTZEE \$20. if you are interested, he can be contacted on 6998481.

I bought my TI so my dad could play with it

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On the second saturday of
November, its A.G.M time
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NOMINATION FORM
for office bearers of...
Co-ordinating Committee
within T.I.S.H.U.G.

The following, are the positions available for you to either nominate yourself,
or a fellow member of T.I.S.H.U.G.

(1):CO-ORDINATOR, (2):SECRETARY, (3):TREASURER, (4):EDUCATIONAL CO-ORD, (5):LIBR
ARIAN, (6):EDITOR-PUBLICATIONS,
(7):PUBLIC RELATIONS OFFICER, (8):ADVERTISING MANAGER, (9):MEMBER.

All of these positions will be briefly explained to you at the coming meeting.

And now, place the names of these who you feel would be available to take on the
above mentioned positions...

- (1):
- (2):
- (3):
- (4):
- (5):
- (6):
- (7):
- (8):
- (9):

remember, you must be a
financial Member to
vote, nominate or be
nominated as a Committee
Member of T.I.S.H.U.G.

TISHUG

1st Younger Set



SOFTWARE AWARDS

FINAL MONTH

Hi again, gang. This month, we have both SOFTWARE AWARDS and a HALL OF FAME report.

Regarding the SOFTWARE AWARDS, the response to date has been really poor, considering the great prizes to be won. As well as the prizes, the competition is also an opportunity to have **YOUR PROGRAM PUBLISHED ON THIS PAGE !!**

On the subject of the awards, I recently visited COMPUTER CONNECTION. Their range of TI gear is growing constantly and already they have a good selection of cartridges. They also recognise the group, so a 5% discount applies to TISHUG members. It is readily accessible by public transport, being only a stroll from MIRANDA railway station.

Next issue, I will present the full revised list of the HALL OF FAME. To see what the current high scores are, don't miss this page next time!!!

P.S. The September issue of Australian Personal Computer has reviews of several TI game modules. As with last month, I have more ADDRESSES OF OVERSEAS USERS' GROUPS for you to write to, and perhaps swap programs, etc., etc.

CANADA: Edmonton Users' group, PO Box 11983, Edmonton, ALBERTA CANADA T5J3L1.

TEXAS: Central Texas 99/44 UG, PO Box 3026, AUSTIN TEXAS 78764.

OHIO: CIN-DAY USERS' GROUP, PO BOX 519, WEST CHESTER OHIO 45059-0519.

NEW YORK: NEW YORK 99/4 UG, 34 MAPLE AVE., ARMONK NEW YORK 10504.

Try writing to these groups, and if possible, include some programs on tape. If they respond likewise, and if you are successful, you have a ready-made library of software.

STRICTLY FOR UNDER 18 MEMBERS ONLY!!

We have 2 great prizes: the first prize being a \$50 voucher for COMPUTER CONNECTION at Miranda.

The second prize is a copy of the "BUMBER BOOK OF LISTS AND REVIEWS" by Peter Lynden.

CONDITIONS

a) Contest open to all members under 18 years of age

b) The entrant must be the SOLE AUTHOR of the program, although other may help in debugging.

c) ABSOLUTELY NO COPYING OR PIRACY of any other program permitted!!

d) Either Basic or X-Basic may be used. Don't forget to state the language the program is in

e) Save the program on both side of the tape. If a program will not load from either copy, the entry will be disregarded.

f) Operating instructions must be included, if applicable.

g) All tapes and programs become property of Younger Set, and may be used at the discretion of Younger Set.

h) Remember, use your imagination! Judges will be looking for full use of features such as graphics and sound.

i) The Judges' decisions are final and no correspondence will be entered into.

j) Competition closes last mail, November 4, 1983

To enter, save your program on a tape, fill in the coupon below, read the conditions and post the tape to:

P.O. Box 595
Marrickville, 2204, N.S.W.

By for me
Jenny



APPLICATION FORM

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Prog remarks _____

Signature _____

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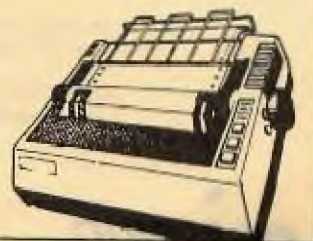
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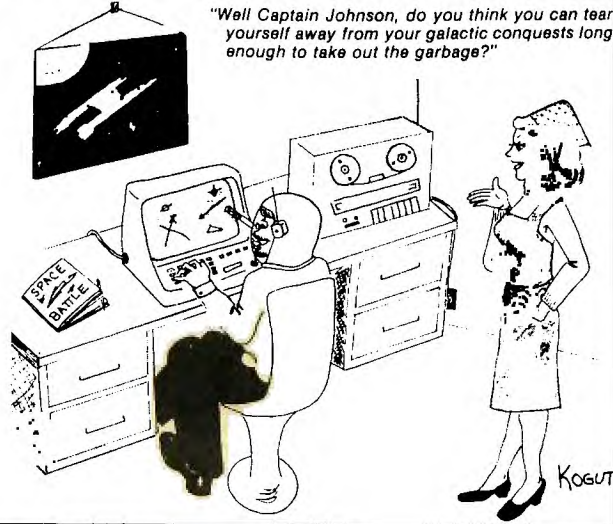
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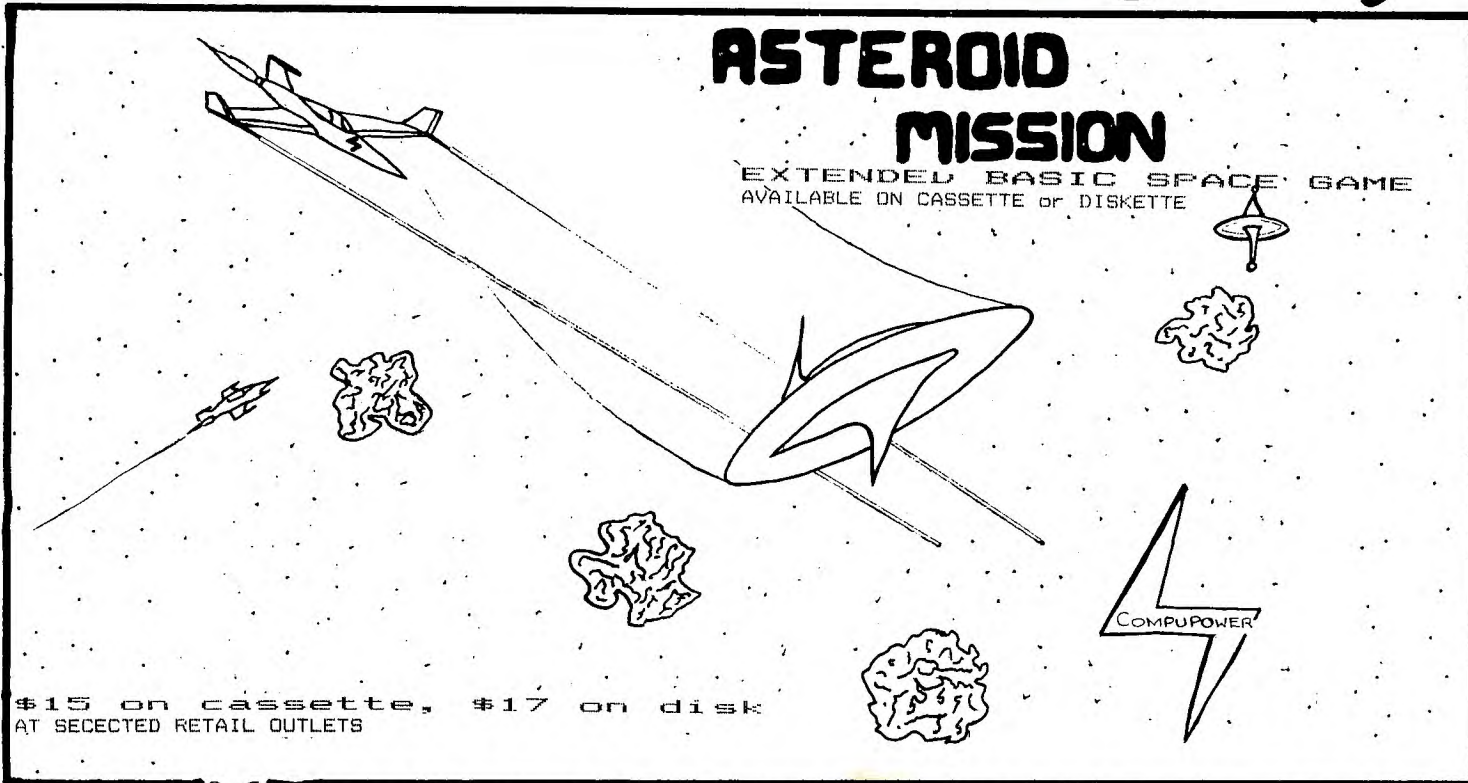
TI the family computer

"Well Captain Johnson, do you think you can tear yourself away from your galactic conquests long enough to take out the garbage?"



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PHONE (HOME): (WORK):

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I am interested in the following areas (please be specific):
.....

SIGNATURE: DATE:



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