Hullo computing friends (OOPs),   I hope 1985 is going OK for you
so far. As this year is International Youth Year I would like to see
some of our "expertise" in the field of computing to contribute in some
way to IYY.

First I must thank John Waters for advertising LE'VZ in his VEE ZEE
newsletter, as I now have quite a few more OOPs on my database. Some
folk have sent me money for issues prior to #4 which were sent out on a
SASE basis. If I have back copies I include them in with the now
chargable issue but, do not charge you for them.

If you have asked for these issues (#1 to #3) and have not received
them, just keep reminding me. I have not had much feedback from OOPs,
with regards to software tapes, contibutions or what YOU would like to
see in LE'VZ. As John Waters said, I can only assume that you are happy
with the newsletter's content.
Did many of you try the little M/L programmes in #4??

Enclosed with this issue is your record on a small slip of paper.
Please correct any data and add more information ie; amount of RAM, do
you have a printer?, your interests, your VZs BASIC Version etc..

This issue should be OK regards to print quality and copying. I
trust you could read the inserted sections in #4, and the crinkles on a
few were not too bad. John and Gordon would repeat my words, that puting
together a newsletter is no mean task, so please forgive me for any
errors or problems, in fact if there are any errors , let me know.

For those who do not obtain the electronics magazine, ELECTRONICS
AUSTRALIA, there is an article in the November's issue written by
Neville Williams whereby he gives the VZ200 a good wrapup, in that he
uses it to write his segment called "FORUM".

If you do have trouble with any software or hardware make sure you
indicate which version of BASIC is in your ROM. This is the information
at the top of VDU (tv), VIDEO TECHNOLOGY BASIC V2.0, or what ever,
when the computer is first switched on.
One difference is the POKE 30744,1 to inverse the VDU is OK for
VERSION 2.0 but not V 1.0.

One error I must correct in LE'VZ #4 is regards the Sandgroper's
club, I gave Russell Harvey of Karrinyup as the contact for WAVZ.
Contact ANDRE SCHOEN, 31 Edinborn St., Mount Hawthorne, WA, 6016.
The fees are five dollars (5) per year or on joining and one dollar
(1) per meeting, which is held every second week.

I welcome advertisers in this issue, ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬
Mr.W Obrist of ST.KILDA VIC,and Mr.S.Olney of NORTH RICHMOND NSW.I trust
you' may find their products very useful in the implementation of the
great little VZ 200.

Many people have enquired as to the availability of the 64K RAM
pack. Unfortunatly our supply line to VIDEO TECHNOLOGY in Hong Kong is
still not open, but I will keep you informed when the packs are

available. In outward appearance they are the same as the 16K unit but with the LASER name on top.

The mem map C000h to FFFFh is in triplicate so if the other two blocks are required they are software switched. The unit has a 5volt regulator and the RAMs are HM4864P. If you are going to Singapore or Hong Kong you should be able to purchase one (or more).

~~ Programming ~~

BMC BX-80 Printer

Larry Taylor sent this short routine to allow the BX-80 too work from the COPY command.

```
100 REM OPERATE BMX BC-80 PRINTER IN COPY MODE
1000 LPRINTCHR$(15);
1010 LPRINTCHR$(27);"A";CHR$(6);
1020 FORY%=0TO63
1030 FORX%=0TO127
1040 P=POINT(X%,Y%)
1050 IFP=1THENLPRINT" ";:NEXT:GOTO1070
1060 LPRINT"*";:NEXT
1070 LPRINT:NEXT
```

Programming for the VZ Joysticks. Machine Code / Assembly Language.

```
001 ;JOYSTICK PROGRAMMING
002 ;READ 1ST ROW
003 JSK   IN   A,(2EH)
004       OR   0E0H
005       CPL
006       LD   B,A
007 ;READ 2ND ROW
008       IN   A,(2DH)
009       BIT  4,A
010       JR   NZ,JST1
011       SET  5,B
012 ;READ 3RD ROW
013 JST1  IN   A,(2BH)
014       OR   0E0H
015       CPL
016       LD   C,A
017 ;READ 4TH ROW
018       IN   A,(27H)
019       BIT  4,A
020       RET  NZ
021       SET  5,C
022       RET
```

This routine reads the status of both joysticks and returns with the results in the B and C registers. The appropriate bit is set to logic 1 if that joystick is enabled, except that the "fire" switches are transferred to bit 5.

```
1 REM JOYSTICK PROGRAMMING
5 R$="RIGHT JOYSTICK  ":L$="LEFT JOYSTICK "
10 A=INP(32)AND31:IFA=31THEN10:REM WAIT FOR SOME ACTION
20 A=INP(46)AND31:IFA=31THEN100:REM CHECK FIRST ROW
30 IFA=26THENPRINTR$+"LEFT+UP":GOTO200
32 IFA=25THENPRINTR$+"LEFT+DOWN":GOTO200
34 IFA=22THENPRINTR$+"RIGHT+UP":GOTO200
36 IFA=21THENPRINTR$+"RIGHT+DOWN":GOTO200
40 IFA=30THENPRINTR$+"UP":GOTO200
50 IFA=29THENPRINTR$+"DOWN":GOTO200
60 IFA=27THENPRINTR$+"LEFT":GOTO200
70 IFA=23THENPRINTR$+"RIGHT":GOTO200
80 IFA=15THENPRINTR$+"ARM":GOTO200
100 A=INP(45)AND16:REM NOW CHECK SECOND ROW
110 IFA=0THENPRINTR$+"FIRE":GOTO200
120 A=INP(43)AND31:IFA=31THEN190:REM CHECK 3RD ROW
130 IFA=26THENPRINTL$+"LEFT+UP":GOTO200
132 IFA=25THENPRINTL$+"LEFT+DOWN":GOTO200
134 IFA=22THENPRINTL$+"RIGHT+UP":GOTO200
136 IFA=21THENPRINTL$+"RIGHT+DOWN":GOTO200
140 IFA=30THENPRINTL$+"UP":GOTO200
150 IFA=29THENPRINTL$+"DOWN":GOTO200
160 IFA=27THENPRINTL$+"LEFT":GOTO200
170 IFA=23THENPRINTL$+"RIGHT":GOTO200
180 IFA=15THENPRINTL$+"ARM":GOTO200
190 A=INP(39)AND16:REM CHECK 4TH ROW
195 IFA=0THENPRINTL$+"FIRE"
200 FORI=1TO300:NEXTI:GOTO10
```

Disc Drives.

I have seen the LASER units, which are
quite nice. An expansion socket is fitted
so that a printer etc. can remain in circuit.
The unit is SEQENCIAL operation with it's
operating system address at the intended
RAM area as in the VZ200 manual.

DSE may have released them by the time
you read this.   JD.

Variation to INKEYS.

INKEYS is used to allow entry of a key without having to press the <RET>
key. In a menu if a letter is asked for the instructions are thus....

```
5 CLS
10 REM  VARIATION TO "INKEY$" CONVERT TO ASCII FOR MENU SELECT
50 PRINT"A = AAA"
55 PRINT"B = BBB"
60 PRINT"C = CCC"
90 PRINT"TYPE IN A - C FOR SELECTION"
100 A$=INKEY$
110 A$=INKEY$:IFA$=""THEN100
120 AS=ASC(A$)
130 IFAS=65THENPRINT"YOU SELECTED AAA":END
135 IFAS=66THENPRINT"YOU SELECTED BBB":END
140 IFAS=67THENPRINT"YOU SELECTED CCC":END
145 IFAS>67ORAS<65THENPRINT"SELECT AGAIN":GOTO100
```

line 120 A$=ASC(A$)   changes the string variable to a numeric variable. A check is done to prevent entry of a numeral or a letter past "C" in line 145.

Software Library

I have altered the headings to show the owner of the tape. If you do not know where to obtain a tape then write to myself as I am now distributor for some of the writers.

1 tape code,   2 name of programme,   3 owner of tape,   4 whether (C) copyright or (PD) public domain,   5 who owns the copyright,   6 price if any,   7 memory required.

2	Disassembler	J.D'Alton	(C) DSE.	Exchange	24K
1	Learjet	F.Halliwell	(C) DSE.	Exchange	24K
1	VZ Cashbook Ledger	J.D'Alton	(C) J.D'Alton	$20.00	24K
2	VZ Database	J.D'Alton	(C) J.D'Alton	$20.00	64K
3	Mailing List	J.D'Alton	(C) DSE.	Exchange	24K
3	Flight Deck	F.Halliwell	(C) DSE.	Exchange	24K
4	Colour Graphics	P.Mc.Lennan	(C) P.Mc.Lennan	$10.00	24K

A menu driven BASIC programme based on analytic geometry and trigometric equations, with interaction on a number of subroutines and tips on using the others. You get help on the way.

1	Keyboard	L.Taylor.	(C) L.Taylor	$8.00	6K

A keyboard familiarization programme with 6 speed levels.

2	Wordmatching	L.Taylor	(C) L.Taylor	$10.00	24K

Practice in Homonyms, Synonyms and Antonyms.

3	Meatpies	L.Taylor	(C) L.Taylor	$10.00	24K

Educational decision making business simulation.

4	VZ Monoply	S.Le Brun	PD	Free	4K
3	Utilitys	I.Webber	(C) I.Webber	$15.00	4K

This is THE software that many of you have been waiting for. Has a menu of 9 options.   Create new programme   List mem in ascii   Poke ascii into mem   Enter statements into mem   Transfer control to programmes.   Renumber   Find the address of a BASIC line   Copy a programme to another location in memory. It is written in BASIC for the advanced programmer to enable relocating programmes and if required to merge them. Supplied with the tape are three pages of instructions.

5	Weaving Drafts	R.Harvey	(C) R.Harvey	$10.00

This great little programme in basic is for those into designing weaving patterns. You enter in the harness lifts in sequential order, then the threading from left to right, the number of pattern repeats and the number of harnesses in each lift. The pattern is drawn in low res. then after you enter the number of repeats it is drawn in high res.

This is a routine to read and display a Programme, character by character.

```
64010 CLS:NL=PEEK(30884)+256*PEEK(30885)
64020 FORI=NLTONL+999:CD=PEEK(I)
64030 PRINTCHR$(CD),CD
64040 FORL=1TO100:NEXTL
64050 IFCD=0THEN64070
64060 NEXTI
64070 NL=I+1:GOTO64020
```

This has some implications:
1 The routine can also modify the prog. on a byte for byte basis by POKEing chars or tokens.
2 It might be possible to modify DATA statements embedded in a prog., under prog. control.   3 It might.be possible to write new DATA stats. at the end (say) of the prog., under prog. control.   Im not saying this has any practical value at the time of writing. (Oct '84 ed.)   My objective at this stage is a data base but the details are still vague. I may only prove that elaborate data structures aren't much value in dealing with small volumes of data-- but thats a long way off. I envisage a number of string variables used as input/output registers, and I want to avoid reading ALL the data into arrays at the one time because that amounts to holding data in two areas of RAM simultaniously, ie. in DATA as well as in the array.   end

    Well as I haven't spoken to Keith for some time I wonder what progress he has made. Perhaps some one else may like to add to his thoughts.

* * * PROGRAMME BUGS * * *

    There appears to be a lot of bugs (or typing errors) in the DSE books, as I receive many 'Phone calls from irrate VZ owners. I usualy do not hear from the person again to let me know the "fixes". PLEASE if you find any bugs at all in any software let me know. Time does not allow me to investigate such things, so I am relying on users and OOPs.

* * * SOFTWARE PREVIEW * * *

    SUPERSNAKE.
    This is the DSE one, simple High Res graphics, but very challenging, in fact I wonder if anyone has ever completed the highest level. The snake comes from the left at such a speed that one's reaction is too slow to turn it.

    LADDER CHALLENGE.
    'Another DSE one, similar to Donkey Kong but without the gorilla at the top. Best played with the joysticks. After getting through the first four levels, the speed of the barrels is increased to make things rather hectic.

    WORDPROCESSOR.

I use this to print this newsletter, and I grade it as exellent. The only bugs that I have found is the one mentioned by Neville Williams of EA. To operate on blocks of text two markers are inserted as required. If a third one is inserted all text after (below) it is deleted.

The other bug is that after LOADing or VERIFYing a warning message is given " checksum error". To my knowledge no one has ever seen a different message. I suggest that the writers got the IF THEN ELSE around the wrong way.

VZ200 INSTANT LETTER TYPE PROGRAMME.

This originated from Gordan Browell and was modified and submitted by Henry Maassen.

Two lines on the VDU are typed in and printed at a time. You change the letterhead to suit your requirments. There is no Tape Save Facility.

VZ-200 + 80 Col. PRINTER
INSTANT LETTER TYPE PROGRAM

```
2    PRINT "     SET CORRECT DATE -RUN 10":PRINT:LIST430
10 CLS:GOTO 600
20 CLS:GOSUB560
30 PRINT@224,"  ████████████████████████████████████"
40 PRINT@320,"████████████████████████████████████"
60 PRINT@224,"":INPUTZ$
70 FORI=1TOLEN(Z$)
80 A=ASC(RIGHT$(LEFT$(Z$,I),1))
90 IFA>=64ANDA<=95THENA=A+32
91 IFA>=192ANDA<=223THENA=A-128
92 IFA>=224ANDA<=255THENA=A-192
100 NEXT
110 PRINT@98,Z$:PRINT
120 GOSUB500
130 GOTO20
260 PRINT@197,"LETTER HEAD G.BROWELL"
270 FORI=1TO1000:NEXT
280 FORI=1TO21:PRINT@197,CHR$(127):NEXT
290 FORI=1TO1000:NEXT
390 CLEAR 1000
400 Z$="GORDON BROWELL                    HENRY MAASSEN"
405 GOSUB500
410 Z$="7 ABBOTT CRESCENT               60 BLUE GUM DRIVE"
415 GOSUB500
420 Z$="BRLAK                       Imassdam QLD. 4203"
425 GOSUB500
430 Z$="IIII2IIIIIIIIII5793              18. OCTOBER 1984"
435 GOSUB500
436 LPRINTCHR$(10)
440 Z$="DEAR GORDON "
445 GOSUB500
446 LPRINTCHR$(10)
450 CLS:GOTO30
500 FORI=1TOLEN(Z$)
510 A=ASC(RIGHT$(LEFT$(Z$,I),1))
520 IFA>=64ANDA<=95THENA=A+32
521 IFA>=192ANDA<=223THENA=A-128
522 IFA>=224ANDA<=255THENA=A-192
530 LPRINT TAB(10);CHR$(A);
540 NEXT:LPRINT:RETURN
550 FORI=1TO1000:NEXT:RETURN
560 PRINT@98,Z$:PRINT:RETURN
```

— LOWER CASE ROUTINE (lines 80-92)

CHANGE TO SUIT YOUR LETTER HEAD (lines 400-440)

— LOWER CASE ROUTINE (lines 510-522)

```
600 PRINT@97,"▓▓▓▓▓▓▓▓ - ENTER 1"  ◀── TO TYPE LETTER HEAD
610 PRINT@129,"▓▓▓▓▓▓▓▓ - ENTER 2"  ◀── BY PASS LETTERHEAD
620 PRINT:INPUTN
630 IFN=1THEN260
640 IFN=2THEN660
650 IFN<1OR>2THEN620
660 CLS:CLEAR 1000:GOTO30
```

LETTERHEAD SAMPLE

Gordon Browell   Henry Maassen
7 Abbott Crescent   60 Blue Gum Drive
Malak   MARSDEN Qld. 4203
DARWIN N.T. 5793   18. October 1984

Dear Gordon

CONTINUE TO TYPE LETTER ·····

* * * HINTS and KINKS * * *

    SOUND.   I notice some programmers are still entering (SOUND) for
each statement ei,
    SOUND20,5:SOUND25,7
        The shortcut way is
SOUND20,5:25,7

    PRINTER.   To return the GP100 to NORMAL mode after being in DOUBLE
WIDTH mode a print of a GRAPHIC character will also do the job ei,
    LPRINT"▓"
    If you have any such hints please forward them in to me.

* * * TRIP TO ROCKHAMPTON * * *

    At the end of March Marie and I will be travelling up to
Rockhampton, calling in to various Dick Smith Eletronics stores as well
as the resellers. For those in the region you may like to contact the
closest to you and enquire about my wherabouts. I will be demonstrating
the software that I distribute as well as others.
    These will be for sale as will be various hardware items. If you
can arrange another meeting place for nightimes I would appreciate it if
you would let me know fairly soon.

* * * D'ALTON SOFTWARE SECURITY * * *
    This service is available to BASIC programmers who wish to protect
their Copyright Software. I must have proof of ownership of the Software
as many of you know that I beleive in Copyright. Please contact me for
details as the charges depends on quantities.

* * * NEXT ISSUE * * *

A listing of BATTLESHIPS, a game by Gordon Browell.

    An article about the construction and operation of the ETI RTTY
unit.

An article on a voice synthesiser.

    Cheerio for now, happy computing.

7   GOD BLESS.   John D'Alton.   John
```
```