

/// LE'VZ 200/300 OOP ///

JUNE 1986. #12 \$1.00. J.C.E.D'ALTON, 39 Renes St. TOOWONG, QLD. 4066.
AUSTRALIA.

Hi OOPs,

By the time you read this I will be doing my jogging and exercising seriously to be in shape for my skiing on Mt. Hotham in Victoria. Rhh-- to get away from the Queensland heat for a few days.

If there is anyone else likely to be skiing down there perhaps we could meet up. I will be there at the end of July so if you are interested in talking a LITTLE about computers, let me know.

I have had a few good compliments about LE'VZ, which is very gratifying. I thank those OOPs very much.

Bob Kitch, Larry Taylor and I had a little pow-wow during Easter about the VZ and LE'VZ and have come up with some new ideas which should make LE'VZ even better with their help. I have received more contributions but would like more. Don't be afraid to let other folk know what you are doing with the VZ.

There are some who have added a full size keyboard, voice synthesiser, extra RAM memory and so on. And of course there are others who write good software. But the majority seem to be content to just play games (someone else's), what a pity. Programming in BASIC is not that hard. Like learning any language, practice (in this case, at the keyboard) and determination is what is required. Give it a go!!

My recommendation is to fasten down by screwing or clamping the entire system, computer- VZ DTR- Power Packs and disc drive (if any) to a base board. This can be a piece of five ply with rubber feet underneath. Or an old upturned cupboard drawer, where the Power Packs can be clamped up underneath.

The object is to ensure very little movement of the pieces. The way some folk have the RAM unit flopping around amazes me. No wonder their system crashes from time to time. Once this has been done the real pleasure of computing comes to light.

Some folk do have trouble with heat apparently causing crashes, but this seems to apply to the early VZ 200s. I have a VZ 200 which among other things, plays the door chime, and it is running 24 hours per day and crashes very rarely (once a fortnight/week). Admittedly it does not have the RAM Pack plugged in causing more current drain, but I think it does demonstrate that the VZ can be used for long periods.

Now that you have set up the VZ correctly, would you like to really put it to some very useful purposes. The things that you may know that the Commodore, Atari, BBC, Microbee, Apple and others can do. Such as:-

Would you like to "talk" to other VZ owners and other computers???

Would you like to use the VZ in an alarm system???

Would you like to run serious/useful software like data bases or financial packages???

Would you like to talk to other "HAMs" via Radio Teletype???

Would you like to listen to international RTTY diplomatic and news services???

Would you like to use computer bulletin boards???



I hope I have stirred your imagination because all these things are possible via the VZ. There are a few pieces of hardware available from D.S.E. which will allow some of these things to be done. But don't expect a lot of the D.S.E. staff to set these things aside for you, they have good intentions but not the expertise or the time to spend with you.

There have been construction articles in the various magazines covering these items, refer to Bob Kitch's list. There are other DOPs who have the experience to help those who need it. I hope to print articles on these pieces of hardware in future LE'VZs.

So I repeat, if you can contribute something, PLEASE send it to me for inclusion in LE'VZ.

David Newcombe of 926-969 Beenleigh to Redland Bay Rd., CARBROOK QLD 4120, is a hardware chap who has been building pieces of hardware for the MicroBee, and has now entered the VZ scene. He has built up RAM Packs which the purchaser can fit more RAM ICs as available cash is found. A fully finished 18K Pack for the VZ300 in the D.S.E. box costs approximately \$70.00.

Another unit which is a ROM board can be fitted inside the RAM Pack. It means that programme/s that you use often are "burnt into" an EPROM and fits in the cartridge memory area at 4000H - 6000H. No need to have to load in the programme/s when needed. David envisages that the ROM capacity could be taken to 144K. YES 144K !!!

Price of a 64K ROM Pack with menu EPROM approx \$55.00.

David also has a Buffer Board which buffers the address, data, and some signal lines. This is necessary if more than a couple of external devices are connected to the VZ. Such as Printer, Joystick, disc drive. If a buffer is not fitted and you are experimenting by connecting a device to the VZ, you can damage it as the Z80 microprocessor can only drive so many devices. Price approx \$60.75.

David needs to know what quantities of all the items are required by DOPs so that a better Pricing structure can be arrived at. Contact myself or David directly and let him know that you are an DOP.

With this LE'VZ I include a "liftout Page" of Bob Kitch's list. I (we) hope you like LE'VZ even more. There is a lot more to come, so keep tuned in ...en... keep reading LE'VZ.

GOD BLESS. John D'Alton.

DICK SMITH ELECTRONICS NEW ZEALAND.



A few days I received a very welcome letter replying to one which I wrote to Mr Yann Duran, who is the Computer Products Manager of N.Z.

He will give me as much support as possible, in relation to LE'VZ and VSOFTWAREZ software. The same applies in the reverse as I presently do for D.S.E. of Australia. More about this matter in the next LE'VZ. I wish to stress to New Zealand VZ users that they contact Mr Duran at the Head Office, 200 Kheber Pass Rd, AUCKLAND, 'Phone 396-495 for help in any matter. He wants to give VZ users all the support that is possible. He has much of our data-- software and LE'VZ at his disposal, and soon demonstration tape and discs of our software.

This Programme, MEAN STREETS by Bob CHAPPEL was sent in by Bob Davis of Mildura.

```

1 RANDOM:REM INVISIBLE COMMAND
2 CLEAR 200
5 REM MEAN STREETS BY BOB CHAPPEL  UZ 200
VERSION BY A.LOCK
20 DS=" A CLUE. ":"NS=" NOTHONGS "
21 PK$= " PLEASE TYPE NUMBERS.
"
25 SL$=CHR$(31)+" THE SLEUTHS "
26 SP$=CHR$(31)+" THE SUSPECTS "
27 R$=" REVEALS "+CHR$(10)
30 WF$=CHR$(31)+" THE WEAPONS "+CHR$(10)
31 PL$=CHR$(31)+CHR$(10)+CHR$(10)+" THE
LOCATIONS "+CHR$(10)
35 AN$=" HERE'S LOOKING AT YOU KIDS ":"WR
$=" PLAY IT AGAIN SAM!!"
40 DIMH(12),E(15,4):Z=RND(1000)
45 FORN=1TO9:READT$(N):NEXT:FORN=1TO9:RE
ADS$(N):NEXT
50 FORN=1TO9:READW$(N):NEXT:FORN=1TO9:RE
ADL$(N):NEXT
55 DATA"SHERI GUY", "KOJAK", "COLUMBO", "DR
WATSON", "MAIGRET"
56 DATA"INSP. CLOUSSEAU", "JIM ROCKFORD",
"DAN TANNER", "MS MAPPLE"
65 DATA"JOHN D'ALTON", "PLAYBOY'S EDITOR"
,"TEA LADY", "CLEANER"
66 DATA"BOB HAWKE", "IDA BUTTPOSE", "PICK
SMITH"
67 DATA"OSSIE COSTICH", "PETER FORBIT"
80 DATA"LETTER FOMB", "VIC MAIL COFFEE", "
COLT 45", "MALLET"
82 DATA"POISON FRUIT CAKE", "LASER GUN"
83 DATA"KILLER SNOOPY", "CHRIS SOCKS", "EL
ECTRIC SHOCK"
89 DATA"CIVIC BUILDINGS", "THE MURRAY", "A
WATERPER", "APEX PAFF"
"
95 DATA"PSYCHE REND", "BO2 DUAL", "MILDURA
STATION"
96 DATA"TARGET", "OLYMPIC POOL"
110 CLS:PRINT" MEAN STREETS "
111 PRINT:PRINT:INPUT" YOUR NAME PLEASE ";
XX$
112 PRINT:PRINT:PRINT" WHICH LEVEL (1-3)?
"
115 INPUTA$:
120 LU=INT(UAL(A$)):IFLU<10RLU>3,110
125 PRINTSL$:FORN=1TO9:PRINTN;T$(N):NEXT
130 PRINTPK$:FOR N=1 TO 4
135 IFN=1,A$=" I AM - "
140 IF N=2,A$=" YOU ARE - "
145 IFN=3,A$=" 1ST ROOKIE IS - "
150 IFN=4,A$=" 2ND ROOKIE IS - "
155 PRINTCHR$(10);A$:
157 IF N=2,T$(T(2))=XX$:GOTO 175
160 GOSUB865:IFA<10RA>9,160
165 FORN=1TO4:IFT(N1)=A,160
170 NEXT:T(N)=A
175 PRINTT$(T(N));
180 IFN=1,PRINT" OF PINKERTON'S ";
185 PRINT".":NEXT:PPINT:GOSUB825
190 PRINTSP$:FORN=1TO3:PRINTN;S$(N):NEXT
195 PRINTPK$;:FORN=1TO6:IFN>6,PRINT 3/S
PECT"N"IS ";
200 IFN=6,PRINT:PRINT" THE VICTI
M IS:- "
205 GOSUB865:IFA<10FA>9,225
210 FORN=1TO6:IFS(N1)=A,205
215 NEXT:S(N)=A:PRINTS$(S(N));
220 PPINT" ":"NEXT:GOSUB 825
225 PRINTWD$:FORN=1TO3:PRINTN;W(N):NEXT
230 PRINTPK$:PRINTCHR$(10);FORN=1TO8:IF
INT"WEAPON"IS A ";
235 GOSUB865:IFA<10FA>9,235
240 FORN=1TO5:IFW(N1)=A,235
245 NEXT:W(N)=A:PRINTW$(W(N));":":NEXT:G
OSUB825
250 PRINTP$:FORN=1TO8:PRINTN;END:NEXT

```

```

255 PRINTPK$:PRINTCHR$(10):FORN=1TO5:PRI
NT"LOCATION"IS ";
260 GOSUB865:IFA<10RA>3,260
265 FORN=1TO5:IFL(N1)=0,260
270 NEXT:L(N)=0:PRINTL$(L(N))":":NEXT:GO
SUB825
275 CLS:PRINT:PRINT" A SCREAM IN THE
NIGHT!! ":"SOUND14,R
280 FORN=1TO5:SS(N)=S(N):S(N)=0:NEXT:FOR
N=1TO5
285 Z=RND(5):FORN=1TO4:IFS(N1)=SS(Z),
ZFS
290 NEXT:S(N)=SS(Z):NEXT
295 FORN=1TO5:WW(N)=W(N):W(N)=0:NEXT:FOR
N=1TO5
300 Z=RND(5):FORN=1TO4:IFW(N1)=WW(Z),
ZWW
305 NEXT:W(N)=WW(Z):NEXT
310 FORN=1TO5:LL(N)=L(N):L(N)=0:NEXT:FOR
N=1TO5
315 Z=RND(5):FORN=1TO4:IFL(N1)=L(Z),
ZL
315 NEXT:L(N)=L(Z):NEXT
325 A=1:FORN=1TO4:E(A,A)=S(N):E(A+1,0)=W
(N1)+10:E(A+2,0)=L(N)+20
326 A=A+3:NEXT
330 FORN=1TO12
335 Z=RND(12):FORN=1TO4:IFH(N1)=E(Z,A
),Z
340 NEXT:H(N)=E(Z,A):NEXT
345 FORN=1TO5:E(N,0)=N:E(N+5,0)=N:E(N+10
,0)=N:NEXT
350 FORN=1TO5:FORN=1TO3:IFH(N1)=SS(N),F
ORZ=1TO4:E(N,Z)=1:NEXT
355 NEXT:FORN=1TO3:IFH(N1)=WW(N)+10,FOR
Z=1TO4:E(N+5,Z)=1:NEXT
360 NEXT:FORN=1TO3:IFH(N1)=LL(N)+20,FOR
Z=1TO4:E(N+10,Z)=1:NEXT
365 NEXT:NEXT:CLS
366 PRINT:PRINT:PRINT" YOUR CLUES, "T$(TC
2)":":":FORN=1TO6:PRINT
"
370 IFH(N)>20,PRINTL$(H(N)-20):GOTO385
375 IFH(N)>10,PRINTW$(H(N)-10):GOTO385
380 PRINTS$(H(N))
385 NEXT:GOSUB825
390 CLS:PRINT:PRINTT$(T(2));":":PRINT
391 PRINT" HAVE YOU SOLVED IT (Y/N)? ":"G
OSUB865
395 IFA$="Y",XX=1:CLS:PRINTCHR$(10):PRIN
T" THE DENOUNCEMENT?? "
396 IFA$="Y",PRINT:PRINT:GOTO430
400 CLS:PRINT:PRINT" WHICH SLEUTH WILL Y
OU GRILL? "
405 PRINT:PRINT:PRINT" 1 ":"PRINTT$(T(1))
406 PRINT:PRINT" 2 ":"PRINTT$(T(3))
407 PRINT:PRINT" 3 ":"PRINTT$(T(4))
410 GOSUB865:IFA<10RA>3,410
415 IFA>1,A=A+1
420 A1=A
425 CLS:PRINTCHR$(10)
430 FORN=1TO5:PRINTN;S$(SS(N)):NEXT:PRIN
T
431 PRINT" YOU SUSPECT? "
435 GOSUB865:A2=A
440 IFA<10RA>5,435
445 CLS:PRINTCHR$(10):PRINTCHR$(10)
446 FORN=1TO5:PRINTN;W$(WW(N)):NEXT:PRI
NT
447 PRINT" WHICH WEAPON? "
450 GOSUB865:A3=A
455 IFA<10RA>5,450
460 CLS:PRINTCHR$(10):PRINTCHR$(10)
461 FORN=1TO5:PRINTN;L$(LL(N)):NEXT:PRI
NT
462 PRINT" WHERE? "
465 GOSUB865:A4=A
470 IFA<10RA>5,465
475 Z=2:GOSUB480:GOT0515
480 CLS:PRINTCHR$(10):PRINT" THE MURDER
OF "S$(S(6))" "
485 IFA$=1,PRINT:PRINT

```

TO BE CONTINUED NEXT LEVEL.

LEVEL #12 A3



JUNE 1986.

** SOFTWARE FOR SALE FROM COMPUTER CENTRE LTD

- DE1-8 EDUDISK. \$ 50.00. VZ3-VZ4.
Educational programmes. E1 to E8 all on one Disc. It is for children that a program is selected by a single key press, unlike children.

- T/DE9 MEETIES V2. \$ 15.00. VZ3-VZ4. Year (Grade) 5-7. Similar to E3, but features additional graphics screen, more expensive events and provision for the "game" to be saved to tape. This allows students to continue on where it was left before.
- TU18 LOAD XY80 FILES. \$ 7.95. VZ3-VZ4. This allows loading of System 80 and TRS 80 (12) tapes. It is up to the user to modify the program to run on a VZ. Some simple programs will run ok without any changes.

- T/DE36 BLACK JACK. \$ 20.00. VZ2-VZ4.
The card game (Pontoon) can be played by 3 people. Good fun etc.

- T/DE37 POKER MACHINE. \$ 20.00. VZ3-VZ4.

- Another good low RES graphics game. See if you can break the bank.

- T/DE38 WORDSQUARES. \$ 10.00. VZ2-VZ4.
The familiar game where you find words hidden in the maze of letters. You enter in the words and the VZ hides them for you. Very good.
- T/DE39 COMPUTER MONOPOLY. \$ 15.00. VZ2-VZ4.

- You play the VZ at the famous game.

- T/DE40 TRIVIAL CULT. \$ 15.00. VZ2-VZ4.

- An educational game where the computer selects randomly up to 100 questions to test your general knowledge. Could be an Educational unit. Suitable for all ages.
- T/DE41 SCOTLAND YARD. V2. \$ 15.00. VZ2-VZ4.
You find out "who dunit".

- T/DE42 CHEQUE LEDGER DISC. \$ 50.00. VZ3-VZ4.

- DB5 LE/VZ STATEMENT VZ.0. #185.00. VZ4.
For small business use. Based on LE/VZ D'BASE. Random access records. Requires the Disc Drive System, a Printer and VZ DTR. Process and print end of month statement, labels, Pay into account etc. Hit money calculations carried out. IE. Debit, Paid in and Statement \$ totals. Comes with a 20 page instruction booklet. Write for more information or see a demonstration.

- DB16 CHEQUE LEDGER DISC. \$ 50.00. VZ3-VZ4.
A small business unit. Based on T/B1 (CHEQUE LEDGER) but for Disc operation only, in that all data is saved/loaded to/from Disc. Type in - date, Paid to, Cheque #, bank # and 12 other \$ columns. View date, correct credit, printout of all data across two 84 sheets of paper by printing on the left side then the right side. This allows in 80 column printer such as a GR100 or similar rather than an expensive wide business type.
Each "tape in session" is saved to Disc, which is loaded in at the next session so that new data is typed in and merged. This is then saved to Disc. To this was the month's or period's file is built up ready to be printed at the close of the month/period.
At the close of that month/period, you type in the previous month's period's running totals. All \$ totals are then calculated and printed at the bottom.

- DT19 COPY PROTECT. \$ 50.00. VZ1-VZ4.
Incorporates two programmes BREAKPROOF and FILECOPIER. Using BREAKPROOF on Basic programmes produces versions which autorun and will automatically start. If the BREAKPROF key is pressed, FILECOPIER allows the transfer of Basic or Machine Code programmes to or from tape or disc.
- NUO. DISC SHUFFL. \$ 50.00. VZ1-VZ4.
DISK SHUFFL prevents easy copying of programmes stored on Disc. IE. FILECOPIER cannot copy a DISKSHUFFLED Disc. Basic programmes are automatically encrypted to produce an autorun programme, which will return if the BREAKPROF key is pressed. That program cannot be effectively interpreted.

EXISTING SOFTWARE

D/TU2	EDITOR/ASSEMBLER	\$ 45.00	VZ3-VZ4.
D/TB1	CASH BOOK LEDGER	29.00	VZ3-VZ4.
TU4	COLOUR GRAPHICS	29.00	VZ3-VZ4.
D/TE1	KEYBOARD	13.00	VZ1-VZ4.
D/TE2	WORDMATCHING	13.00	VZ3-VZ4.
D/TU3	MERAPIES	13.00	VZ3-VZ4.
TUS	UTILITY'S	13.00	VZ3-VZ4.
D/TE4	WEAVING DRAFTS	13.00	VZ1-VZ4.
D/TE5	MATHS COUNTDOWN	13.00	VZ3-VZ4.
D/TE6	COORDINATES	13.00	VZ3-VZ4.
D/TE7	TOWER of HANOI	13.00	VZ1-VZ4.
D/TE8	MICROSCOPE	13.00	VZ1-VZ4.
TE20	BLOCK PUZZLER	13.00	VZ3-VZ4.
TE24	PLUS and MINUS	13.00	VZ1-VZ4.
TE25	MATHS	13.00	VZ3-VZ4.
TE27	QUEENSLAND	13.00	VZ1-VZ4.
TE30	EUROPEAN CAPITALS	13.00	VZ1-VZ4.
TE36	CAMPING	13.00	VZ3-VZ4.
D/TG2	MANSION and NOVA	12.50	VZ1-VZ4.
	MANSION... VZ3-VZ4. for NOVA	12.50	VZ3-VZ4.
D/TG3	VZ MONOPOLY.	12.50	VZ1-VZ4.
TU12	SEARCHTAPE	12.50	VZ3-VZ4.
D/TG13	SCOTLAND YARD	12.50	VZ3-VZ4.
DB4	LE'VZ D'BASE	12.50	VZ3-VZ4.
TB15	DATABASE-VZ	12.50	VZ3-VZ4.
TG35	HAUNTED MANSION	12.50	VZ3-VZ4.
TU6	VZ EXTENDED BASIC	12.50	VZ1-VZ4.
TU7	PROTECT	12.50	VZ3-VZ4.
TU8	CMERGE/DELETE/REN	12.50	VZ3-VZ4.
TU9	MONITOR DEBUGGER	12.50	VZ3-VZ4.
TU10	EXTENDED BASIC	12.50	VZ3-VZ4.
TU11	ARRAY/RESTORE	12.50	VZ1-VZ4.
D/TU12	FILESEARCH	10.00	VZ1-VZ4.

You must have TU10 to TU11.

Below is a patch to enable your editor assembler to list its source code. As stated in the manual using option C.

First enter Insert mode by entering 'I'. Then set code origin by entering 'O'. Now type in the below program, pressing RETURN at the end of each line.

```

001 LD BC,0CH ;Size of transfer is 12 bytes.
002 LD HL,LOOP ;Point to new printer routine
003 LD DE,BF54H ;Point to editor assembler print out
004 LDIR ;Transfer routine to editor assembler
005 JP 7B00H ;Return control to editor assembler
006 LOOP IN A,(00H) ;Load printer status
007 BIT 0,A ;Check ready bit
008 JR NZ,LOOP ;Repeat LOOP if not ready
009 LD A,C ;Load Accumulator with print data
010 OUT (0EH),A ;Output data to printer port
011 OUT (0DH),A ;Another port for an early interface
012 RET ;Get next character

```

Now assemble the program by entering 'A'. Now RUN the program by entering 'R' then press 'Y' to verify you wish to execute the program. Finish up by deleting the program by entering 'D*'. Your editor assembler may list programs now, just by selecting option 'C'.(enter 'SC').

```

1 ;*** TEST PROGRAM 1 ***
2 ;
3 ; P.THURSBY 12/85
4 ;TO USE CHAR OUT ROUTINE
5 ;ON VZ300 COMPUTER.
6 SOUT EQU 33AH
7 CLR EQU 1C9H
8 EDIT EQU 7B00H
9 ;
10 ;SAVE ALL REGISTERS
11 STRT PUSH AF
12 PUSH DE
13 PUSH HL
14 PUSH BC
15 CALL CLR
16 POP BC
17 POP HL
18 POP DE
19 POP AF
20 ;NOW FOR SOUT ROUTINE
21 PUSH BC
22 LD B,255
23 LOOP LD A,24H
24 CALL SOUT
25 DJNZ LOOP
26 POP BC
27 JP EDIT
28 ;JUMP TO EDITOR/ASSEMBLER
29 ;ASSEMBLE AT "O <RET>"
```

To use a Printer with the D.S.E. Editor/Assembler.

There apparently is more than one version of the Ed/Ass. I do not have any trouble with mine and the GP100. The M/L routine sent by Peter Thursby some months ago gets around the problem. Jamie Perry of D.S.E. at the Sydney "hot line" sent me another routine which is the D.S.E. Technical Bulletin # 116, above.

*** NEXT LE/VZ ***
VZ200 and VZ300 memory map.
VZ video modifications Part one.
VARPTR Ext Basic Programming.
VZ Editor/Assembler tips.

BINARY - DECIMAL CONVERSION

By SCOTT LE BRAIN

To understand how the binary system works, we must revert back to how the decimal system works.

FIGURE (1) - Decimal Place value

4	3	2	1	0
10	10	10	10	10
10000	1000	100	10	1

FIGURE (2)

The decimal number:-

7 4 2 8

$$3 \\ 7 \times 10^3 = 7000$$

+

$$2 \\ 4 \times 10^2 = 400$$

+

$$1 \\ 2 \times 10^1 = 20$$

+

$$0 \\ 8 \times 10^0 = 8$$

$$\hline \\ \Rightarrow 7428$$

FIGURE (3) - Binary Place values

7	6	5	4	3	2	1	0
2	2	2	2	2	2	2	2

$$128 \quad 64 \quad 32 \quad 16 \quad 8 \quad 4 \quad 2 \quad 1$$

13 decimal = 1101 binary

Look up table and find highest number that can be divided into the number that you wish to convert.

$$13 \div 8 = 1 \text{ remainder } 5 \quad - \quad 1$$

$$5 \div 4 = 1 \text{ remainder } 1 \quad - \quad 1$$

$$1 \div 2 = 0 \text{ remainder } 1 \quad - \quad 0$$

$$1 \div 1 = 1 \quad - \quad 1$$

$$\hline \\ \Rightarrow 1101$$

GOTO PAGE 7.

FIGURE (4)

The binary number:-

1 0 1 0 1

$$4 \\ 1 \times 2^4 = 16$$

+

$$3 \\ 0 \times 2^3 = 0$$

+

$$2 \\ 1 \times 2^2 = 4$$

+

$$1 \\ 0 \times 2^1 = 0$$

+

$$0 \\ 1 \times 2^0 = 1$$

$$\hline \\ \Rightarrow 21$$

SCOTT LE BRAIN

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SPEECH & MUSIC FROM YOUR VZ

Two types of peripheral device which can greatly expand the appeal of the VZ and enhance your interest in the machine (not to mention the enthusiasm that others will get for the computer) are VOICE and SOUND SYNTHESISERS. These are alternate and novel forms of sound output from the computer when one has tired of the entirely visual forms of output from the screen or printer. Music synthesis exceeds the capabilities of the VZ's inbuilt beeper.

A number of circuits and projects have appeared in the magazines over the past couple of years. This article briefly identifies these for those who may wish to build a board or alternatively register your interest with me so that we can make available these peripherals plus software off-the-shelf.

Imagine the blockbuster use of voice and music synthesis in games or applications.

A couple of introductory articles on speech synthesis appeared in BYTE Sep. 84 p.337 and I.T.E.C. #26 p.812. These are good background.

Magazine	Date	Name	Chip	Interface	Software
<u>VOICE</u>					
E.A.	Oct. 82 Apr. 83	Compu- voice	Votrax SC-01	Centronics	Yes
A.P.C.	Dec. 84	DIY voice synth.	"	"	"
E.T.I.	Jan. 85 Apr. 86	Chatter- box	"	"	"
E.T.I.	Mar. 86	Talking VZ-200	GI SP0256	Parallel	No
A.E.M.	Feb. 86	Project 4504	"	Centronics	Yes
P.E.	Mar. 85 Jun. 85	BBC	"	Parallel	"
P.E.	Jan. 86	Spectrum	"	"	"
<u>SCUND</u>					
A.P.C.	Nov. 84	DIY music	TI synth.	Centronics	"
E.A.	Aug. 83	Compu- muse	TI SN76489	"	"

So if you're tired of reading output from your computer how about LISTENING instead?

Copies available from Bob Kitch 7 Eurella St., KENMORE QLD. 4069

Now that's how to convert from binary to decimal. Now comes the fun part - converting from decimal to binary!

FIGURE (5) - Powers of 2

N	2 ^N
0	1
1	2
2	4
3	8
4	16
5	32
6	64
7	128

CONTINUATION OF SCOTT LE BARS ARTICLE

THE ONE THING I DON'T LIKE
ABOUT AUTOMATIC MACHINES
IS THAT THEY AUTOMATICALLY
GO WRONG..... Marie D'Alton.

LE1V2A12 P7

Reworked original.

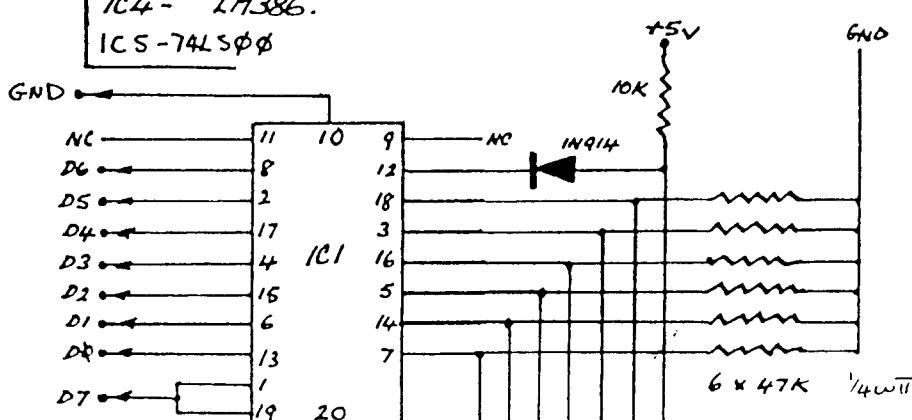
IC1 - 74LS244

IC2 - SPA256-ALZ (TANDY - 276-1784) (AVAILABLE FROM 'MAPLINS' U.K.) ALSO

IC3 - 74LS629 OR LS124.

IC4 - LM386.

IC5 - 74LS00

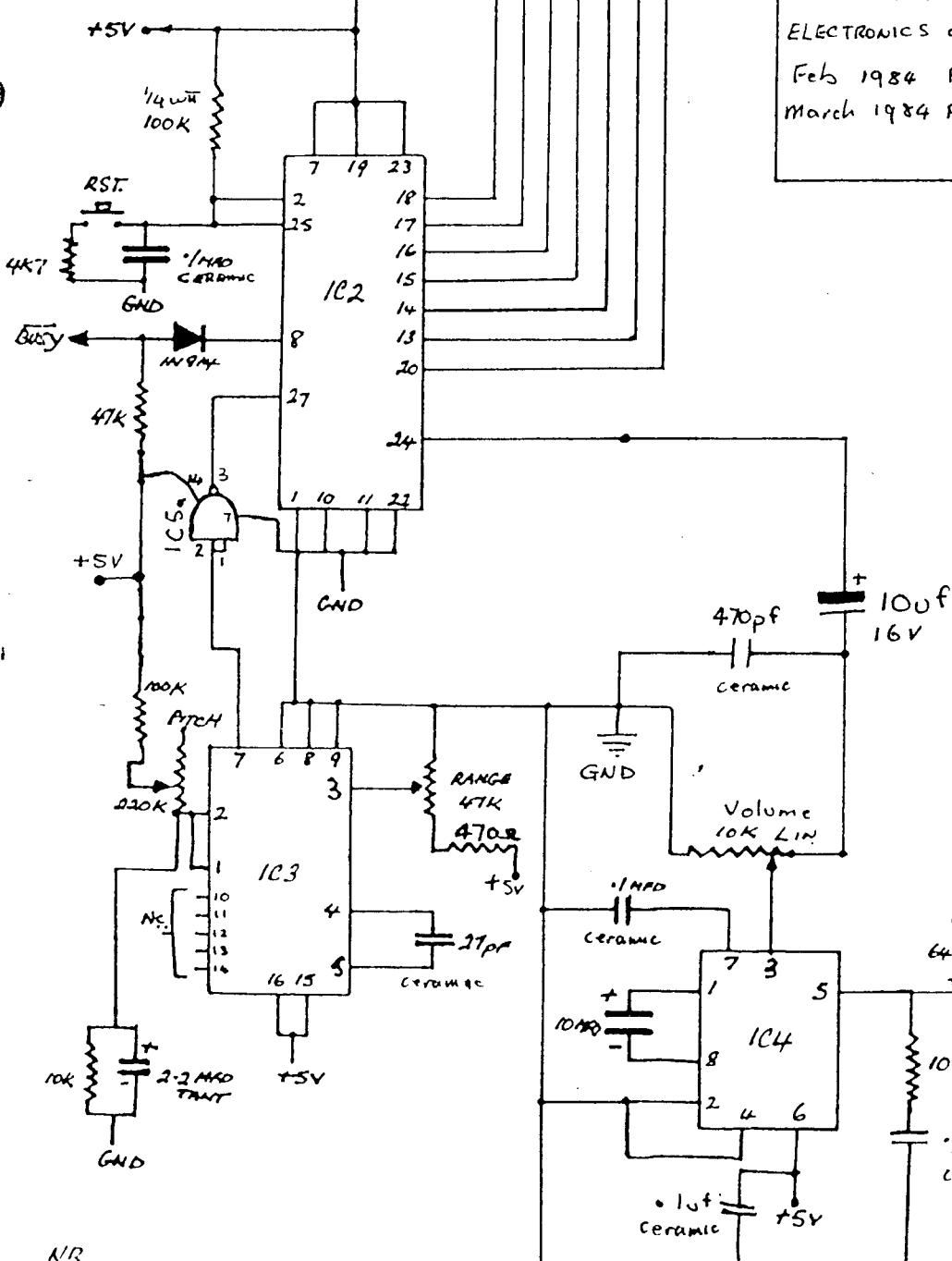


V2-200

SPEECH SYNTHESISER

USES PORT A IN FOR TEST ON BUSY LINE.

COPYRIGHT I.A.WILLIAMS
SEPT 1984



Reference Books

ELECTRONICS and Computing Monthly
Feb 1984 P61
March 1984 P25

Resistors

10Ω × 1

470Ω × 1

4.7kΩ × 1

10kΩ × 2

47kΩ × 7

100kΩ × 2

Caps

27pf × 1 ceramic

470pf × 1 ceramic

10uf × 4 ceramic

2.2uf × 1 Tant 16V

100uf/16V × 2

1000uf/16V × 1

4700uf/16V × 1

other

10k Lin pot × 1

47k pot × 1

2.2MFD pot × 1
push button × 1
spkr 8Ω × 1

N.B.

SUPPLY LINE DECOUPLING

NOT SHOWN. USE HT0406 ON INPUT IF NECESSARY!

(a modification of Craig Milner's JOYSTICK DRAWER)

This modification of "joystick drawer" is very interesting.
Rather than using 1 joystick, this program uses 2 controls.

An added function lets your drawing be printed by a GP100.

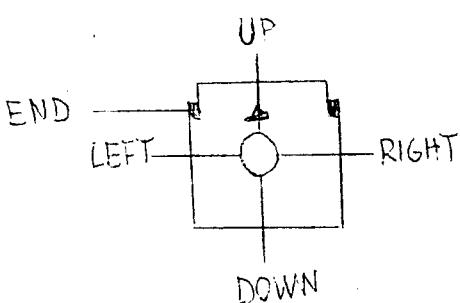
```

500 MODE(1)
501 A=(INP(43)AND31):B=(INP(46)AND31)
502 IFA=23ANDX<127THEN X=X+1
503 IFA=27ANDX>0THENX=X-1
504 IFA=30ANDY>0THENY=Y-1
505 IFA=29ANDY<63THENY=Y+1
506 IFA=15THENCLS:END
507 IFB=15THEN GOTO 500
508 IFB=30THEN COPY
509 SET(X,Y)
510 GOTO 501

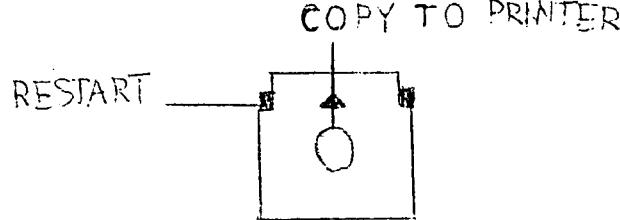
```

CONTROLS

Left Joystick



Right Joystick



EDITOR ASSEMBLER TIPS

TO ENTER HI-RES MODE (MODE(1)) IN
ASSEMBLER LANGUAGE YOU HAVE TO SET
BIT 3 OF ADDRESS 6800H(26625) TO 1.

FOR EXAMPLE:

```

LD A,(6800H);LOAD A WITH THE CONTENTS
OF 6800H

```

```
OR 8 ;SET BIT 3 OF A TO 1
```

```

LD (6800H),A ; LOAD NEW INFORMATION
BACK

```

```

LD (783BH),A ; INTO 6800H AND 783BH

```

IF YOU WANT TO CHANGE THE BACKGROUND
COLOUR TO BUFF (NORMALLY ITS GREEN)
INSTEAD OF [OR 8], AS ABOVE, CHANGE
THAT TO OR 24 (SETTING BIT 4 TO 1).
(783BH) IS THE COPY OF (6800H). IT
IS IMPORTANT TO LOAD A INTO (783BH)
IF YOU WANT TO USE THE SOUND DRIVER
ROUTINE IN ROM, BECAUSE THE SDR DOES A
READ (783BH) TO SEE WHAT MODE YOU ARE
IN, AND LOADS THAT INTO (6800H).
TO CALL THE SOUND DRIVER ROUTINE
LD HL,FREQUENCY
BAL BC,3458H

BEFORE RETURNING BACK TO THE EDITOR
ASSEMBLER USE THE PROGRAM BELOW TO
CLEAR BIT 3 OF (783BH). IF YOU DON'T
THE SCREEN WILL CHANGE TO MODE(1)
(HI-RES) WHEN YOU USE TAPE SAVE IN
THE EDITOR ASSEMBLER.

```

LD A,(783BH)
AND 247
LD (783BH),A

```

SPEECH SYNTHESISER.

This five I/O circuit was sent by Dave Boyce. The speech I/O is a Tandy unit, but another I/O which is cheaper can be used. More about this later.
SEE PAGE 8.

// / LETTERS to the EDITOR // //



Please take advantage of this section to make a comment or ask questions. I may not know all the answers, but someone else may. "It is better to be thought of as a fool for a few minutes, than be a fool forever."

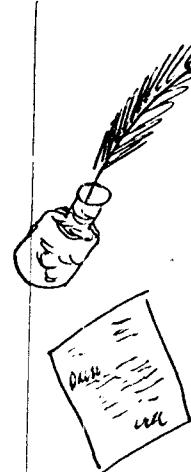
Dear Ed.,

The TRS-80/System-80 and Vic 20 computers are no longer sold or supported - having been superceded by newer machines. This fate awaits even the VZ'd! However, many happy Users are continuing to use their older hardware without trading up to new Gizmo's. How?

Both the TRS-80 and Vic-20 have strong User's Groups which continue to co-ordinate activities. But perhaps more importantly, the Groups had the foresight to centralize all software into a library system. The Vic-20 Club has around 900 programs and the TRS Club about 600 programs indexed and held in a library and accessable to Members at a nominal cost. I have done a lot of work centralizing and indexing magazine information for the benefit of VZ Users. My bibliography is attached to this newsletter. I am now trying to identify the various Users Groups Newsletters which have been circulated since 1983.

So how about writing to me if you have any Newsletters and sending along details of author and date of release etc.? How about letting me know of your ideas on starting a Central VZ Software Library?

Bob Kitch, 7 Eurella St., KENMORE QLD. 4069



Dear Editor,

I am currently building the Australian Electronics Magazine's speech synthesiser. Do you know anyone with software for it?

Mr. David Mathews, RMB, 4330, SALE, VIC. 3850.

CENTRONICS PIN CONNECTIONS.

The VZ connections at the Printer Plug (output of Printer interface) are not standard according to Grant Calhoun.

To conform to the standard Centronics connections, Pins 19 to 30 should be earthed. Earth should be removed from Pins 16 and 33.

P.S. I THINK THERE ARE VARIATIONS TO THIS EVEN!

J.D.

PIN	1 STROBE	PIN 13	NC.	PIN 25	EMYH
2 D0		14 NC.		26	EARTH
3 D1		15 NC.		27	EARTH
4 D2		16 NC.		28	EARTH
5 D3		17 NC.		29	EARTH
6 D4		18 NC.		30	EARTH
7 D5		19 EARTH		31	NC.
8 D6		20 EARTH		32	NC
9 D7		21 EARTH		33	NC
10 NC.		22 EARTH		34	NC
11 BUSY		23 EARTH		35	NC
12 NC....		24 EARTH		36	NC.

BANKCARD and VISACARD NOW WELCOME

PROGRAMMING.

Once you get to write long Programmes, you may have found that there are delays in a Programme when it is run. The screen (VDU) remains stationary, no READY or cursor. This is something that the books don't tell you.

ALWAYS use the CLEAR statement, then initialise all variables at the start of a Programme, BEFORE using the DIM statement. If you DIM at the start and somewhere in the Programme a variable (string or numeric) is introduced, the VZ has to first shift all the DIM areas to fit the new variable in.

To initialise a string variable just use a pair of quotation marks- IE B\$="".

To initialise a numeric variable just use an 0 (zero)- IE s=0.

Type in the three little Programmes, one at a time, and time them. The first is about 1 1/2 seconds. The second takes about 8 seconds and the third about 2 seconds. So you can see that about 6 seconds is saved in the third Programme.

1 REM JUST 'DIM'
5 CLS
10 PRINT "START":PRINT:PRINT
20 DIM A\$(5000):DIM B\$(5000)
100 PRINT "FINISHED"

The only people who
brag about having been
poor are the rich -

2 1 REM 'DIM' THEN INTRODUCE VARIABLES
5 CLS
10 PRINT "START":PRINT:PRINT
20 DIM A\$(5000):DIM B\$(5000)
30 A\$="AAAAAAAAAAAAAAA":B\$="DDDDDDDDDDDDDD":C=123:G=1:H=5
100 PRINT "FINISHED"

3 1 REM INITIALISE ALL VARIABLES AT START OF PROGRAMME
5 CLS
8 A\$="":B\$="":C=0:G=0:H=0
10 PRINT "START":PRINT:PRINT
20 DIM A\$(5000):DIM B\$(5000)
30 A\$="AAAAAAAAAAAAAAA":B\$="DDDDDDDDDDDDDD":C=123:G=1:H=5
100 PRINT "FINISHED"

* EDIT SLIP *

I request all OOPs to complete this slip and return to me at your earliest. It is similar to the one I included in an earlier LE/VZ. In Particular the question as to whether you want YOUR name to be on the General List. If you answer NO, then your name and address will NOT be given out to OOPs when a list is printed. IE. of a list of NSW OOPs, DISC user OOPs and so on.

If you answer YES, or do not answer at all, you will automatically be put on the YES General List.

I do not give out printouts of all OOPs on the G.L. as there are too many.

CUT

Surname..... Mr/Mrs/Miss and Christian name.....
Address..... Post Code

Computer, VZ200 and/or VZ300..... Any other computer

Printer and/or Plotter..... Disc System, yes/no

RAM Expansion, Yes/No .. K Tape Recorder, VZ DTR or other.....

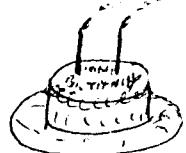
Any other Peripherals, RTTY, Joysticks etc.....

Interest? Games, Business, Amateur Radio, M/L etc..... Date.....

Do you want your name on the GENERAL LIST? Yes/no..

This program looks for a specified byte. Once it is found the program backspaces to the previous byte and then prints the address in HEX to the printer. The search covers the entire ROM and the DOS region. In this case I was searching for any references to the Communications Area of RAM between the addresses 7A00H and 7AFFH. BY LARRY TAYLOR.

```
001    CALL 3AE2H ;Do a carriage return
002    LD BC,6000H ;Number of bytes to be searched
003    LD HL,0000H ;Start of ROM area
004 RETN LD A,(HL) ;Load A with the byte in HL
005    CP 7AH ;Check to see if it is 7AH
006    JR NZ,NEXT ;If not go to next
007    PUSH BC ;Save number of bytes to search
008    PUSH HL ;Save current address being searched
009    DEC HL ;Go back one place
010    LD A,H ;Load A with the high byte
011    CALL HEX ;Convert the value to HEX and print it
012    LD A,L ;Load A with the low byte
013    CALL HEX ;Convert the value to HEX and print it
014    LD C,32 ;Load C with a space
015    CALL 058DH ;Print it
016    POP HL ;Recover the current address
017    POP BC ;Recover the number of bytes
018 NEXT INC HL ;Increase the current address by one
019    DEC BC ;Decrease the number of bytes by one
020    LD A,B ;Check to see if the
021    OR C ;contents of BC equals zero
022    JR NZ,RETN ;If not then continue search
023    CALL 3AE2H ;Do a carriage return
024    JP 31488 ;Return to Editor Assembler
025 HEX PUSH AF
026 RRCA
027 RRCA
028 RRCA
029 RRCA
030 CALL HEX2
031 POP AF
032 HEX2 AND 0FH
033 ADD A,30H
034 CP 7AH
035 JR C,DISP
036 ADD A,7
037 DISP PUSH HL
038 LD C,A
039 CALL 058DH
040 POP HL
041 RET
```



LE'VZ 200/300 OOP 2nd birthday.

In June 1984 I Printed the first LE'VZ which consisted of only one A4 sheet. How it has grown in two years. This edition has more articles than ever. I hope you like it. For those who still wonder what "OOP" stands for, it means "Owners, Operators and Programmers". J.D'A.

Celestron Software.

Does anyone know what has happened to this firm? I spoke to John Halkiadakas about October 1985, and he appeared to be the firm's Principle. He advertised in Your Computer Oct 1985. He sent me a three page flier advertising a VZ Communications Package V1.0. Price \$370.00. The address was P.O. Box 31, HUNTINGDALE, Vic. 3166. Phone (03) 791 5850.

I have not heard from him since. The Telecom message says that the phone number is not connected. I just this minute tried it again. A couple of OOPs have sent money for Programmes but have not received anything from the firm.

A WARNING. NEVER send money to a P.O. Box number. If anyone knows any more about this matter Please let me know.