LE'VZ COPY ~~(handwritten)~~

****

....LE VZ200/300 OOP....

JUNE 1985. #7 $1.00.   J.C.E.D'ALTON.

Hullo computing friends (OOPs),

The mighty little VZ 200 has grown up. OOPs can now use the DISC DRIVE SYSTEM to increase it's power and capabilities. Either you can do that or update to the new VZ 300, with it's 'proper' keyboard and more inbuilt RAM.

I have added VZ 300 to the name of the newsletter as you may have noticed, to cover it as the VZ 300 is not that much different to the VZ 200. As for the disc drive, well it gives a new dimension to operate in. Most of the software listed in that section is now also available on disc. It is a pity that the little operating manual that comes with the LASER unit is so very very basic. It is up to the user to read other publications to really do serious programming, in particular DATA filing.

I would like those who have upgraded to the VZ 300 or purchased the Disc Drive System to please let me know so that I can update my Data Base. Remember, if you have any article for sale to inform me because there are others waiting to buy.

I have spent only a short time with the VZ 300 so can only give a brief mention of it. The difference to the VZ 200 is mainly a cosmetic one as stated before in regards to the keyboard. The commands which are below the keys as the VZ 200, ie. asc(,reset,inp etc. are marked on the keys them selves. The ROMs have some small changes, but I only tried a few communication addresses which are the same.

Top of Mem Pointer- 30897 & 30898, inverse screen- 30744, keyboard beep- 30779.

The basic VZ 300 usable RAM is from 7800H to B7FFH = '16K', so that plus the 2K Video RAM =18K. In future it will be referred to as an 18K VZ 300 system.

The VZ 300 RAM exp pack may not work with a 24K VZ 200 because the starting address of the pack appears to be B7FFH, where as the top address of a 24K VZ 200 is CFFFH.

A VZ 300 with the 16K expansion RAM unit makes the top of memory F6C8H = 63176.

I am presently writing a big Disc Based Data Base which will load data from tape as saved on VZ DATA BASE and transfer it to disc. It will include plenty of search facilities, merge etc.

Now to add more to the 'saga' of tape usage. See erratum. A point that is not widely known but mentioned in some places by tape manufacturers and others in the business, that any tape recording medium suffers from 'print through'. The magnetic signals do transfer from one layer of tape to the other. It is very small but nevertheless it is happening to your and my tapes while you are reading this.

Whether the signals are music, voice or computer, it is a fact. It is recommended that tapes, cassette, reel to reel etc should be rewound

occassionally, what ever that means. As a guess I would say once a year.

I did some more tests on a VZ DTR by adjusting it's motor speed. The speed must not be lower or higher than one semi-tone. IE, testing with a test tape with a 440HZ tone (middle A), the speed must not be lower than G# or higher than A#. So for those who are having tape problems, record a musical instrument that is accuratly tuned at middle A on a cassette tape recorder that is known to operate at the correct speed and then play the tape back on your CTR. By listening to it and the musical instrument at the same time you can check the CTR speed. If you are not sure of this procedure, perhaps a musician friend may help you.

I thank Mr. Davis of Mildura for again sending in another interesting programme which 'Prints' characters on the VDU in high resolution. I have also printed the rest of his 'World Times' programme in this issue.

I apologise if I have not answered YOUR letter. I do write a note in some LE'VZs, but as I have over 110 names in the group Data Base, it does occupy a lot of time. Anyway do not hesitate to write to me as I find your letters interesting.

I have not had any feedback regarding the RTTY article in the last issue. There are a few who are having trouble setting up the system, so you may be able to contribute something to assist.

BUGS.

These are bugs found by others which I cannot verify.
GRAND PRIX. in the DSE book. Line 1000 POKE 28776,2240. Do not type the 0 after 224.
CHASM CAPERS. Line 364 GOSUB IF F =17. Delete Line 364.
INVENTORY. Requires 24K RAM.

DICK SMITH VZ 300 SOFTWARE

Some VZ 200 software will not run on a VZ 300. A programme that just fits into a 24K VZ 200 will not run in a basic VZ 300 because it has less RAM. DSE are modifing the software if and where possible.

Programming

A very usefull feature when waiting for input, ie. Y = YES TO CONTINUE N = BACK TO MENU.
Instead of the curser flashing on it's own and you type in Y or N then <RETURN>, have Y printed and the cursor flashing on it. Then only the <RETURN> needs to be pressed for a Y answer. Of course for a N answer the N still has to be typed then the <RETURN>. Arrange which character to have printed under the cursor for the most likely answer. This is the short routine which could be a subroutine.

```
30160 REM YES/NO SUBR 1
30165 PRINT@416," Y TO VIEW MORE, N TO MENU"
30166 PRINT@450,"Y":PRINT@416," "
30170 RETURN
```

RET'N WITHOUT GOSUB ERROR IN XXXXX
If a CLEAR statement is used, it should be at the beginning of the

Programme. Do not have a CLEAR statement in a subroutine, as the return address cannot be read from the 'stack', and so the error message will appear.

Thanks to Fred Olsen for these communication addresses.

78FDH (30973) & 78FEH (30974) = the starting address of free space in RAM.
78F6H (30965) & 78F7H (30966) = last line number excecuted.
78E2H (30946) & 78E3H (30947) = starting line number.
7899H (30873) = single byte, last inkey pressed.
789EH (30878) = single byte, high or low res.
789AH (30874) = single byte, error code storage.
Hopefully more next LE'VZ.

Sorry that the projected article on voice synthesisers is not in this issue. It is hard to arrange the next issue, as YOUR SCOMPUTER also realises. The May issue of YC was to have a list of software under $25.00, but that is now held over to the June one.
I would appreciate more contributions for LE'VZ, please write to me if YOU have anything to offer.

* * * 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 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.

1	2	3	4	5	6	7
U10	DISASSEMBLER	J.D'Alton	(C)	DSE.	$10.00.	24K
U2	EDITOR/ASSEMBLER	I.Webber	(C)	I.Webber	$20.00	24K

This is writen in basic. Has most of the usual features.

B1	VZ CASH BOOK LEDGER	J.D'Alton	(C)	J.D'Alton	$20.00	24K
B2	VZ DATABASE	J.D'Alton	(C)	J.D'Alton	$20.00	64K
B3	MAILING LIST	J.D'Alton	(C)	DSE.	$10.00.	24K
U4	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.

| E1 | KEYBOARD | L.Taylor. | (C) | L.Taylor | $8.00 | 6K |

A keyboard familiarization programme with 6 speed levels.

| E2 | WORDMATCHING | L.Taylor | (C) | L.Taylor | $10.00 | 24K |

Practice in Homonyms, Synonyms and Antonyms.

| E3 | MEATPIES | L.Taylor | (C) | L.Taylor | $10.00 | 24K |

Educational decision making business simulation.

| U3 | UTILITYS | I.Webber | (C) | I.Webber | $15.00 | 24K |

This is THE software that many of you have been waiting for. Has a menu of 8 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.

| U5 | WEAVING DRAFTS | R.Harvey | (C) | R.Harvey | $10.00 | 6K |

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.

E4 MATHS COUNTDOWN   L.Taylor.   (C) L.Taylor. $10.00.   24K
     A top class maths unit with addition, multiplication, subtraction and
division including long division. Various levels. The rocket takes off when
a group of answers are correct.

E5 COORDINATES   L.Taylor.   (C) L.Taylor $10.00.   24K   Work
with any four quadrants is available.

E6 TOWER ofHANOI   L.Taylor.   (C) L.Taylor $8.00.   6k
     Shift 3,4 or 5 blocks (discs) to another position in so many moves.

E7 MICROSCOPE   L.Taylor.   (C) L.Taylor $8.00.   24K
     Questions on various part of a microscope.

E8 BLOCK PUZZLER.   L.Taylor.   (C) L.Taylor $10.00.   6K
     Very entertaining. The old block game where one square piece is left out
so that you can re-arrange the letters.

G2 MANSION   D. Odgers.   (c) D.Odgers. $12.50,   24K
     A Low Res adventure game. Find an article in the big mansion by picking
up clues and objects on the way.

G3 VZ MONOPOLY   S.Le Brun.   (c) S.Le Brun. $12.50.   24K
     The famous board game in Low Res.

U12 SEARCHTAPE   L.Taylor.   (c) L.Taylor $10.00.

     A M/L unit that gives a view/printout of the filename, starting address
and ending address of a tape programme. The filename of data saved by the
DSE. Word Processor is also given, so you can now find out what files are on
a tape without having to load the DSE. W.P.

     The addresses are required of programmes. 'B' if you wish to <SAVE> onto
Disc or tape. Use of W.Os Monitor/Debugger to <SAVE> to tape is required in
this case.

* * * ERRATA * * *

     In LE'VZ #6 on page 1 . Regarding VZ DTR testing. ...this drops to 4
volts peak to peak at 4 volts DC... should read
     this drops to 2 volts peak to peak at 4 volts DC.

     you   That's all folks, GOD BLESS until next issue, or when I
speak to again.
          ^

                    John

PS.
     On page I where I refer to using a VZ 300 exp RAM pack with
a VZ 200, I should add that a way of connecting the second RAM
pack would have to be arranged also.
                    JD.

```
689 DATA 0,0,0,0,2,130,0,0,0,0
690 DATA 0,0,0,0,0,0,0,0,0,170,170,168,0
,0,0,0,5,85,84,60,0,0,0
691 DATA 0,0,0,42,162,128,0,0,0
692 DATA 0,0,0,0,0,0,0,0,0,42,170,168,0,
0,0,0,5,85,80,240
693 DATA 0,0,0,0,0,2,170,170,160,0,0,0
694 DATA 0,0,0,0,0,0,0,0,0,42,170,128,0,
0,0,0,5,85,80,240
695 DATA 0,0,0,0,0,10,170,170,168,0,0,0
696 DATA 0,0,0,0,0,0,0,0,0,42,170,0,0,0,
0,0,1,85,64,0,0,0,0,0,0
697 DATA 42,170,170,168,0,0,0
698 DATA 0,0,0,0,0,0,0,0,0,170,168,0,0,0
,0,0,1,85,0,0,0,0,0,0,0
699 DATA 42,170,170,168,0,0,0
700 DATA 0,0,0,0,0,0,0,0,0,170,168,0,0,0
,0,0,0,84,0,0,0,0,0,0,0
701 DATA 10,0,42,168,0,12,0
702 DATA 0,0,0,0,0,0,0,0,0,170,128,0,0,0
,0,0,0,0,0,0,0,0,0,0,0
703 DATA 0,0,2,160,0,3,0
704 DATA 0,0,0,0,0,0,0,0,2,170,0,0,0,0,0
,0,0,0,0,0,0,0,0,0,0,0
705 DATA 0,0,0,0,3,0
706 DATA 0,0,0,0,0,0,0,0,2,160,0,0,0,0,0
,0,0,0,0,0,0,0,0,0,0,0
707 DATA 0,0,240,0,60,0
708 DATA 0,0,0,0,0,0,0,0,2,160,0,0,0,0,0
,0,0,0,0,0,0,0,0,0,0
709 DATA 0,0,0,0,240,0
710 DATA 0,0,0,0,0,0,0,0,2,160,0,0,0,0,0
,0,0,0,0,0,0,0,0,0,0
711 DATA 0,0,0,0,0,0
712 DATA 0,0,0,0,0,0,0,0,2,128,0,0,0,0,0
,0,0,0,0,0,0,0,0,0,0,0
713 DATA 0,0,0,0,0,0
714 DATA 0,0,0,0,0,0,0,0,0,128,0,0,0,0,0
,0,0,0,0,0,0,0,0,0,0
715 DATA 0,0,0,0,0,0
716 DATA 0,0,0,0,0,0,0,0,0,32

900 E$(0)="24444444111444444"
901 E$(1)="24111114444411111"
902 E$(2)="24414444141444414"
903 E$(3)="24414144141444444"
904 E$(4)="24444411114111444"
905 E$(5)="24444144141441444"
906 E$(6)="24444444141441444"
907 E$(7)="24411114111144444"
908 E$(8)="24444444141444444"
909 E$(9)="24441144141444444"
910 E$(10)="24144444114114444"
911 E$(11)="24444444141414141"
912 E$(12)="24444444111441114"
913 E$(13)="24444444111414441"
914 E$(14)="24444444141441414"
915 E$(15)="24444444141141411"
916 E$(16)="24444444114441444"
917 E$(17)="24444441141144444"
918 E$(18)="24411144444441114"
919 E$(19)="24111141111444444"
920 E$(20)="24444441141144144"
921 E$(21)="24444441111411114"
922 E$(22)="444444441111444444111144444"
```

```
923 E$(23)="24444444111144444"
924 E$(24)="24444444111444444"
925 E$(25)="24444444141144411"
926 E$(26)="24444414114444441"
927 E$(27)="24444444141114144"
928 E$(28)="24141144141441141"
929 E$(29)="24411114444441111"
930 E$(30)="24444441111444444"
931 E$(31)="24444411111444441"
932 E$(32)="444444411114444441111444444"
933 E$(33)="24441441141144144"
934 E$(34)="24444111144444411"
935 E$(35)="24411444141444114"

960 RETURN
1010 X=VAL(LEFT$(A$(0),1)):Y=VAL(MID$(A$
(0),2,1))
1020 FOR I=0 TON:A$(I)=RIGHT$(A$(J),LEN(
A$(I))-2)
1030 FOR J=0 TOX:FOR K=0 TO Y:T%(I,J,K)=
VAL(LEFT$(A$(I),1))
1040 IF LEN(A$(I))=1 THEN 1060
1050 B$=RIGHT$(A$(I),LEN(A$(I))-1):A$(I)
=B$
1060 NEXT:NEXT:NEXT:RETURN
1100 FOR I=0 TO Y:FOR J=0 TO X:COLOR T%(
N-1,J,I)
1110 SET(X1+J,Y1+I):NEXT:NEXT:RETURN
```

HI RES NUMBERS AND LETTERS

If you would like to use the HI RES letters and figures as I used in the WORLD TIMES program, in a program of your own then here is the subroutine for it and also how you can add all the rest of the ASCII characters if you wish, or any other HI RES character you may like. The first part of the program from line 10 - 30 is a short routine to input some numbers and then a word then calls the subs to display them in HI RES.

Being in basic it is very slow but at the same time can be efective for some displays. If you want to try some other characters of your own then we will have a look at how the letter "A" is made up. Have a look at line 910 and you will find...

910 e$="24144444114114444"

This is the data for the letter "A". The letter is in a three by five grid as indicated by the first two numbers 2 and 4 (you start to count from zero) then the next fifteen (the one's and four's) are the colours that you want the pixels to be.

If you add more ASCII characters to the list you will have to change lines 222 and also 235, in line 222 Q=Q-55, the ASCII code for A is 65 so 65-55 gives us 10, E$(10) gives us the data for the letter "A" so if you insert more ASCII characters in front of the alphabet this part of the line will have to be altered to suit the new position in the array also line 235 looks for "M" and "W" to move the cursor along an extra two places as these are in a 5X5 grid. We will have a look at that line again but broken up into sections to get a better idea of how it goes together.

```
24 14444 41141 14444
        |
    |   0 1 2
   0 | 1 4 1
   1 | 4 1 4      If you follow
   2 | 4 1 4      the 4's in the
   3 | 4 4 4      grid they make
   4 | 4 1 4      the letter "A"
```

If the first two numbers are 99 then you would have a ten by ten grid and so on, but as this would mean 100 bits of data to do this it would mean you would have to put the first half in one variable the next half in another then say E$=Y$+Z$. But just have a go at making up the rest of the ASCII set first and see how you go at that.

```
10 CLEAR 1000:DIM E$(36):GOSUB900:CLS
15 INPUT O
20 MODE(1):X1=0:Y1=59:GOSUB 110
22 FOR N=1 TO 1000:NEXT
25 INPUT E$:MODE(1):X1=0:Y1=59:GOSUB 200
30 FORN=1TO1000:NEXT:GOTO 15
110 X1=0
121 C$=STR$(O)
130 D=LEN(C$)
135 FORU=2TOD
140 E=VAL(MID$(C$,U,1))
150 N=0:A$(0)=E$(E):GOSUB1010:N=1
155 GOSUB 1100
160 X1=X1+4:NEXT:RETURN
200 REM LETTERS
212 L=LEN(E$)
220 FORU=1TOL
221 L$=MID$(E$,U,1)
222 Q=ASC(L$):Q=Q-55
223 IF Q<0THEN X1=X1+4:GOTO240
230 N=0:A$(0)=E$(Q):GOSUB1010:N=1:Y1=59
233 GOSUB 1100:X1=X1+4
235 IFQ=22 OR Q=32 THENX1=X1+2
240 NEXT
250 RETURN
900 E$(0)="24444444111444444":REM "0"
901 E$(1)="24111114444411111":REM "1"
902 E$(2)="24414444141444414":REM "2"
903 E$(3)="24414144141444444":REM "3"
904 E$(4)="24444411114411444":REM "4"
905 E$(5)="24444144141441444":REM "5"
906 E$(6)="24444444141441444":REM "6"
907 E$(7)="24411114111144444":REM "7"
908 E$(8)="24444444141444444":REM "8"
909 E$(9)="24444144141444444":REM "9"
910 E$(10)="24144444114114444":REM "A"
911 E$(11)="24444444141414141":REM "B"
912 E$(12)="24444444111441114":REM "C"
913 E$(13)="24444444111414441":REM "D"
```

```
914 E$(14)="24444444141441414":REM "E"
915 E$(15)="24444444141141411":REM "F"
916 E$(16)="24444444111441444":REM "G"
917 E$(17)="24444441141144444":REM "H"
918 E$(18)="24411144444441114":REM "I"
919 E$(19)="24111441111444444":REM "J"
920 E$(20)="24444441141144144":REM "K"
921 E$(21)="24444441111411114":REM "L"
922 E$(22)="44444444111144444411114444 4"
:REM "M"
923 E$(23)="24444444111144444":REM "N"
924 E$(24)="24444444111444444":REM "O"
925 E$(25)="24444444141144411":REM "P"
926 E$(26)="24444414114444441":REM "Q"
927 E$(27)="24444444141114144":REM "R"
928 E$(28)="24141144141441141":REM "S"
929 E$(29)="24411114444441111":REM "T"
930 E$(30)="24444441111444444":REM "U"
931 E$(31)="24444411111444441":REM "V"
932 E$(32)="44444441111444441111444444"
:REM "W"
933 E$(33)="24441441141144144":REM "X"
934 E$(34)="24444111144444411":REM "Y"
935 E$(35)="24411444141444114":REM "Z"
960 RETURN
1010 X=VAL(LEFT$(A$(0),1))
1015 Y=VAL(MID$(A$(0),2,1))
1020 FOR I=0 TO N
1025 A$(I)=RIGHT$(A$(I),LEN(A$(I))-2)
1030 FOR J=0 TOX:FOR K=0 TO Y
1035 T%(I,J,K)=VAL(LEFT$(A$(I),1))
1040 IF LEN(A$(I))=1 THEN 1060
1050 B$=RIGHT$(A$(I),LEN(A$(I))-1)
1055 A$(I)=B$
1060 NEXT:NEXT:NEXT:RETURN
1100 FOR I=0 TO Y:FOR J=0 TO X
1105 COLOR T%(N-1,J,I)
1110 SET(X1+J,Y1+I):NEXT:NEXT:RETURN
```

```
15 OPEN"NASH 6",0
20 IN#"NASH 6",D1$
30 CLOSE"NASH 6"

15 OPEN"NASH 6",1
20 PR#"NASH 6",D1$
30 CLOSE"NASH 6"
```

As mentioned earlier about the Laser Disc Drive manual being so basic, here is the main correction of the IN# and PR# routines on page 60.

TRADING POST.

```
HARDWARE:
VZ 200 with 24k expansion.
VZ 200 Datacassette
VZ 200 Printer interface
All leads and connections.
SOFTWARE:
Dick Smith:
WordProcessor, Demonstration tape, typing teacher, Basic
introduction,  Spellomatic B,  Dracula's  Castle,  Knights  and
Dragons, Hoppy, Learjet, Statistics I, VZ Golf.
LYSCO:
Master  finance 100, Check record, Enchanted Princess, Little
Packer, Caverns of Venus, Beat the Bug, Slot Machine.
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Extended Basic (Olney), Load XX80, Array/Utility.

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TELEPHONE MODEM'S
========= =======

This article as you might have
assumed from the title, is about using
the telephone network to comunicate
from one computer to another.

I   have   been   looking   into   the
possibility of using a modem with
either   the   VZ-200   or   the   VZ-300.
however one of the main problems is
the   fact   that   neither   of   the
computer's have a RS-232C PORT built
in.

I was in contact with DSE in SYDNEY
and   was   informed   that   if a RS-232C
PORT was installed that the computer's
would not have any trouble operating.
So after this encouraging new's; I
decided to find out exactly how much
installation and purchase of a RS-232C
PORT would cost.

The only place I could find which
sell's such a kit was TANDYS cost $160

which   does   not   include   installation.
For   installation   I had too look else-
where. The cheapest price I got was
around $40. I you know any were cheaper
for these item's please let me know.

I then went on to find how much it
would cost to operate the telephone
network. I discovered the cheapest way
in   the   long run was to join a system
called AUSPAC it cost's $50 to join
for a year and $4 per month rental.
Through Auspac it is possible to get
entery to the OTC MIDAS network at no
extra cost. However the cost of a call
to the UK., for ONE hour works out at
roughly $20 as you can see it is a lot
cheaper than ordinary ISD to the UK.,
which would cost $120...

If any of. you have further info on
this subject please send it in.

written by
Andrew Garrick