

ORIC COMPUTING

THE COMPLETE ORIC USER MAGAZINE

MARCH/APRIL 1984

ISSUES 5/6

*ORIC SHOWING
OFF AGAIN*

*ORIC CROSSWORD
PUZZLE*

ORIC ATTRIBUTES

ORIC HEALTHCARE

*ALLAPHONES
AT WORK*

*AND
MORE*



OFFICIAL ORIC OWNERS USERS GROUP PUBLICATION

ORIC SOFTWARE STATION

Oric Computing Software

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The Oric Software Station is a service to help avoid those programming blues! particularly with those larger programmes, if you've neither the time or the patience, let us help!

NEW SOFTWARE - NEW SERVICE - NEW LIBRARY.

CROWLEY'S HOUSE - Oric - 1

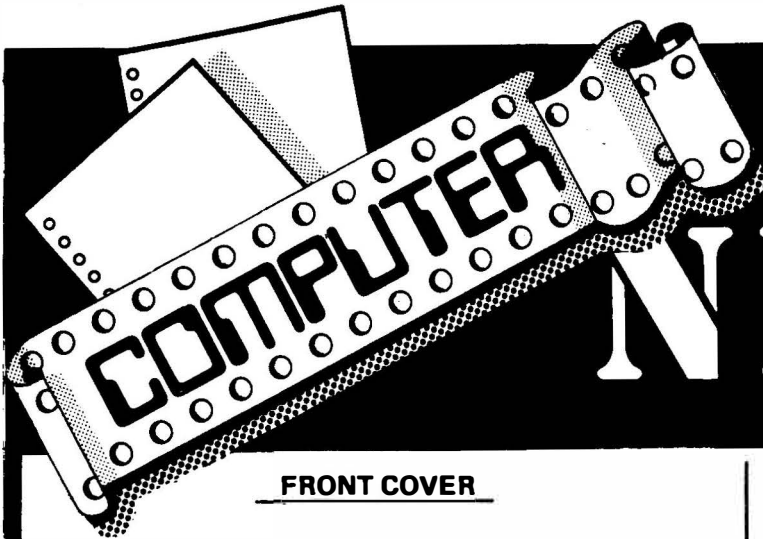
This super new fantasy adventure program launches a new software library service for O.U.G. members. The library software is exclusive to group members at realistic prices. So make the most of these opportunities and support your group at the same time.

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CROWLEY'S HOUSE (Oric - 1) £5.00 inc

**MORE NEW TITLES COMING SHORTLY
WATCH THESE PAGES**



FRONT COVER

Mr Barry Muncaster Managing Director of Oric Products International and the joint Managing Director of Edenspring Investments, an investment company which recently acquired O.P.I.

Mr Muncaster trained as a telecommunications engineer with the British Post Office, specialising in automatic exchange maintenance. After five years he left to join three other people in starting Laser-scan Laboratories, the first company to move onto the Cambridge Science Park. There he worked with Prof. Otto Frisch, a world famous physicist and pioneer of the concepts of nuclear fission, in developing a computer controlled laser system employed in the analysis of bubble chamber experiments. During this period he attended Durham University reading system engineering.

In the early seventies he established Speed Electronics Ltd which developed electronic taximeters, many of which still appear in London taxi cabs under the name Cavalier. This product was the first in the U.K. to exploit microprocessors in large volume application. Late in 1978 Barry Muncaster met Dr. Paul Johnson and together they founded Tangerine Computer Systems which designed and produced the popular Microtan, Tantel and Tiger range of computers. Tantel gained 74% of the U.K. Viewdata market.

Tangerine designed the Oric microcomputer and is the only U.K. company to have developed its own Un-Committed Logic Array from silicon upwards.

Oric - 1 was launched in January 1983 and has already sold in large numbers worldwide. Joint venture companies were then established in Singapore and Japan to penetrate the enormous potential of the rapidly expanding Asian market place for home computers.

A NEW MAN IN THE TEAM

Malcom (Ken) Kendrick (aged 48) joins the Oric Users Group team and assumes responsibility as Director of U.K. operations and also takes on the role of joint Editor of Oric Computing, Taking over the production and distribution from Bob Green who now assumes new responsibilities including the further development of the Groups activities at home and overseas.

Ken's interest in electronics and computing began while he was serving in the R.A.F. as an Air Traffic Controller, this provoked a keen interest in Radio and Computing electronics which eventually led to him becoming a Radio Amateur enthusiast on 2 m and 70 cm bands (Call Sign G6CYU). This naturally led still further to computer applications and development in this field. After spending more than twenty years in small business Ken now joins the team and brings with him much expertise for the benefit of O.U.G. members.

STOP PRESS NEWS

RAMTOP

Radio Amateurs Microcomputer Techniques, Operation and Programs circulates a group magazine dedicated to radio amateurs, and as the name suggests, for those who also use computers. The Ramtop magazine is issued to subscribers four times a year, at the end of the months of April, July, September and January. It contains program listings, circuit diagrams and ideas for adapting a wide range of micros to amateur radio uses. Having seen the list of members of Ramtop it seems that Oric/Atmos Radio Amateurs may find some comrades already at work. Material is pooled between various Groups, including the A.S.C.I. magazine of the German R.A.C.G. and with Swedens 'Swedish Calling DXer's. For details of Ramtop write to R.P. Butcher, Great Billing Rectory, Northampton. NN3 4ED.

ORIC COMPUTING - BACK ISSUES

ISSUE 1. November/83

Oric Attributes in Action
Coworth Park Horrors
Barbican Report
Tape Verify Routine
Software Reviews
and more

ISSUE 2. December/83

Oric Specs
Yahtzee
Mastermind
More Attributes in action
Software Reviews
and more

ISSUE 3. January/84

Oric Dragon Curves
MCP40 Printer Review
Showing Off
Gone Static
and more

ISSUE 4. February/84

Morse Trainer
3D Noughts & crosses
More Scope for your Micro
Inside Atmos
Software Reviews
and more

Oric Computing back issues are available directly from Oric Owners Users Group,
1, Marlborough Drive, Worle, Avon. BS22 0DQ -- £1.00 each
Please make Cheques/Postal to O.U.G. Ltd

ORIC ATTRIBUTES

```
0 REM*****
1 REM#
2 REM# Oric Attributes Part Four! #
3 REM#
4 REM*****
5 REM#
6 REM# By Roger Massey (C) 1984 #
7 REM#
8 REM*****
9 PAPER0: INK7: POKE618, 2
10 POKE48035, 0: CLS: PLOT0, 11, 10: PLOT0, 12, 10: PLOT1, 11, 17: PLOT1, 12, 17
20 A$="P A R T F O U R": PLOT11, 11, A$: PLOT11, 12, A$: WAIT400
25 DATA0, 14, 8, 14, 8, 56, 40, 56
30 FORX=0T07: READA: POKE46080+8*ASC("\")+X, A: NEXT
35 PAPER0: INK0: HIRES: PAPER0: INK1: PRINTCHR$(17)
40 T$="ORIC THE MUSIC MAKING MICRO": CURSET14, 25, 3: FILL8, 1, 2
45 CURSET45, 25, 3: FORX=1T0LEN(T$): CHARASC(MID$(T$, X, 1)), 0, 1: CURMOV6, 0, 0: NEXT
50 N=13: M=226: C=90: FORX=1T05: CURSETN, C, 0: DRAWM, 0, 2: C=C+4: NEXT
55 CURSET21, 104, 3: FORX=1T012: CHAR92, 0, 2: MUSIC1, 3, X, 10: WAIT30
60 CURMOV18, -2, 3: NEXT: PLAY0, 0, 0, 0
65 T$="ORIC THE SOUND SYNTHESISER": CURSET14, 155, 3: FILL8, 1, 5
70 CURSET51, 155, 3: FORX=1T0LEN(T$): CHARASC(MID$(T$, X, 1)), 0, 1: CURMOV6, 0, 0: NEXT
75 WAIT100: E$=CHR$(27): ZAP: PRINTSPC(8)E$+"DZAP";
```

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76 WAIT75:SHOOT:PRINT$+"BSHOOT";:WAIT75:PING
77 PRINT$+"FPING";:WAIT50:EXPLODE:PRINT$+"EEXPLODE"
78 WAIT350:TEXT:POKE618,2:INK2:PLOT0,0,1
80 POKE48035,0:T$=": SOUND AND MUSIC MAKING :":PLOT6,0,T$
85 DOKE621,48080:POKE623,24:POKE48041,1:PRINTCHR$(30)
86 PRINT"ORIC in common with most computers has";
87 PRINT"the ability to produce a range of both";
88 PRINT"musical and non-musical sounds.
89 PRINT:PRINT"A special sound synthesiser chip is
90 PRINT"responsible for producing these sounds";
91 PRINT"and is of the variety more commonly
92 PRINT"found in games machines.However,quite
93 PRINT"stunning results can be obtained which";
94 PRINT"are limited only by the users musical ability or imagination."
95 PRINT:PRINT"The object of this program is to fill
96 PRINT"the void left when the ORIC manual's
97 PRINT"sound section has been consulted."
98 PRINT:PRINT"You will be presented with a menu from";
99 PRINT"which you can select any command by pressing the appropriate number"
100 GOSUB5000
105 POKE619,20:POKE620,7:CLS
110 PLOT17,3,"MENU":PLOT17,4,"——"
120 PLOT7,7,17:PLOT8,7,"1. SOUND":PLOT17,7,20
125 PLOT7,10,17:PLOT8,10,"2. MUSIC":PLOT17,10,20
130 PLOT7,13,17:PLOT8,13,"3. PLAY":PLOT17,13,20
135 PLOT7,16,17:PLOT8,16,"4. DEMO":PLOT17,16,20
140 PLOT7,19,17:PLOT8,19,"5. GENERAL":PLOT20,19,20
142 PLOT7,22,17:PLOT8,22,"6. QUIT":PLOT17,22,20
145 A$=" PLEASE MAKE YOUR SELECTION ":PLOT0,26,12:FORX=1TOLEN(A$)
150 A=ASC(MID$(A$,X,1))+128:POKE49085+X,A:NEXT
155 GETR$:R=VAL(R$):IFR<10RR>6THEN155
160 ONR GOTO200,300,400,500,600,700
200 GOSUB5040:PAPER0
201 PRINTSPC(8)CHR$(27);"Q"CHR$(27)"GTHE SOUND COMMAND "CHR$(27)"P"
206 PRINT:PRINT" ";CHR$(27)"TSOUND Channel,Period,Volume";CHR$(27)"P"
207 PRINT:PRINT"Channel is a number between 1 - 6 and
208 PRINT"selects channels as follows:-"
209 PRINT:PRINT"1.Selects tone channel one."
210 PRINT"2.Selects tone channel two."
211 PRINT"3.Selects tone channel three."
212 PRINT"4.Routes noise generator to channel 1.";
213 PRINT"5.Routes noise generator to channel 2.";
214 PRINT"6.Routes noise geneSCRNator to channel 3.";
215 PRINT:PRINT"N.B.If the SOUND command is used in
216 PRINT"immediate mode then only channel one
217 PRINT"can be used without a PLAY command."
218 PRINT"Also the noise must be enabled by a
219 PRINT"PLAY command before SOUND 4-6 are used";
220 PRINT"SOUND 4-6 following the appropriate
221 PRINT"PLAY commands will produce noise or
222 PRINT"noise and tone(s) mixed"
223 DOKE621,48240:POKE623,22:GOSUB5000
224 PRINT"PERIOD is a number in the range:-
225 PRINT:PRINTSPC(7)"0 - 65535"
226 PRINT:PRINT"The number sets the pitch or frequency";
227 PRINT"for the selected channel.The higher
228 PRINT"the number,the lower the pitch is."
229 PRINT"4096 is the lowest pitch value and a
230 PRINT"number greater than this repeats the
231 PRINT"same series ie.4097 = 1."
232 PRINT"Some values (1-4) produce tones that
233 PRINT"are beyond our range of hearing,but
234 PRINT"they may excite your pets!!!
235 PRINT:PRINT"VOLUME is a number in the range 0 - 15";
236 PRINT:PRINT"This sets the loudness of the sound
237 PRINT"roduced. 1 = soft,15 = loud"

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238 PRINT"0 transfers volume to a subsequent
239 PRINT"PLAY command.
240 GOSUB5000:GOSUB5100
300 GOSUB5040:PAPER0
301 PRINTSPC(7)CHR$(27);"Q"CHR$(27)"6THE MUSIC COMMAND ";CHR$(27)"P"
306 PRINT:PRINT" "CHR$(27)"TMUSIC Channel,Octave,Note,Volume";CHR$(27);"P"
307 PRINT:PRINT"CHANNEL is a number = 1 - 3 and is
308 PRINT"used to select the appropriate channel"
309 PRINT"OCTAVE is a number = 0 - 7 and selects";
310 PRINT"in which octave the note is to be
311 PRINT"played, 0 being the lowest."
312 PRINT:PRINT"NOTE is a number = 1 - 12 and selects
313 PRINT"the note from within the chosen octave"
314 PRINT"1 = C 4 = D# 7 = F# 10 = A
315 PRINT"2 = C# 5 = E 8 = G 11 = A#
316 PRINT"3 = D 6 = F 9 = G# 12 = B
317 PRINT:PRINT"VOLUME is a number = 0 - 15"
318 PRINT"1 = soft 15 = loud
319 PRINT:PRINT"If volume = 0 then it is set by a
320 PRINT"subsequent PLAY command."
321 GOSUB5000:GOSUB5100
322 PRINT:PRINT"
350 REPEAT:UNTILKEY$="P"
400 GOSUB5040:PAPER0
401 PRINTSPC(8)CHR$(27);"Q"CHR$(27)"6THE PLAY COMMAND ";CHR$(27)"P"
406 PRINT:PRINT" "CHR$(27)"TPLAY Tone E,Noise E,Env M,Env P";CHR$(27)"P"
407 PRINT:PRINT"Tone E and Noise E are both channel
408 PRINT"selectors which are set according to
409 PRINT"the table below."
410 PRINT:PRINTSPC(7)"0 = No channels on"
411 PRINTSPC(7)"1 = Channel 1 on"
412 PRINTSPC(7)"2 = Channel 2 on"
413 PRINTSPC(7)"3 = Channel 1 + 2 on"
414 PRINTSPC(7)"4 = Channel 3 on"
415 PRINTSPC(7)"5 = Channel 1 + 3 on"
416 PRINTSPC(7)"6 = Channel 2 + 3 on"
417 PRINTSPC(7)"7 = Channel 1 + 2 + 3 on"
418 PRINT:PRINT"Env M refers to one of seven possible
419 PRINT"envelope shapes and is therefore a
420 PRINT"number in the range 1 - 7"
421 DOKE621,48240:POKE623,22:GOSUB5000
422 PRINT"Env P is a number in the range:-
423 PRINT:PRINTSPC(7)"0 - 65535
424 PRINT:PRINT"This last parameter is used to set the";
425 PRINT"length of certain portions of the
426 PRINT"envelope mode selected and it's effect";
427 PRINT"varies from mode to mode.
428 PRINT:PRINT"Mode Portion under control"
429 PRINT:PRINT" 1 Decay from immediate attack"
430 PRINT" 2 Attack time to immediate decay"
431 PRINT" 3 As 1 only continuous"
432 PRINT" 4 Attack and Decay continuous"
433 PRINT" 5 Initial decay from peak then continuous
434 PRINT" 6 Exponential Attack:immediate Decay continuous"
435 PRINT" 7 Attack to peak:continuous"
437 DOKE621,48240:POKE623,22:GOSUB5000
438 PRINT:PRINT"The PLAY command is the most versatile";
439 PRINT"of the three sound commands available
440 PRINT"In order to achieve the best effects
441 PRINT"it's use should be clearly understood.
442 PRINT"PLAY can be used prior to SOUND or
443 PRINT"MUSIC in order to set up the channels
444 PRINT"Eg PLAY7,0,0,0 will open all three of
445 PRINT"the tone channels.
446 PRINT"Likewise PLAY0,7,0,0 will route the
447 PRINT"noise to all the channels but no tones"

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448 PRINT"In both cases no sound will result
449 PRINT"because the other parameters are 0
450 PRINT"However,any play command issued after
451 PRINT"the execution of another which was
452 PRINT"not terminated with PLAY0,0,0,0 is
453 PRINT"liable to produce unwanted results
455 GOSUB5000:GOSUB5100
500 CLS:A$=" SOUND DEMONSTRATION RUNNING":POKE618,(PEEK(618)OR8)
501 FORL=1TOLEN(A$):A=ASC(MID$(A$,L,1))+128:PLOT4+L,26,A:NEXTL
502 E$=" THE SOUND COMMAND ":PLOT5,7,E$
503 PLAY7,0,0,0:FORX=1TO400:SOUND1,X,10:SOUND2,X+10,10:SOUND3,X+30,10:NEXT
504 WAIT200:PLAY0,0,0,0
505 PLAY7,0,0,0:FORN=1TO25:FORY=1TO3
506 A=RND(1)*100+1:SOUNDY,A,10:WAIT10:NEXTY,N:PLAY0,0,0,0
507 PLAY0,1,0,0:FORN=1TO31:SOUND4,N,15:WAIT100:NEXT:PLAY0,0,0,0
508 PLAY1,0,0,0:FORN1=1TO20:SOUND1,800,15:WAIT40:SOUND1,400,15:WAIT40:NEXT
509 PLAY0,0,0,0:WAIT100
510 PLAY7,4,0,0:FORN=1TO25:FORY=1TO31
511 SOUND1,4*N,10:SOUND2,3000,14
512 IFINT(Y/2)=Y/2THENSOUND6,Y,14ELSE SOUND3,N,12
513 NEXTY,N:EXPLODE:PLAY0,7,1,15000:WAIT600:PLAY0,0,0,0
514 E$="
515 FORX=1TOLEN(E$):PLOT4+X,7,ASC(MID$(E$,X,1))+128:NEXT
516 E$=" THE MUSIC COMMAND ":PLOT5,14,E$
517 WAIT100:PLAY7,0,0,0:MUSIC1,3,1,10:MUSIC2,3,5,10:MUSIC3,3,8,10
518 WAIT200:MUSIC1,2,12,10:MUSIC2,3,3,10:MUSIC3,3,8,10
519 WAIT200:MUSIC1,3,3,10:MUSIC2,3,6,10:MUSIC3,3,10,10
520 WAIT200:MUSIC1,3,3,10:MUSIC2,3,6,10:MUSIC3,3,11,10
521 WAIT200:MUSIC1,3,1,10:MUSIC2,3,5,10:MUSIC3,3,10,10
525 WAIT200:MUSIC1,3,3,10:MUSIC2,3,6,10:MUSIC3,3,10,10
526 WAIT200:MUSIC1,2,12,10:MUSIC2,3,5,10:MUSIC3,3,8,10
528 WAIT200:FORX=1TO20:FORN=12TO1STEP-1
529 D=INT(RND(1)*6)+1:A=INT(RND(1)*12)+1
530 MUSIC1,3,N,10:MUSIC2,D,N,10:MUSIC3,D,N,10
531 NEXTN,X:WAIT200:E$="
532 FORX=1TOLEN(E$):PLOT4+X,14,ASC(MID$(E$,X,1))+128:NEXT
533 PLAY0,0,0,0:E$=" THE PLAY COMMAND ":PLOT5,21,E$
534 WAIT100:PLAY7,0,0,0:MUSIC1,1,1,0:MUSIC2,2,5,0:MUSIC3,4,8,0
535 FORX=1TO10:PLAY7,0,1,5000:WAIT200:NEXT
536 FORX=1TO3:A(X)=RND(1)*500:NEXT:SOUND1,A(1),0:SOUND1,A(2),0:SOUND3,A(3),0
537 PLAY7,1,4,4000:WAIT1000:PLAY0,0,0,0
538 N=100:REPEAT:SOUND5,1,0:SOUND4,2,0:PLAY0,3,6,300:WAIT40:N=N-1
539 IFN/5=15ORN/5=10ORN/5=5THENMUSIC3,4,9,0:PLAY4,3,6,300:WAIT40
540 PLAY0,3,6,300:UNTILN=0:PLAY0,0,0,0
541 FORO=7TO1STEP-1:FORN=12TO1STEP-1:MUSIC1,D,N,0:PLAY1,0,1,800:NEXTN,0
542 E$="
543 FORX=1TOLEN(E$):PLOT4+X,21,ASC(MID$(E$,X,1))+128:NEXT
544 FORX=0TO38:PLOTX,26,32:NEXT:CLS:GOSUB5000:GOSUB5100
600 GOSUB5040:PAPER0:PRINT" "CHR$(27)"Q"CHR$(27)"GENERAL INFORMATION"
601 PRINT:PRINT"The sound chip can generate three
602 PRINT"tones simultaneously and or noise .
603 PRINT"The tones are simple square waves the
604 PRINT"frequency of which ranges from a few
605 PRINT"cycles per second to approx 66Khz or
606 PRINT"66 thousand cycles /second.By using
607 PRINT"the sound command we can utilise the
608 PRINT"whole frequency range of the chip in
609 PRINT"4096 steps.However the sound command
610 PRINT"parameters do not allow the frequency
611 PRINT"to be specified so that in coincides
612 PRINT"with the musical scale,and so we are
613 PRINT"provided with another command music.
614 PRINT"Music allows the frequency of any or
615 PRINT"all of the tone channels to be set to
616 PRINT"the correct musical intervals over a
617 PRINT"seven octave range."

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618 PRINT:PRINT"Noise is by definition a series of
619 PRINT"random frequencies at varying amplitude";
620 PRINT"covering the audio spectrum.
621 DOKE621,48160:POKE623,24:GOSUB5000
622 PRINT"Noise is therefore termed aperiodic
623 PRINT"ie it has no steady period (frequency)
624 PRINT"The different tonal qualities of noise";
625 PRINT"are termed colours.White,Pink and Red
626 PRINT"being three examples.Oric is very
627 PRINT"generous in providing 32 different
628 PRINT"tonal qualities of noise.Noise and
629 PRINT"tones both musical-non musical can be
630 PRINT"combined to provide a large variety of";
631 PRINT"sound effects."
632 PRINT:PRINT"Enter the play command.
633 PRINT:PRINT"The play command can be thought of as
634 PRINT"a switching device selecting the 3
635 PRINT"channels and noise turning them on
636 PRINT"and off.Without this command only one
637 PRINT"channel would be useable.The most used";
638 PRINT"play command is PLAY0,0,0,0 which
639 PRINT"turns everything off
640 GOSUB5000
641 PRINT"Four predefined sound effects can be
642 PRINT"accessed,these being:-
643 PRINT:PRINTSPC(6)"1.PING (typewriter bell)
644 PRINTSPC(6)"2.ZAP (laser fire)
645 PRINTSPC(6)"3.SHOOT (gunshot)
646 PRINTSPC(6)"4.EXPLODE (explosion)
647 PRINT:PRINT"In addition to this are two different
648 PRINT"sounding keyclicks,one for the CTRL
649 PRINT"key and one for any other key press.
650 PRINT"These two sounds are generated using
651 PRINT"tone channel one only.Any Sound,Play
652 PRINT"or Music command once interpreted and
653 PRINT"running does not interfere with the
654 PRINT"program that is presently being run
655 PRINT"except for ZAP.This is because the
656 PRINT"processor is required to continually
657 PRINT"update the sound registers.Also Zap
658 PRINT"is the only predefined sound that we
659 PRINT"can chain ie ZAP:ZAP:ZAP without the
660 PRINT"use of a wait statement.":GOSUB5000
661 PRINT"When using any of the sound commands
662 PRINT"it is always advisable to turn off the
663 PRINT"the keyclick(s).Failure to do this is
664 PRINT"likely to interfere with the sound if
665 PRINT"any input from the keyboard is needed
666 PRINT"during the course of the program
667 PRINT:PRINT"The sound chip can be controlled from
668 PRINT"a machine code program by using the
669 PRINT"parameter storage area to hold the
670 PRINT"data or by creating a table and then
671 PRINT"jumping to the appropriate rom routine
672 GOSUB5000:GOSUB5100
700 DOKE621,48000:POKE623,27:CLS:PAPER0:INK7:GOTO4999
4999 END
5000 PLOT0,26,12:PLOT1,26,4:A$="PRESS SPACE TO CONTINUE":PLOT8,26,A$:REPEAT
5005 A=INT(RND(1)*7)+1:B=(23-16)*RND(1)+16
5010 IF INT(B)=INT(A) THEN 5005
5020 POKE48040,INT(B):POKE48041,A
5030 UNTILKEY$=" ":PAPER0:PLOT0,0,1
5040 FORX=0TO38:PLOTX,26,32:NEXT
5050 PRINTCHR$(30):FORX=1TOPEEK(623):PRINTCHR$(11);:NEXT:RETURN
5100 DOKE621,48080:POKE623,24:POP:GOTO105

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ORIC SUPPORTED HEALTH CARE

Ales Satanek M.D.

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The sophisticated methods of medical treatment generate a constantly increasing flow of data. At the same time the urgent need for more rapid processing and evaluation of the data is making increasing demands on the physician. Effective and efficient treatment calls for accurate and immediately accessible information. The introduction of modern data techniques releases highly qualified staff from routine tasks, thus leaving more time for personal attention to the patient. Manually maintained card indexes inevitably contain errors of mis-filing and duplication. The future trend is the turn to computers in order to help eliminate the mistakes.

The presented program compiled for the 48K Oric supports a medical record. The entered data are stored in the memory where they can easily be removed to tape. The searching routine offers a possibility to get a patient record even when an incomplete name is entered. In addition to this, there is a possibility to look for a certain diagnosis. The program then lists all patient records which contain the entered diagnosis. The deployed memory range for data storage is located between the addresses 20000 and 30000 (Dec.) which is enough space for daily requirements.

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```
10 GOTO 1000
12 REM PATIENT RECORDS
15 REM BY ALES SATANEK, M.D. 1984
30 A=LEN(A$)
50 FOR B=1 TO A
60 B$=MID$(A$,B,1)
80 C=ASC(B$)
100 POKEM,C
120 M=M+1
130 NEXT B;POKEM,34:M=M+1
140 IF M>30000 THEN PRINT"MEMORY FILLED"
145 RETURN
150 M=20000
151 CLS
152 PRINT"ENTER (1) if you are seeking for a NAME or (2) for DIAGNOSIS"
153 INPUT N:IF N<1 OR N>2 THEN 153
154 PRINT
155 ON N GOTO 160,705
160 INPUT "SEARCH NAME:";K$
170 K=LEN(K$)
180 GOSUB 600
260 IF K$=S$ THEN 270 ELSE 370
270 M=M-K
?80 X=PEEK(M)
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```

290 IF X=34 THEN 350
300 IF X=42 THEN 450
310 X$=CHR$(X)
320 Y$=Y$+X$
330 M=M+1
340 GOTO 280
350 PRINT:PRINT Y$
360 S$="" :GOTO400
370 S$="":M=M+1
380 X=PEEK(M)
390 IF X=34 THEN 400
391 IF X=42 THEN 450
400 M=M+1
410 GOSUB 600
420 GOTO260
450 IF Y$= "" THEN PRINT"NOT FOUND":END
451 PRINT"END ":END
600 FOR I=1 TO K
610 F=PEEK(M)
615 IF F=42 THEN 450
620 M=M+1
630 T$=CHR$(F)
640 S$=S$+T$
650 NEXT
670 RETURN
705 INPUT"SEARCH DIAGNOSIS: ";K$
710 F=PEEK(M)
720 IF F=42 AND Y$="" THEN PRINT" THE SEARCHED DIAGNOSIS IS NOT INCLUDED":END
721 IF F=42 THEN END
730 IF F=34 THEN 780
740 IF F=32 THEN 780
750 F$=CHR$(F)
760 G$=G$+F$
770 M=M+1:GOTO 710
780 IF K$=G$ THEN Z=M:GOTO800
785 G$=""
790 M=M+1:GOTO710
800 M=M-1
810 P=PEEK(M)
820 IF P=34 THEN M=M+1:GOTO850
830 IF M=20000 THEN GOTO 850
840 GOTO 800
850 Y$=""
860 X=PEEK(M)
870 IF X=34 THEN 930
880 IF X=42 THEN 451
890 X$=CHR$(X)
900 Y$=Y$+X$
910 M=M+1
920 GOTO 860
930 PRINT:PRINT Y$
940 M=Z+1:G$="":GOTO 710
1000 CLS:PRINT"PATIENT RECORD":PRINT
1010 PRINT"Enter (1) for data input or (2) for searching data";
1020 INPUT M: IF M<1 OR M>2 THEN 1020
1030 ON M GOTO 1050,150
1050 PRINT:PRINT"Enter '/' to terminate data input"
1055 PRINT"Note: each word must be seperated by space":PRINT
1060 M=20000
1070 INPUT"Data: ";A$: IF A$="/" THEN GOTO1100
1080 GOSUB 30
1090 GOTO 1070
1100 POKEM,42:PRINT:PRINT"DATA LOADED"

```

ORIC SHOWING OFF AGAIN

Doppel-Ganger

~~~~~

The Original Oric Showoff was designed to explore the features of the Oric-1, but recently I decided that as I had learnt much more about this machine, I would write a sequel.

I've seen the flashy machine code demo put out for the Atmos, but we want to show people what can be done with a little knowledge in good oldfashioned Basic, and here it is, fully compatible with both Roms (Oric-1 and Atmos)

See sine waves in three different colours on the screen at the same time, hear music in wonderful three part harmony, see a teletext - prestel type screen in living colour, see background attributes as you've never seen them before, and the climax, a golden goblet drawn (Before your very eyes!) in wonderful Three-D!

Roll up, roll up for the wonderful all basic no trickery multi-coloured Oric show! (And by removing the CALL # E6CA and CALL # E804 statements it will run on the Atmos too!)

N.B. Remember that you must substitute a pounds sign for the in the listing.

~~~~~

```
1 REM *****
2 REM *
3 REM * Showing Off Again !!! *
4 REM *
5 REM * with Dopppe-Ganger *
6 REM *
7 REM *****
8 REM * (C) 1984 *
9 REM *****
10 REM These programs are valuable because routines developed here can be used
11 REM elsewhere. By studying the listing routines may be borrowed for other
12 REM programs or adapted to meet specific needs. A lot can be learnt this
13 REM way for many. If this program is too long, then it's available on tape
19 HIMEM #96FF
20 REM ORIC SHOW-OFF PART TWO
30 REMEMBER THE ORIGINAL ORIC SHOWOFF?
40 REMARKABLY ENOUGH THIS IS THE SEQUEL... WRITTEN BY THE DOPPEL-GANGER
45 REMEMBER TO USE ? FOR PRINT, OR YOU WILL FIND SOME LINES TOO LONG..
50 PAPER0:INK7:HIRES:POKE618,10:X=18:Y=80
55 CURSET12,10,3:FILL70,1,1:CURSET88,10,3:FILL70,1,2:CURSET164,10,3:FILL70,1,4
56 DUM$="WELCOME!":XP=102:YP=2:GOSUB6000
60 REPEAT:X=X+1:Y=Y-1
70 CURSETX,Y,3
80 DRAW0,-60,1:DRAW60,0,1:DRAW0,60,1:DRAW-60,0,1:CURMOV15,-15,3:DRAW0,-30,1
85 DRAW30,0,1:DRAW0,30,1:DRAW-30,0,1
90 CURSETX,Y,3:CURMOV76,0,3
100 DRAW0,-60,1:DRAW20,0,1:DRAW0,40,1:DRAW20,0,1:DRAW0,-40,1:DRAW20,0,1
101 DRAW0,60,1:DRAW-60,0,1
110 CURSETX,Y,3:CURMOV152,0,3
120 DRAW0,-60,1:DRAW60,0,1:DRAW0,20,1:DRAW-50,0,1:DRAW0,30,1:DRAW30,0,1
125 DRAW0,-10,1
130 DRAW-10,0,1:DRAW0,-10,1:DRAW30,0,1:DRAW0,30,1:DRAW-60,0,1
140 UNTILX=23
```

```

150 FORY=10T084
160 :COL=INT(RND(1)*7)+17:IFCOL=17ORCOL=18ORCOL=20THEN160
170 CURSET6,Y,3:FILL1,1,COL:NEXT
180 DUM$="ARE PLEASED TO PRESENT":XP=35:YP=100:GOSUB60000
190 DUM$="ORIC SHOWOFF II":XP=60:YP=120:GOSUB60000
200 CURSET55,128,3:DRAW(LEN(DUM$)*7)+5,0,1:
210 DUM$="If you liked Show-off I,":XP=15:YP=135:GOSUB60000
220 DUM$="then you'll Love this..":XP=15:YP=145:GOSUB60000
230 DUM$="All the things there would have":XP=15:YP=155:GOSUB60000
240 DUM$="been if I had known how to do":XP=15:YP=165:GOSUB60000
250 DUM$="them at the time. So sit back,":XP=15:YP=175:GOSUB60000
260 DUM$="Watch and Listen.":XP=15:YP=185:GOSUB60000
270 DUM$="Doppel-Ganger.":XP=140:YP=190:GOSUB60000
280 DUM$="SORCERER":ES=1:EP=7000:GOSUB61000
290 PRINT:PRINT"Are you sitting Comfortably?"SPC(28)"Then we'll Begin.":WAIT500
300 HIRES:POKE618,10:PRINT"Three different ways of plotting in"
310 PRINT"full colour, first horizontal sines"
320 PRINT"drawn with the DRAW command";:
330 IK=0:REPEAT:IK=IK+1
340 IFIK=1THENDEF FNA(Z)=99+80*SIN(6.28*(X-12)/113)
350 IFIK=2THENDEF FNA(Z)=99+80*SIN(PI*(X-12)/113)
360 IFIK=3THENDEF FNA(Z)=99+80*SIN(12.56*(X-12)/113)
370 CURSET11,99,3
390 FORX=13T0239:DRAWX-PEEK(537),FNA(Y)-PEEK(538),1
400 CURMOV-6,-3,3:FILL4,1,IK:CURMOV6,3,3
410 NEXT:UNTILIK=3
420 CLS:PRINT"As you can see, this is a bit patchy"
430 PRINT"and looks a mess.":WAIT1000
440 HIRES:POKE618,10:PRINT"Now we do it just plotting points"
450 PRINT"using the CURSET command."
460 IK=0:REPEAT:IK=IK+1
470 IFIK=1THENDEF FNA(Z)=99+80*SIN(6.28*(X-12)/113)
480 IFIK=2THENDEF FNA(Z)=99+80*SIN(PI*(X-12)/113)
490 IFIK=3THENDEF FNA(Z)=99+80*SIN(12.56*(X-12)/113)
500 FORX=13T0239:CURSETX,FNA(Z),1:CURMOV-6,0,3:FILL1,1,IK
510 NEXT:UNTILIK=3
520 CLS:PRINT"Better, less cluttered, but not Lines"
530 WAIT1000:HIRES:POKE618,10
540 PRINT"Now we do it Down the screen, watch."
550 IK=0:REPEAT:IK=IK+1
560 IFIK=1THENDEFFNA(Z)=120+100*SIN(6.28*Y/100)
570 IFIK=2THENDEFFNA(Z)=120+100*SIN(PI*Y/100)
580 IFIK=3THENDEFFNA(Z)=120+100*SIN(12.56*Y/100)
590 CURSET120,1,3
600 FORY=1T0199:DRAWFNA(Z)-PEEK(537),Y-PEEK(538),1
610 CURMOV-12,0,3:FILL1,1,IK:CURMOV12,0,3
620 NEXT:UNTILIK=3
630 CLS:PRINT"This Vertical method gives the best results of all..":WAIT1000
640 HIRES:POKE618,10:DUM$="If you really must have":XP=10:YP=2:GOSUB60000
650 DUM$="Different sines (Or some lines)":XP=10:YP=11:GOSUB60000
660 DUM$="on the screen then the best way":XP=10:YP=180:GOSUB60000
665 DUM$="to tell which one is which":XP=10:YP=190:GOSUB60000
670 PRINT"is to pattern them. One line a fill."
680 PRINT"line, one Dotted, and one Dashed. Like this.:"
690 PT=0:REPEAT:PT=PT+1
700 IFPT=1THENPATTERN255:DEFFNA(Z)=99+80*SIN(6.28*X/120)
710 IFPT=2THENPATTERN170:DEFFNA(Z)=99+80*SIN(PI*X/120)
720 IFPT=3THENPATTERN240:DEFFNA(Z)=99+80*SIN(12.56*X/120)
730 CURSET0,100,3
740 :FORX=1T0239STEP6:DRAWX-PEEK(537),FNA(Z)-PEEK(538),1:NEXT:UNTILPT=3
750 WAIT1000
760 HIRES:POKE618,10:PRINT"And while we're still on Sinewaves, Try this..."
770 PT=0:REPEAT:PT=PT+1
780 IFPT=1THENPATTERN255:DEFFNA(Z)=99+80*SIN(6.28*X/120)
790 IFPT=2THENPATTERN170:DEFFNA(Z)=99+80*SIN(PI*X/120)
800 IFPT=3THENPATTERN240:DEFFNA(Z)=99+80*SIN(12.56*X/120)

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810 FORX=1TO239
820 CURSETX,199,3:DRAW0,FNA(Z)-PEEK(538),2
830 NEXT:UNTILPT=3
840 CLS:PRINT"Not too bad....":WAIT1000
850 DATASORCERER,8,3,4,3,4,1,3
860 DATAB,3,4,3,4,1,3,8,3,4,3,4,1,1
870 DATA12,3,8,3,8,1,4
880 DATA11,3,8,3,6,1,1,10,3,6,3,6,1,2,8,3,8,3,6,1,.5,6,3,6,3,6,1,.5
890 DATA4,3,1,3,1,1,.5,3,3,3,3,1,1,.5,1,3,1,3,1,1,1,1,3,1,3,1,1,2
900 DATA11,3,6,3,6,1,1,10,3,6,3,1,1,2,8,3,8,3,1,1,.5,6,3,6,3,1,1,.5
910 DATA4,3,1,3,1,1,.5,3,3,3,3,1,1,.5,1,3,1,3,1,1,3
920 DATA11,3,6,3,6,1,1,10,3,6,3,6,1,2,8,3,8,3,6,1,.5,6,3,6,3,6,1,.5
930 DATA4,3,1,3,1,1,.5,3,3,3,3,1,1,.5,1,3,1,3,1,1,1,1,3,1,3,1,1,2
940 DATA4,3,12,2,4,1,1,6,3,1,3,6,1,2,4,3,12,2,4,1,.5,3,3,3,3,3,1,.5
950 DATA1,3,8,2,1,1,4
970 DATA11,3,8,3,6,1,1,10,3,6,3,6,1,2,8,3,8,3,6,1,.5,6,3,6,3,6,1,.5
980 DATA4,3,1,3,1,1,.5,3,3,3,3,1,1,.5,1,3,1,3,1,1,1,1,3,1,3,1,1,2
990 DATA11,3,6,3,6,1,1,10,3,6,3,1,1,2,8,3,8,3,1,1,.5,6,3,6,3,1,1,.5
1000 DATA4,3,1,3,1,1,.5,3,3,3,3,1,1,.5,1,3,1,3,1,1,3
1010 DATA11,3,6,3,6,1,1,10,3,6,3,6,1,2,8,3,8,3,6,1,.5,6,3,6,3,6,1,.5
1020 DATA4,3,1,3,1,1,.5,3,3,3,3,1,1,.5,1,3,1,3,1,1,1,1,3,1,3,1,1,2
1030 DATA4,3,12,2,4,1,1,6,3,1,3,6,1,2,4,3,12,2,4,1,.5,3,3,3,3,3,1,.5
1040 DATA1,3,8,2,1,1,4,0,0,0,0,0,0,0
1050 HIRES:POKE618,10:PRINT"Of course the simplest way to produce"
1060 PRINT"multi-colour displays is like this:-"
1070 FORY=0TO199:CURSET6,Y,0:FILL1,1,INT(RND(1)*7)+1:NEXT:EXPLODE
1080 FORD8=1TOINT(RND(1)*10)+10
1090 X=INT(RND(1)*225)+13:Y=INT(RND(1)*200):R=INT(RND(1)*70)+1:Z=(RND(1)+.2)
1100 S=INT(RND(1)*3)+2:ST=S/2
1110 PATTERNINT(RND(1)*127)+127
1120 RS=R*R
1130 FORX1=X-RTOX+RSTEPST
1140 IFX1<13THEN1220
1150 IFX1>239THENX1=X+R:GOTO1220
1160 Y1=Z*SQR(RS-(X1-X)*(X1-X))
1170 YT=Y+Y1
1180 IFYT<0THENYT=0
1190 IFYT>199THENYT=199
1200 CURSETX1,YT,2:Y1=-Y1:IFY+Y1=YTTHEN1220
1210 YT=Y+Y1:IFYT<0THENYT=0
1215 IFYT>199THENYT=199
1216 DRAWX1-PEEK(537),YT-PEEK(538),2
1220 NEXTX1
1230 NEXTD8
1260 WAIT500:CURSET12,0,3:FILL200,38,64
1270 CLS:PRINT"By using this sequence of commands:-"
1280 PRINT"'CURSET12,0,3:FILL200,38,64'"
1290 PRINT"you leave the Attributes intact.!!";
1300 PATTERN255:CALL#E6CA
1310 H=226:V=189
1320 DUM$="This pattern takes time to draw":XP=13:YP=190:GOSUB60000
1330 X1=H/2:X2=X1*X1:Y1=V/2:Y2=V/4
1340 FORX=0TOX1
1350 X4=X*X:M=-Y1
1360 A=SQR(X2-X4)
1370 FORI=-ATOASTEPV/20
1375 R=SQR(X4+I*I)/X1
1380 F=(R-1)*SIN(R*12)
1390 Y=I/5+F*Y2
1400 IFY<=MTHEN1420
1405 M=Y:Y=Y1-Y
1410 CURSET(X1-X)+13,Y,1:CURSET(X1+X)+13,Y,1
1420 NEXTI,X:CALL#EB04
1430 WAIT1000
1440 TEXT:POKE618,10:PRINTCHR$(4)

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1460 PRINT "CHR$(27)"Jof characters, Ordinary, like this":PRINT:PRINT:PRINT
1470 PRINT "CHR$(27)"J and Alternative"CHR$(27)"OLIKE THIS":PRINT:PRINT:PRINTCHR$(4)
1480 DUM$="YOU CAN ALSO HAVE REVERSED VIDEO":D2$=""
1490 FORX=1TOLEN(DUM$):D2$=D2$+CHR$(ASC(MID$(DUM$,X,1))OR128):NEXT
1500 PLOT2,13,CHR$(10)+D2$:PLOT2,14,CHR$(10)+D2$
1510 DUM$="USING THE PLOT COMMAND AND A STRING":D2$=""
1520 FORX=1TOLEN(DUM$):D2$=D2$+CHR$(ASC(MID$(DUM$,X,1))OR128):NEXT
1530 PLOT2,17,CHR$(10)+D2$:PLOT2,18,CHR$(10)+D2$
1540 DUM$="OF CHARACTERS WITH THE TOP BIT SET.":D2$=""
1550 FORX=1TOLEN(DUM$):D2$=D2$+CHR$(ASC(MID$(DUM$,X,1))OR128):NEXT
1560 PLOT2,21,CHR$(10)+D2$:PLOT2,22,CHR$(10)+D2$
1570 FORIK=0TO7:PP=7-IK:INKIK:PAPERPP:ZAP:WAIT100:NEXT:WAIT250
1580 HIRES:POKE618,10
1590 FORY=0TO199:FILL1,1,INT(RND(1)*7)+1:NEXT:ZAP
1600 FORA=1TO6STEP.1
1620 CURSET120,60,3.
1630 S=A*12
1640 X=S*SIN(A)
1650 Y=S*ICOS(A)
1660 S=INT(S):X=INT(X):Y=INT(Y)
1670 CURSET12,0,3:FILL200,38,64:CURSET120,40,3:CURMOVX,S,3
1680 DRAW-X,-Y,1:DRAW-X,Y,1:DRAWX,Y,1:DRAWX,-Y,1:DRAWY,X,1:DRAW-X,-Y,1
1690 DRAW-Y,-X,1:CURMOVY,X,3:DRAW-X,Y,1:DRAW-Y,-X,1:CURMOVY,X,3
1700 DRAWX,Y,1:DRAW-Y,-X,1:CURMOVY,X,3:DRAWX,-Y,1:WAIT8:NEXT
1705 WAIT500:CURSET0,0,3:FILL200,40,64
1710 TEXT:CLS:POKE618,10:PRINTCHR$(4)
1720 PRINTCHR$(27)"JThe Oric has a Graphics mode ":PRINT:PRINT:PRINT
1730 PRINTCHR$(27)"J(LORES1) which is compatible with":PRINT:PRINT:PRINT
1740 PRINTCHR$(27)"Jthe 'Chunky' block graphics used":PRINT:PRINT:PRINT
1750 PRINTCHR$(27)"Jby Prestel, and Teletext services":PRINT:PRINT:PRINT
1760 PRINTCHR$(27)"JCefax and Oracle. If you are":PRINT:PRINT:PRINT
1770 PRINTCHR$(27)"Jfamiliar with these then the sight":PRINT:PRINT:PRINT
1780 PRINTCHR$(27)"Jyou are about to see is nothing new"CHR$(4)
1790 FORA=#BB00TO#BB7F:IFPEEK(A)=240THENPOKEA,56
1800 IFPEEK(A)=15THENPOKEA,7
1810 NEXT:REMLINES1790-1810 CORRECT ALTERNATIVE CHR.SET.
1820 CLS:LORES1
1830 PRINT "CHR$(27)"S"SPC(36);
1840 PRINT "CHR$(27)"S"CHR$(27)"D ___T ^ ";
1850 PRINT "CHR$(27)"S"CHR$(27)"D ___ ?0 ?M PP _\ :/5 +TX' (/ _/! ";
1860 PRINT "CHR$(27)"S"CHR$(27)"D ___ ? J^ ]> ## _ M>B X'MO _/\ ";
1870 PRINT "CHR$(27)"S"CHR$(27)"D 5 !Z% ";
1880 PRINT "CHR$(27)"S"CHR$(27)"D ,,,,,,,,,,,,,,,,,,,,,,,,,, ?3 ";
1890 PRINT "CHR$(27)"S"CHR$(27)"D #! ";
1900 DUM$="DOPPEL-TEL 1st April 1984 13:00"
1920 FORX=1TOLEN(DUM$):POKE48002+X,ASC(MID$(DUM$,X,1)):NEXT
1930 PRINT:PRINTCHR$(27)"H Hello there, and Welcome to Dop-fax"
1940 PRINT
1950 PRINT "CHR$(27)"T"SPC(36);
1960 PRINT "CHR$(27)"T"CHR$(27)"A ^_ ] _ _ ^// ";
1970 PRINT "CHR$(27)"T"CHR$(27)"A _ _ _ _ $ _ ";
1980 PRINT "CHR$(27)"T"CHR$(27)"A 0_? 0_? 0_? \ ";
1990 PRINT "CHR$(27)"T"SPC(36);
2000 PRINT "CHR$(27)"T"CHR$(27)"B ___ ?0 WE WS _/ ?0 W5 ";
2010 PRINT "CHR$(27)"T"CHR$(27)"B _ J^ _ PZ _! ]^ 74 ";
2020 PRINT "CHR$(27)"T"SPC(36);
2030 PRINT "CHR$(27)"T"CHR$(27)"C"CHR$(27)"M ^_ ] _/ ] / / ^_ ] _ ";
2040 PRINT "CHR$(27)"T"CHR$(27)"C"CHR$(27)"M _ _ _ \? _ _ S / ";
2050 PRINT "CHR$(27)"T"CHR$(27)"C"CHR$(27)"M 0_? _K\ \ \ 0_? _ ";
2060 PRINT "CHR$(27)"T"SPC(36);
2065 PRINT
2070 PRINTCHR$(27)"H "CHR$(27)"U"CHR$(27)"DChunky Prestel-type Graphics page ";
2080 PRINTCHR$(27)"H "CHR$(27)"U"CHR$(27)"Din Oric Showoff II. ";
2090 WAIT1000:POKE48000,0:CLS:PRINTCHR$(4)
2100 PRINT "CHR$(27)"JDid you spot the Topical Joke???:PRINT:PRINT:PRINT
2110 PRINT "CHR$(27)"JBut that page should have given you":PRINT:PRINT:PRINT

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2120 PRINT "CHR$(27)"Ja Flavour of what may come if/when":PRINT:PRINT:PRINT
2130 PRINT "CHR$(27)"Jthe Modem is released.....":PRINT:PRINT:PRINT
2140 PRINT "CHR$(27)"JBut now let's go back to good old":PRINT:PRINT:PRINT
2150 PRINT "CHR$(27)"JHigh Resolution Graphics...":PRINT:PRINT:PRINT
2160 WAIT1000:HIRES:POKE618,10
2165 PRINTCHR$(4)
2166 PRINT "CHR$(27)"JPlotting in Background Attributes"CHR$(4)
2170 Z=0:REPEAT:CURSET0,0,0:FILL200,40,16
2175 IFZ=0THENDEFFNA(Z)=INT(ABS(SIN(X/20)+COS(Y/10))*3.5)+17
2176 IFZ=1THENDEFFNA(Z)=INT(ABS(EXP(X/30)+SIN(Y/20))*2.2)+17
2177 IFZ=2THENDEFFNA(Z)=INT(ABS(SIN(X/40)+SIN(Y/60))*4.5)+17
2180 FORX=0TO19:FORY=0TO99
2190 A=19+X:B=99+Y:C=19-X:D=99-Y
2200 N=FNA(Z)
2210 CURSETA#6,B,1:FILL1,1,N:CURSETC#6,D,1:FILL1,1,N
2220 CURSETA#6,D,1:FILL1,1,N:CURSETC#6,B,1:FILL1,1,N
2230 NEXT: NEXT
2250 DUM$="NOCTURNE":Z=Z+1:ES=5:EP=Z#10:GOSUB61000:WAIT500:UNTILZ=3
2255 CALL#E6CA
2260 CURSET0,0,0:FILL190,40,16
2261 CURSET0,190,0:FILL10,40,64
2262 CALL#E6CA
2265 DUM$="This will take some time":XP=15:YP=190:GOSUB60000
2270 H=234:V=198:X1=H/2:X2=X1#X1:Y1=V/2:Y2=V/4
2280 FORX=0TOX1:X4=X#X:L=-Y1
2290 A=SQR(X2-X4):FORI=-ATOASTEPV/10
2300 R=SQR(X4+I#I)/X1
2310 F=SIN(R#3)
2320 Y=I/5+F#Y2:IFY<=LTHEN2360
2330 L=Y:Y=Y1-Y
2340 IF(X1-X)/6=INT((X1-X)/6)THENCURSETX1-X,Y,3:FILL1,1,INT(RND(1)#7)+17
2350 IF(X1+X)/6=INT((X1+X)/6)THENCURSETX1+X,Y,3:FILL1,1,INT(RND(1)#7)+17
2360 NEXTI,X
2370 CALL#E804
2380 WAIT1000
2400 DATANOCTURNE,3,4,3,4,3,4,1
2410 DATA3,4,3,4,3,4,1
2420 DATAB,3,3,3,1,3,2,11,3,11,3,11,3,1
2430 DATA10,3,4,3,11,2,.5,11,3,4,3,11,2,.5,8,3,8,3,8,1,1,10,3,10,3,10,3,1
2440 DATA11,3,3,3,11,2,.5,1,4,3,3,11,2,.5,3,4,3,4,8,1,1,8,4,8,4,8,4,1
2450 DATA6,4,6,4,10,1,1,6,4,4,3,1,3,1,6,4,6,4,6,4,1
2460 DATA6,4,6,4,10,1,1,6,4,4,3,1,3,1,6,4,6,4,6,4,1
2470 DATA6,4,4,3,1,3,1,6,4,6,4,10,1,1,6,4,6,4,6,4,1
2480 DATA3,4,3,4,11,1,1,3,4,3,3,11,2,1,3,4,3,4,3,4,1
2490 DATA1,4,4,3,8,2,1,1,4,1,4,8,2,1,3,4,6,2,11,1,1
2500 DATA3,3,11,2,6,2,2,3,4,3,4,3,4,1
2510 DATA1,4,4,3,9,2,2,3,4,3,4,3,4,1
2520 DATA11,3,1,3,7,2,1,11,1,11,1,11,1,1,3,4,3,4,11,1,1
2530 DATA10,3,1,3,7,2,1,3,1,3,1,3,1,1,3,4,3,4,3,1,1
2540 DATAB,3,11,2,3,2,1,8,3,8,1,8,1,1,11,3,11,3,11,3,1
2550 DATA10,3,4,3,1,3,.5,11,3,4,3,1,3,.5,8,3,8,1,8,1,1,10,3,10,3,8,1,1
2560 DATAB,3,3,3,8,2,3,0,0,0,0,0,0,0
2570 DATAGOBLT,50,0,50,10,5,10,5,40,40,40,75,100,65,100,30,45,0,45
2600 HIRES:POKE618,10
2605 PRINT"Watch this then,it takes time to draw";CHR$(4);
2606 PRINT "CHR$(27)"J THE GOBLT"CHR$(4)
2610 DEFFNX(X)=((X+160)#.746875)-PEEK(537):REM ABSOLUTE PLOTTING
2620 DEFFNY(Y)=(199-((Y+50)#1.03645833))-PEEK(538)
2625 RESTORE:REPEAT:READA$:UNTILA$="GOBLT"
2630 FORQ=1TO9
2640 READX(Q),Y(Q)
2650 NEXTQ
2660 B=55
2670 INK3:CALL#E6CA
2680 ZAP
2690 FORC=1TO9

```

```

2700 A=1
2710 FORD=0T07.854STEP6.283/B
2720 IFA=1THENCURMOVFNX (X (C) *COS (D)),FNY (Y (C)+X (C) *.2*SIN (D)),1
2721 Q=FNX (X (C) *COS (D)):W=FNY (Y (C)+X (C) *.2*SIN (D))
2722 IFQ>-1ANDQ<1ANDW>-1ANDW<1THEN2730
2725 IFA=2THENDRAWFNX (X (C) *COS (D)),FNY (Y (C)+X (C) *.2*SIN (D)),1
2730 A=2
2740 IFC=1THENNEXTD,C
2750 CURMOVFNX (X (C-1) *COS (D)),FNY (Y (C-1)+X (C-1) *.2*SIN (D)),1
2751 Q=FNX (X (C) *COS (D)):W=FNY (Y (C)+X (C) *.2*SIN (D))
2752 IFQ>-1ANDQ<1ANDW>-1ANDW<1THEN2770
2760 DRAWFNX (X (C) *COS (D)),FNY (Y (C)+X (C) *.2*SIN (D)),1
2770 NEXTD,C:
2780 DUM$="Eat your heart out Tansoft":XP=30:YP=0:GOSUB60000:CALL#EB04
2790 DUM$="MINUET":ES=1:EP=7000:GOSUB61000
2800 DATAMINUET,12,3,8,3,8,3,.75,12,3,8,3,8,3,.75,1,4,10,3,10,3,.25
2810 DATA3,4,12,3,8,1,.75,2,4,11,3,8,1,.25,3,4,12,3,12,1,.75,1,4,10,3,12,1,.25
2815 DATA3,4,12,3,3,2,.75,1,4,10,3,3,2,.25
2820 DATA3,4,12,3,8,2,1,3,4,12,3,8,1,1,5,4,1,4,1,4,.75,12,3,9,3,9,3,.25
2830 DATA1,4,10,3,3,2,1,1,4,10,3,3,1,1,3,4,12,3,12,3,.75,10,3,7,3,7,3,.25
2840 DATA12,3,8,3,8,1,1,10,0,10,0,10,0,1,8,3,12,2,12,2,.75,10,3,3,3,3,3,.25
2850 DATA12,3,8,3,8,1,.75,11,3,7,3,8,1,.25,12,3,8,3,12,1,.75,11,3,7,3,12,1,.25
2855 DATA12,3,8,3,4,2,.75,11,3,7,3,4,2,.25
2890 DATA12,3,8,3,5,2,1,12,3,8,3,7,2,1,10,3,7,3,8,2,.5,8,3,5,3,8,2,.5
2900 DATAB,3,5,3,10,2,.5,7,3,3,3,10,2,.5,7,3,3,3,3,3,.5,10,3,7,3,5,3,.5
2905 DATAB,3,5,3,10,1,.5,5,3,2,3,10,1,.5,3,3,3,3,3,2,1,3,1,3,1,1
2906 DATA0,0,0,0,0,0
2910 WAIT1000
3000 HIRES:FILL200,40,16:PRINTCHR$(4)
3010 PRINT "CHR$(27)"J Another Showing Follows"CHR$(17)CHR$(4)
3015 Z=0:REPEAT
3020 X=INT (RND (1) *40):Y=INT (RND (1) *200)
3030 A=INT (RND (1) *100)+1:B=INT (RND (1) *20)+1
3040 IFX+B>40ORX+B<1THEN3020
3050 IFY+A>199ORY+A<1THEN3030
3060 COL=INT (RND (1) *7)+1
3070 SOUND1,Y*A,0:SOUND5,X*B,0:PLAY1,2,COL,(Y*X)+(A*B) *(COL/2)
3080 CURSETX*6,Y,3:FILLA,B,COL+16
3090 WAIT50:Z=Z+1:UNTILZ=100
4000 WAIT100:PLAY0,0,0,0:RUN
59997 END
59998 PING:PLAY1,0,3,750
59999 GOTO59999:REM #SUBR'S#
60000 CURSETXP,YP,3:FORZP=1TOLEN (DUM$):CHARASC (MID$ (DUM$,ZP,1)),0,1
60010 CURMOV7,0,3:NEXT:RETURN
61000 RESTORE:REPEAT:READA$:UNTILA$=DUM$:
61010 READN1,D1,N2,D2,N3,D3,D
61020 MUSIC1,D1,N1,0:MUSIC2,D2,N2,0:MUSIC3,D3,N3,0
61030 PLAY7,0,0,0
61040 REPEAT:READN1,D1,N2,D2,N3,D3,D:IFN1=0THEN61070
61050 MUSIC1,D1,N1,0:MUSIC2,D2,N2,12:MUSIC3,D3,N3,14:PLAY7,0,ES,EP
61060 WAITD*32
61070 UNTIL N1=0
61075 MUSIC1,3,1,1
61080 PLAY0,0,0,0:RETURN

```


ALLAPHONE DEMONSTRATION PACKAGE

```

2 REM * ALLOPHONE *
3 REM * DEMONSTRATION *
4 REM * PACKAGE *
5 REM * *
6 REM * JMB SOFTWARE 1984 *
7 REM * *
10 REM * ALLOPHONES *
20 E$=CHR$(27):D$=CHR$(4):Q$=CHR$(17):C$=CHR$(20):F$=CHR$(6):G$=">"
30 GOSUB200:PRINTC$Q$:GOSUB600:GOSUB300
39 REM * MENU *
40 CLS:PRINTSPC(30)"menu":PRINTE$"V"D$E$"J"E$"D ALLOPHONE CODES"D$
50 PRINT:PRINTE$"V"E$"A PAGE VOICE":PRINT
60 PRINT" 0 Silence":PRINT
70 PRINT" 1 Short Vowels":PRINT
80 PRINT" 2 Long Vowels":PRINT
90 PRINT" 3 R-Coloured Vowels":PRINT
100 PRINT" 4 Resonants":PRINT
110 PRINT" 5 Voiced Fricat":PRINT
120 PRINT" 6 Voiceless Fricat":PRINT
130 PRINT" 7 Voiced Stop Cons.":PRINT
140 PRINT" 8 Voiceless Stop Cons.":PRINT
150 PRINT" 9 Affricate & Nasal"
160 POKE#268,25:PRINT:PRINTE$"V"E$"L"E$"GEnter Page No.":
170 GETA$:IFA$="q"THENPRINTQ$C$:END
180 IFASC(A$)<48ORASC(A$)>57THEN170
190 A=1+VAL(A$):ONAGOTO1000,1100,1200,1300,1400,1500,1600,1700,1800,1900
198 END
199 REM * SET UP ARRAY *
200 DIMALX(10,10)
210 FORW=0TO9:FORX=0TO9
220 READALX(W,X)
230 NEXTX,W:RETURN
240 DATA0,1,2,3,4,0,0,0,0,12,7,26,30,23,15,24,0,0,0,19,20,6,5,22,31,53,32
250 DATA62,0,51,52,58,59,60,47,0,0,0,0,46,14,39,45,49,25,0,0,0,0,35,18,54,43
260 DATA38,0,0,0,0,0,40,29,55,37,27,57,48,0,0,0,28,63,21,33,36,61,34,0,0,0
270 DATA9,17,13,42,41,8,0,0,0,0,50,10,0,16,11,56,44,0,0,0
299 REM * OPENING REMARKS *
300 CLS:PRINTE$"U"
310 PRINTD$E$"U"E$"D"E$"JNOTES FOR THE USE OF THIS PROGRAMME"D$
320 PRINT:PRINTE$"U"E$">-----"
330 PRINT:PRINT" The programme is MENU driven and"
340 PRINT" provides a listing of all the "
350 PRINT" ALLOPHONES available with the Kenema"
360 PRINT" Associates Ltd. speech synthesiser,"
370 PRINT" together with their enunciation,"
380 PRINT" duration and CHR$ code."
390 PRINT:PRINT" To use the synthesiser with your"
400 PRINT" ORIC-1 or ATMOS, connect it to the"
410 PRINT" CENTRONICS parallel port via a 20 way";
420 PRINT" cable. Power the board with between"
430 PRINT" 9 and 12 volts dc."
440 PRINT
450 PRINT" To drive the board from your own"
460 PRINT" programmes, a command in the form of"
470 PRINT" LPRINTCHR$(#);:PRINTCHR$(11) "
480 PRINT" is required. # is the CHR$ code"
490 PRINT" given in this programme."
500 PRINT:PRINT:PRINTE$"V"E$"G"E$"LPress"E$"Hany key to continue"
510 GETA$:RETURN

```

```

599 REM * OPENING SEQUENCE *
600 CLS:INK1:PAPER0:PLOT15,9,"ALLOPHONE"
610 PLOT13,11,"DEMONSTRATION"
620 PLOT16,13,"PACKAGE"
630 PLOT10,17,"` JMB SOFTWARE 1984"
640 FORL=5T033STEP2:PLOTL,21,"*":NEXT
650 FORL=19T05STEP-2:PLOT33,L,"*":NEXT
660 FORL=31T05STEP-2:PLOTL,5,"*":NEXT
670 FORL=7T023STEP2:PLOT5,L,"*":NEXT
680 FORL=7T035STEP2:PLOTL,23,"*":NEXT
690 FORL=21T03STEP-2:PLOT35,L,"*":NEXT
700 FORL=33T03STEP-2:PLOTL,3,"*":NEXT
710 FORL=5T025STEP2:PLOT3,L,"*":NEXT
720 FORL=5T037STEP2:PLOTL,25,"*":NEXT
730 FORL=23T01STEP-2:PLOT37,L,"*":NEXT
740 FORL=35T01STEP-2:PLOTL,1,"*":NEXT
750 FORL=3T025STEP2:PLOT1,L,"*":NEXT
760 PING:WAIT1000:INK0:PAPER6:RETURN
899 REM * SCREEN FORMATS *
900 PRINTE$"V"D$E$"J"E$"D          ALLOPHONE  CODES"D$:PRINT:RETURN
910 PRINTE$"V"E$"H"E$"A  CODE      ENUNCIATION   PERIOD CHR$":PRINT:RETURN
998 END
999 REM * page 0 *
1000 CLS:PRINTSPC(30)"page 0":GOSUB900
1010 PRINTSPC(12)"(Silence)":PRINT:GOSUB910
1020 PRINT" /PA1/    PAUSE           10mS    0":PRINT
1025 PRINT" /PA2/    PAUSE           30mS    1":PRINT
1030 PRINT" /PA3/    PAUSE           50mS    2":PRINT
1035 PRINT" /PA4/    PAUSE          100mS    3":PRINT
1040 PRINT" /PA5/    PAUSE          200mS    4":PRINT
1050 IFP=1THENGOTO3010
1060 GOTO2000
1099 REM * page 1 *
1100 CLS:PRINTSPC(30)"page 1":GOSUB900
1110 PRINTSPC(10)"(Short Vowels)":PRINT:GOSUB910
1120 PRINT" */IH/    SiT             70mS    12":PRINT
1125 PRINT" */EH/    eND             70mS     7":PRINT
1130 PRINT" */AE/    HaT             120mS   26":PRINT
1135 PRINT" */UH/    Book            100mS   30":PRINT
1140 PRINT" */AD/    auGHT           100mS   23":PRINT
1145 PRINT" */AX/    SuCCCEED         70mS   15":PRINT
1150 PRINT" */AA/    HoT             100mS   24":PRINT
1160 PRINT" *-Multi call gives continuous sound"
1170 IFP=1THENGOTO3010
1180 GOTO2000
1199 REM * page 2 *
1200 CLS:PRINTSPC(30)"page 2":GOSUB900
1210 PRINTSPC(10)"(Long Vowels)":PRINT:GOSUB910
1220 PRINT" /IY/    See                250mS   19":PRINT
1225 PRINT" /EY/    BeiGE              280mS   20":PRINT
1230 PRINT" /AY/    SKy                 260mS    6":PRINT
1235 PRINT" /OY/    Boy                 420mS    5":PRINT
1240 PRINT" /UW1/  To                  100mS   22":PRINT
1245 PRINT" /UW2/  To                  260mS   31":PRINT
1250 PRINT" /OW/    Beau                 240mS   53":PRINT
1255 PRINT" /AW/    ouT                 370mS   32":PRINT
1260 PRINT" /EL/    SADDle              190mS   62":PRINT
1270 IFP=1THEN3010
1280 GOTO2000
1299 REM * page 3 *

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```

1300 CLS:PRINTSPC(30)"page 3":GOSUB900
1310 PRINTSPC(7)"(R-Coloured Vowels)":PRINT:GOSUB910
1320 PRINT" /ER1/ Fir 160mS 51":PRINT
1325 PRINT" /ER2/ Fir 300mS 52":PRINT
1330 PRINT" /OR/ STore 330mS 58":PRINT
1340 PRINT" /AR/ ALarM 290mS 59":PRINT
1345 PRINT" /YR/ CLear 350mS 60":PRINT
1350 PRINT" /XR/ REPair 360mS 47":PRINT
1360 IFP=1THEN3010
1370 GOTO2000
1399 REM * page 4 *
1400 CLS:PRINTSPC(30)"page 4":GOSUB900
1410 PRINTSPC(12)"(Resonants)":PRINT:GOSUB910
1420 PRINT" /WW/ wOOL 180mS 46":PRINT
1425 PRINT" /RR1/ rURAL 170mS 14":PRINT
1430 PRINT" /RR2/ BrAIN 120mS 39":PRINT
1435 PRINT" /LL/ lAKE 110mS 45":PRINT
1440 PRINT" /YY1/ yES 130mS 49":PRINT
1445 PRINT" /YY2/ yES 180mS 25":PRINT
1450 IFP=1THENGOTO3010
1460 GOTO2000
1499 REM * page 5 *
1500 CLS:PRINTSPC(30)"page 5":GOSUB900
1510 PRINTSPC(9)"(Voiced Fricat.)":PRINT:GOSUB910
1520 PRINT" /VV/ vEST 190mS 35":PRINT
1525 PRINT" /DH1/ thEY 290mS 18":PRINT
1530 PRINT" /DH2/ thIN 120mS 54":PRINT
1535 PRINT" /ZZ/ zOO 210mS 43":PRINT
1540 PRINT" /ZH/ AzURE 190mS 38":PRINT
1550 IFP=1THEN3010
1560 GOTO2000
1599 REM * page 6 *
1600 CLS:PRINTSPC(30)"page 6":GOSUB900
1610 PRINTSPC(7)"(Voiceless Fricat.)":PRINT:GOSUB910
1620 PRINT" */FF/ fOOd 150mS 40":PRINT
1625 PRINT" */TH/ thIN 180mS 29":PRINT
1630 PRINT" */SS/ vEsT 90mS 55":PRINT
1635 PRINT" /SH/ shIF 160mS 37":PRINT
1640 PRINT" /HH1/ hE 130mS 27":PRINT
1645 PRINT" /HH2/ hOE 180mS 57":PRINT
1650 PRINT" /WH/ whIG 200mS 48":PRINT
1655 PRINT" *-Multi call gives continuous sound"
1660 IFP=1THEN3010
1670 GOTO2000
1699 REM * page 7 *
1700 CLS:PRINTSPC(30)"page 7":GOSUB900
1710 PRINTSPC(7)"(Voiced Stop Cons.)":PRINT:GOSUB910
1720 PRINT" /BB1/ bUSINESS (soft) 50mS 28":PRINT
1725 PRINT" /BB2/ bUSINESS 50mS 63":PRINT
1730 PRINT" /DD1/ COULd 70mS 21":PRINT
1735 PRINT" /DD2/ dO 160mS 33":PRINT
1740 PRINT" /GG1/ gUEST 80mS 36":PRINT
1745 PRINT" /GG2/ gOT 50mS 61":PRINT
1750 PRINT" /GG3/ WIG 160mS 34":PRINT
1760 IFP=1THEN3010
1770 GOTO2000
1799 REM * page 8 *
1800 CLS:PRINTSPC(30)"page 8":GOSUB900
1810 PRINTSPC(6)"(Voiceless Stop Cons.)":PRINT:GOSUB910
1820 PRINT" /PP/ pOW 210mS 9":PRINT

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1825 PRINT" /TT1/ PART 100mS 17":PRINT
1830 PRINT" /TT2/ tD 140mS 13":PRINT
1835 PRINT" /KK1/ cAN'T 160mS 42":PRINT
1840 PRINT" /KK2/ SkY 190mS 41":PRINT
1845 PRINT" /KK3/ cOMB 120mS 8":PRINT
1850 IFP=1THEN3010
1860 GOTO2000
1899 REM * page 9 *
1900 CLS:PRINTSPC(30)"page 9":GOSUB900
1910 PRINTSPC(12)"(Affricate)":PRINT:GOSUB910
1920 PRINT" /CH/ chURCH 190mS 50":PRINT
1925 PRINT" /JH/ DODgE 140mS 10":PRINT
1930 PRINTSPC(14)"(Nasal)":PRINT
1935 PRINT" /MM/ mILK 180mS 16":PRINT
1940 PRINT" /NN1/ THIn 140mS 11":PRINT
1945 PRINT" /NN2/ No 190mS 56":PRINT
1950 PRINT" /NG/ AnCHOR 220mS 44":PRINT
1960 IFP=1THEN3010
1970 GOTO2000
2000 POKE#268,25:PRINT:PRINTE$"V"E$"D"E$"LPRESS"E$"HM for MENU, P for PLAY"
2010 GETA$: IFA$="q"THENPRINTQ$C$:END
2020 IFA$="p"THENP=1:GOSUB3000
2030 IFA$<>"m"THEN2010
2040 GOTO40
3000 CLS:ONAGOTO1010,1110,1210,1310,1410,1510,1610,1710,1810,1910
3010 POKE#268,23:PRINT:PRINTF$:
3015 PRINTE$"V"E$"H"E$"EPosition "E$"@>"E$"Gon line of sound"
3020 PRINTE$"V"E$"G"E$"LPRESS "E$"H"E$"@U"E$"Gfor UP,";
3025 PRINTE$"@D"E$"Gfor DOWN"
3030 PRINTE$"V"E$"@E$"H P"E$"Gfor PLAY,";
3035 PRINTE$"@M"E$"Gfor MENU"
3040 R=10:PLOT1,10,G$
3050 GETA$: IFA$="m"THENP=0:PRINTF$:GOTO40
3060 IFA$="u"THENGOSUB3100
3070 IFA$="d"THENGOSUB3120
3080 IFA$="p"THENGOSUB3200
3085 IFA$="q"THENPRINTQ$C$F$:END
3090 GOTO3050
3099 REM * MOVE POINTER ROUTINE *
3100 IFR-1>3THENPOKE#268,R:PRINT:PRINT" ":R=R-2:POKE#268,R:PRINT:PRINTG$
3110 RETURN
3120 IFR+1<23THENPOKE#268,R:PRINT:PRINT" ":R=R+2:POKE#268,R:PRINT:PRINTG$
3130 RETURN
3199 REM * PLAY SOUND ROUTINE *
3200 IF(R-4)/2<>INT((R-4)/2)THEN3220
3210 LPRINTCHR$(AL%(A-1,INT((R-4)/2)))CHR$(0);:PRINTCHR$(11)
3220 RETURN
9998 END
9999 REM * LLIST ROUTINE *
10000 E$=CHR$(27):POKE#31,93:CLS:PRINT:PRINT"Set paper to Top Of Form"
10010 PRINT:PRINT"Swich on PRINTER":PRINT:PRINT
10020 INPUT"ENTER form length 11 or 12 inch ";A$: IFA$="11"THEN10050
10030 IFA$<>"12"THEN10020
10040 LPRINTE$"C"CHR$(0)CHR$(12);
10050 LPRINTE$"1"E$"N"CHR$(12)E$"Q"CHR$(80);
10060 LPRINTCHR$(14)" A L L O P H O N E S":LPRINT:LPRINT:LPRINT
10070 CALL#E6CA:LLIST:LPRINTCHR$(7)CHR$(140):CALL#22B

```


MEMBERSHIP DATA BASE

Colin Coker

This program is designed to allow you to keep a record of people's name and addresses and would be very useful if you are the organiser of a club or some sort of group. You might also use it as an Address book to keep the names and addresses of your friends and relatives. Simply by changing the headings in certain places to your name, or the name of your club or group you may personalise it to suit your own needs. It allows the saving and loading of data to and from tape, the sorting of names and addresses into alphabetical order, and a printout of

all names and addresses for labelling envelopes etc. Firstly you create a file of members by entering their name, address and postcode. You may have up to a hundred names and addresses in one file. This may be added to or members deleted as required. Sorting will allow you to keep the lists in alphabetical order, and of course the save and load routines are a boon to the Oric owner. By modification to the Save and Load routines to use the Store and Recall commands the program will work with the Atmos.

```
0 PING
5 REM ORIC-1 MEMBERSHIP PROGRAM
6 REM BY COLIN COKER
10 REM*****
11 REM      MENU
12 REM*****
20 DIMN$(100),A1$(100),A2$(100),A3$(100),PC$(100)
22 N$(100)=" END"
25 CLS
28 PRINT:PRINT"      LINCO ADDRESS-BASE":FORZ=1TO5:PRINT:NEXTZ
30 PRINT"1. Create File"
40 PRINT"2. Alpha Sort"
50 PRINT"3. Add Member"
60 PRINT"4. Delete Member"
70 PRINT"5. Search"
80 PRINT"6. Output to Printer"
90 PRINT"7. Save File"
100 PRINT"8. Load File"
110 PRINT"9. End"
120 PRINT:PRINT:PRINT"ENTER OPTION REQUIRED"
130 GETZ$:IFVAL(Z$)>9THEN130
135 CLS
140 ONVAL(Z$)GOSUB1000,2000,3000,4000,5000,6000,7000,8000,200
150 GOTO25
200 REM*****
210 REM      END ROUTINE
220 REM*****
230 PRINT:PRINT:PRINT"NEW FILE SAVED ? ENTER Y/N"
240 GET Z$:IFZ$="N"THENRETURN
250 CLS:END
1000 REM*****
1010 REM      CREATE FILE
1020 REM*****
1040 PRINT:PRINT:PRINT"Each entry must consist of"
1050 PRINT:PRINT"NAME"
1060 PRINT"ADDRESS"
1070 PRINT"ADDRESS"
1080 PRINT"ADDRESS"
1090 PRINT"POST CODE"
1100 PRINT:PRINT:PRINT"Any blank line must have '*' entered"
```

```

1105 PRINT:PRINT:PRINT"Enter END to return to menu"
1110 PRINT:PRINT:PRINT:PRINT"Hit SPACE to continue"
1120 GETZ$:IFZ$<>" THENRETURN
1130 C=1
1140 CLS
1150 PRINT"ENTRY ";C;" of 100"
1160 PRINT:PRINT"NAME      ";;GOSUB10000
1170 N$(C)=KE$:PRINT
1180 IFN$(C)=" END"THENRETURN
1210 PRINT"ADDRESS  ";;GOSUB10000
1220 A1$(C)=KE$:PRINT
1230 PRINT"ADDRESS  ";;GOSUB10000
1240 A2$(C)=KE$:PRINT
1250 PRINT"ADDRESS  ";;GOSUB10000
1260 A3$(C)=KE$:PRINT
1270 PRINT"POSTCODE ";;GOSUB10000
1280 PC$(C)=KE$:PRINT
1290 PRINT:PRINT:PRINT"Correct ? Y/N"
1300 GETZ$:IFZ$="N"THEN1140
1310 C=C+1
1320 IFC=100THENPRINT:PRINT"FILE FULL Hit SPACE to return to menu":GETZ$:RETURN
1330 GOTO1140
2000 REM*****
2010 REM      ALPHA SORT
2020 REM*****
2025 CLS:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT"                SORTING"
2030 C=1
2040 IFN$(C)=" END"THENN=C-1:GOTO2060
2050 C=C+1:GOTO2040
2060 FORK=1TON-1
2070 FORL=K+1TON
2080 IFN$(L)>=N$(K) THEN2100
2090 Z$=N$(L):N$(L)=N$(K):N$(K)=Z$
2091 Z$=A1$(L):A1$(L)=A1$(K):A1$(K)=Z$
2092 Z$=A2$(L):A2$(L)=A2$(K):A2$(K)=Z$
2093 Z$=A3$(L):A3$(L)=A3$(K):A3$(K)=Z$
2094 Z$=PC$(L):PC$(L)=PC$(K):PC$(K)=Z$
2100 NEXTL
2110 NEXTK
2120 CLS:PRINT:PRINT:PRINT:PRINT"                FILE SORTED"
2130 PRINT:PRINT:PRINT:PRINT:PRINT"Hit SPACE to return to menu":GETZ$:RETURN
3000 REM*****
3010 REM      ADD MEMBER
3020 REM*****
3030 CLS
3040 C=1
3050 IFN$(C)=" END"THEN3070
3060 C=C+1:GOTO3050
3070 IFC=100THENPRINT"FILE FULL Hit SPACE to return to menu":GETZ$:RETURN
3080 N$(C+1)=" END"
3085 CLS
3090 PRINT"Entry ";C;" of 100"
3100 PRINT
3105 PRINT"NAME      ";;GOSUB10000
3110 N$(C)=KE$:PRINT
3120 PRINT"ADDRESS  ";;GOSUB10000
3130 A1$(C)=KE$:PRINT
3140 PRINT"ADDRESS  ";;GOSUB10000
3150 A2$(C)=KE$:PRINT
3160 PRINT"ADDRESS  ";;GOSUB10000
3170 A3$(C)=KE$:PRINT
3180 PRINT"POSTCODE ";;GOSUB10000
3190 PC$(C)=KE$:PRINT
3200 PRINT:PRINT:PRINT:PRINT"Correct ? Y/N"
3210 GETZ$:IFZ$="N"THEN3085
3220 RETURN

```

```

4000 REM*****
4010 REM      DELETE MEMBER
4020 REM*****
4030 CLS:PRINT:PRINT"ENTER MEMBER TO DELETE"
4040 PRINT:PRINT"Must be exactly as stored"
4050 PRINT:PRINT">  ";GOSUB10000
4060 Z$=KE$
4070 C=1
4080 IFN$(C)=Z$THEN4110
4090 IFN$(C)=" END"THENPRINT:PRINT:PRINTZ$;" not in file":WAIT200:RETURN
4100 C=C+1:GOTO4080
4110 N$(C)=N$(C+1):A1$(C)=A1$(C+1):A2$(C)=A2$(C+1):A3$(C)=A3$(C+1)
4120 PC$(C)=PC$(C+1)
4130 C=C+1:IFC=100THENCLS:PRINT:PRINTZ$;" deleted":WAIT200:RETURN
4140 GOTO4110
5000 REM*****
5010 REM      SEARCH
5020 REM*****
5030 C=1
5040 CLS
5050 PRINT:PRINT:PRINT"ENTER GROUP TO FIND IN NAME FILE"
5060 PRINT:GOSUB10000
5070 GP$=KE$
5080 L=LEN(GP$)
5085 IFN$(C)=" END"THEN RETURN
5090 FORK=1TO(LEN(N$(C))-L+1)
5100 IFGP$=MID$(N$(C),K,L)THEN5130
5110 NEXTK
5120 C=C+1:GOTO5085
5130 CLS
5140 PRINT:PRINT"NAME      ";N$(C)
5150 PRINT"ADDRESS  ";A1$(C)
5160 PRINT"          ";A2$(C)
5170 PRINT"          ";A3$(C)
5180 PRINT"          ";PC$(C)
5190 PRINT:PRINT:PRINT:PRINT"Hit SPACE to continue search":GETZ$:C=C+1:GOTO5085
6000 REM*****
6010 REM      OUTPUT TO PRINTER
6020 REM*****
6030 CLS:FORZ=1TO5:PRINT:NEXTZ
6040 PRINT"1. OUTPUT MEMBERSHIP LIST"
6050 PRINT
6060 PRINT"2. OUTPUT LABELS"
6070 FORZ=1TO5:PRINT:NEXTZ
6080 PRINT"ENTER OPTION REQUIRED"
6090 GETZ$:IFVAL(Z$)>2THEN6090
6095 CLS:ONVAL(Z$)GOTO9000,9500
6100 RETURN
7000 REM*****
7010 REM      SAVE FILE (ORIC)
7020 REM*****
7030 CLS:PRINT:PRINT"INSERT DATA TAPE AND PRESS RECORD"
7040 PRINT:PRINT:PRINT:PRINT"Hit SPACE when ready"
7050 GETZ$:CLS
7060 CSAVE"POINTERS",A#9E,E#A7
7070 CSAVE"DATA ONE",ADEEK(#9C),EDEEK(#A0)
7080 CSAVE"DATA TWO",ADEEK(#A2),EDEEK(#A6)
7090 PRINT:PRINT:PRINTTAB(25)"DATA SAVED"
7100 WAIT200:RETURN
8000 REM*****
8010 REM      LOAD FILE (ORIC)
8020 REM*****
8030 CLS:PRINT:PRINT"INSERT DATA TAPE":PRINT:PRINT:PRINT"Hit SPACE when ready";
8040 PRINT" then PLAY on"
8050 PRINT:PRINT"recorder "
8060 GETZ$:CLS

```

```

8070 CALL#E725"POINTERS":CALL#E6CA:CALL#E4A8:CALL#E804
8080 CALL#E725"DATA ONE":CALL#E6CA:CALL#E4A8:CALL#E804
8090 CALL#E725"DATA TWO":CALL#E6CA:CALL#E4A8:CALL#E804
8100 PRINT:PRINT:PRINTTAB(25)"DATA LOADED"
8110 WAIT200:RETURN
9000 REM*****
9010 REM  OUTPUT MEMBERSHIP LIST
9020 REM*****
9025 POKE#31,109
9030 PRINT:PRINT"ENTER DATE ";:GOSUB10000
9040 DA$=KE$
9050 CLS
9055 CALL#F439
9060 LPRINTCHR$(27);CHR$(64);CHR$(27);CHR$(80);CHR$(2)
9070 LPRINT"TORBAY AMATEUR RADIO SOCIETY MEMBERSHIP LIST"
9072 LPRINT
9075 LPRINTDA$
9080 LPRINT:LPRINT:LPRINT
9090 C=1
9100 IFN$(C)=" END"THENCALL#E804:RETURN
9110 LPRINTN$(C);" ";A1$(C);" ";A2$(C);" ";A3$(C);" ";PC$(C)
9120 C=C+1:GOTO9100
9500 REM*****
9510 REM  OUTPUT LABELS
9520 REM*****
9530 POKE#31,109
9540 CLS
9550 PRINT:PRINT"ENSURE PRINTER LOADED WITH LABELS AND"
9560 PRINT"TYPE HEAD POSITIONED LEVEL WITH TOP"
9570 PRINT"OF LABEL, AND PRINTER SET ON-LINE"
9571 PRINT:PRINT:PRINT
9572 PRINT"Press SPACE when ready":GETZ$:CLS
9575 CALL#F439
9580 LPRINTCHR$(27);CHR$(64)
9590 LPRINTCHR$(27);CHR$(68);CHR$(3);CHR$(35);CHR$(00)
9600 LPRINT:LPRINT:LPRINT:LPRINT:LPRINT:LPRINT:LPRINT
9610 C=1
9615 IFN$(C)=" END"THENCALL#E804:RETURN
9620 IFN$(C+1)=" END"THEN9700
9630 LPRINTCHR$(09),N$(C),CHR$(09),N$(C+1)
9640 LPRINTCHR$(09),A1$(C),CHR$(09),A1$(C+1)
9650 LPRINTCHR$(09),A2$(C),CHR$(09),A2$(C+1)
9660 LPRINTCHR$(09),A3$(C),CHR$(09),A3$(C+1)
9670 LPRINTCHR$(09),PC$(C),CHR$(09),PC$(C+1)
9680 LPRINT:LPRINT:LPRINT:LPRINT:REM ENOUGH TO START OF NEXT LABEL
9690 C=C+2:GOTO9615
9700 LPRINTCHR$(09),N$(C)
9710 LPRINTCHR$(09),A1$(C)
9720 LPRINTCHR$(09),A2$(C)
9730 LPRINTCHR$(09),A3$(C)
9740 LPRINTCHR$(09),PC$(C)
9750 CALL#E804:RETURN
10000 REM*****
10001 REM  ERROR PROOF INPUT
10002 REM*****
10003 KE$=" "
10010 GETK$:PRINTK$;:IFASC(K$)=127ANDKE$=" "THEN10060
10020 IFASC(K$)=13THEN10060
10030 IFASC(K$)=127THENKE$=LEFT$(KE$,LEN(KE$)-1):GOTO10010
10050 KE$=KE$+K$:GOTO10010
10060 IFKE$=" "THENPRINT"Invalid";:GOTO10010
10070 RETURN

```


LINEAR REGRESSION

Alex Marshall

Linear Regression is a means of finding the best straight line through a set of experimental results. Students at Tech courses in Engineering, 'A' levels, and perhaps degree students may find it useful.

It will give the slope and intercept of the line and the correlation will indicate whether it is a good fit or not. A high correlation of, for instance, 0.99 is an indication that your results fit a law of the type ' $y = mx + c$ '. A low correlation of, for example, 0.5 means that your line is almost a curve. The program also compares x and y and quotes a law of the type ' $x = ay + d$ '. The mean values are where the two lines cross. perfect correlation of 1 means the lines coincide.

```
10000 PRINT"N IS THE NUMBER OF READINGS"
10010 PRINT"INPUT N"
10020 INPUTN
10030 PRINT"INPUT X,Y"
10040 FORK=1TON
10050 INPUTX,Y
10060 F=F+X*Y
10070 D=D+X^2
10090 A=A+X
10095 E=E+Y^2
10100 B=B+Y
10110 NEXTK
10120 M=(A*B/N-F)/(A*A/N-D)
10130 M=INT(M*10000+.5)/10000
10150 REM SIMILARLY CMD1
10160 LPRINT"-----"
10170 PRINT"-----"
10180 LPRINT"SLOPE = "M
10190 PRINT"SLOPE = "M
10200 C=(F-D*M)/A
10210 C=INT(C*10000+.5)/10000
10220 LPRINT"INTERCEPT = "C
10230 PRINT"INTERCEPT = "C
10240 LPRINT"Y="M"X+"C
10250 PRINT"Y="M"X+"C
10260 LPRINT"-----"
10270 PRINT"-----"
10280 V=(A*B/N-F)/(B*B/N-E)
10290 V=INT(V*10000+.5)/10000
10300 LPRINT"SLOPE = "V
10310 PRINT"SLOPE = "V
10320 Z=(A-B*V)/N
10330 Z=INT(Z*10000+.5)/10000
10340 LPRINT"INTERCEPT = "Z
10350 PRINT"INTERCEPT = "Z
10360 LPRINT"X="V"Y+"Z
10370 PRINT"X="V"Y+"Z
10380 LPRINT"-----"
10390 PRINT"-----"
10400 SX=SQR(D/N-(A/N)^2)
10410 SY=SQR((E/N)-(B/N)^2)
10420 R=M*SX/SY
10430 LPRINT"CORRELATION = "R
10440 PRINT"CORRELATION = "R
10450 LPRINT"MEAN X = "A/N
10460 PRINT"MEAN X = "A/N
10470 LPRINT"MEAN Y = "B/N
10480 PRINT"MEAN Y = "B/N
10500 END
```

Example :-

The following results of a test on a lifting machine are thought to be connected by a law of the type ' $E = aW + b$ ', i.e. read E for Y and W for X.

Effort E - 20 - 25 - 29.5 - 35 - 40.5 - 45 - 50.

Load W - 0 - 200 - 400 - 600 - 800 - 1000 - 1200.

Results are typed in as such:-

0, 20 [RETURN] - 200, 25 [RETURN] and so on.

These figures give the following results:-

Slope = .0252
Intercept = 19.8743
Y = .0252 x + 19.8743

Slope = 39.6904
Intercept = -789.164
X = 39.6904 Y + -789.164

Correlation = 1.00052401
Mean X = 600
Mean Y = 35

These give an excellent correlation which fit the bill very well.

ORIC LETTERS

Dear Sir,

I've just set myself up with an Oric - 1 only to find I'm getting problems with the cassette loading. I know how to sort this out, but, I've been advised to use 'Leaderless' tapes in preference to the normal Hi-Fi tapes of which I've got plenty of stock. Do I need to change to specific computer tape or shall I use those I've already got?

ED - I would suggest you avoid 'Leaderless' tapes like the plague because if you load data too close to the start of the tape it can leave an inch or two of the recording surface exposed to the elements whereas a few inches of leader offers better protection when the tape is fully wound back. But, if you are prepared to wind the tape a little prior to recording this will have the same effect as the leader type. I always wind on a little past the leader/tape splice as there is sometimes a rough area around the join.

The only problem you may come across regarding using your Hi-Fi tapes is that of tape stretch when using the long play 60 min and 90 min type. It pays to fast wind them in either direction prior to use. The other problem is loading them with too many programs. Not only difficult to find the odd file, but if the mechanics of the cassette fail it could be disastrous.

Oric Upgrade

Dear Ed,

Your recent article on the Oric-1 to Atmos upgrade put my mind at rest on the matter whether to upgrade - (if that's the right word) from the Oric-1. I've become to like the Oric-1 keyboard, and for most part, can cope with the Rom bugs. By the way, don't other computers like the BBC, Commodore, Spectrum etc. have bugs??

I was pleased to read the article by R. Massey, on projects for using the Oric in the real world. My interest is in using it to plot, on an R.G.B. monitor, with printer dumps, frequency response curves, either from keyboard entered data or via D-A's & A-D's. To start with, where can one buy mating plugs for the Expansion Port and Printer Port? I agree with Mark Casey "Meteoric Programming" by John Vanden Reyden is well presented, and an errata sheet is available from the publishers - phone number 0442 826649.

Another good book is Personal Computer Worlds 'Oric Handbook' with many usefull appendices listing all control functions etc. This book should replace the Oric manual.

A book being advertised, but not yet available, is Oric 'Graphics and Sound'. This, if anything, like the BBC book of the same title promises to find its way to my bookshelves. Originally, to be published by Granada, it is now due in July from Collins.

Finally, has any Oric User (a) written any Hires graph plotting routines, (b) used joystick controls - if so, comments please, and (c) had any experience with the Hitachi 3" Disc Drives - as G.L.C. Computing are selling them for 135 pounds + VAT. Come on Oric Users, lets hear your comments on a terrific little computer, and Users Group.

Richard Hebblethwaite

<p>MORE ARTICLES WANTED PLEASE</p>

KIMBO'S KOMENT NO. 2

This month's subject ----- WIVES!!!!

The following article claims full immunity from any sex discrimination laws. . . .

Now I know you must be a nice reasonable sort of person, and from now on I'm assuming the reader is male (but of course !!) Anyway, as I was saying, are you and your machine having trouble from the old Trouble and Strife --- you know, the verbals, the incidious little digs about how this new found hobby of yours is not really a hobby but a way of life, and how it's completely taken you over !!??

Sound familiar???????

Well now you and me are going to talk about ways to placate the "better half" (I don't know who coined that phrase but it wasn't one of us !!)

Now I suppose the garden looks neglected (well just a little); the outside of the house needs painting (it's not too bad dear, I only did it in 1976); little Jimmy's favourite toy has been broken for weeks (well he broke it !!); the dog doesn't get much exercise these days (he's getting old, and enjoys the rest!!); ---etc, etc, etc,---rabbit, rabbit, rabbit.

SUGGESTION NO.1

Try to get her involved. Is she a temporarily retired secretary?, then try the damaged hand trick you know, youve got a deadline to meet for the O.U.G. mag and there is no way it will be done in time with three feet of bandage wrapped round your right hand

SUGGESTION NO.2

The fame and fortune trick Keep telling her about the well known fact that women are supposed to have more of a natural ability when it comes to programming (??), and that if 15 year old whizz kid school boys can do it, then why shouldn't 30 year old housewives! (devious b x !! + r?!?!)

SUGGESTION NO.3

Slight change of tack here. Find her an evening job, and palm the kids off on the mother-in-law.

SUGGESTION NO.4

Get a divorce and don't contest custody! Drastic yes, but it could preserve your sanity, and allow you to generate your software and hardware masterpieces unhindered!

Anyway, you know i'm only joking!?

Girls, we couldn't do without you or your comments.. (Hi Vee !!)

Seen any good software lately? This months purchase was an offering from Tansoft, their "newey" Ratsplat.

The blurb starts off by telling the user that it is a "truly revolting game"! (oh boy). The aim basically (no, it's in machine code), is to hammer to death rats in a sewer before they eat all your cheese bait. Sounds easy - NO WAY!! Just to complicate things a bit, a monster (their words not mine) appears on screen, who can only be zapped (killed Deidre!!) by a special spray from your trusty aerosol can, which was a hammer before hitting the SPACE bar! To activate the hammer or spray you hit RETURN, and with the normal up, down, left, right keys we have a six finger job!!! (and those damn rats are x x x x fast.) Maybe I'm getting old, but I just couldn't handle this one --- a joystick is really a must for this game. O.K., so now for the verdict:-

Lasting appeal x x

Playability x x

Value for money x

(Maximum x x x x x)

Talking about value for money - how about the new special offers in our beloved O.C.:-

Oricstar)

Filestar) 5 pounds + p and p

Ex-mon)

Now that's what I call a bargain.

Not only software bargains, but hardware as well --- hopefully by the time you read this, I should have received and built my Voice Synthesizer kit (at 13.50 pounds I don't know how they do it!) I've been toying with the idea of a V.S. for the Oric for some time, but have held off because I couldn't quite sus out how to drive 1/0 on the expansion port. Now I've finally worked it out, some other clever clogs have come up with the simple idea of using the Printer Port!!! Anyway, when I get it going maybe I'll write a review for the mag.

Oh well, that's just about it for this month. Keep those inputs to O.C. mag coming in --- lets see if we can make Oric Computing a leader in user group magazines.

Bye for now -- Kimbo

TEMPLE GRAFFITI

Stop! before you throw away the envelope that your copy of O.C. came in make a note of your membership number which is to be found on the top right hand corner of the address label. keep this number in a safe place and always remember to quote this number in any correspondence you may send us.

You may have noticed that this issue of O.C. is a little larger than usual. To make up for the delay in delivery of the last issue of O.C. which was due to an illness, (Bugs are not confined to Oric roms you know!) it was decided to make this issue a bumper issue, packed with more articles and programs than ever before.

Have you written any programs or articles you think you'd like to see in O.C.? If you have something to say, some ideas you would like to pass on to the rest of us, or a program you have written, then don't just sit there, put it on a cassette, shove it in a jiffy bag, send it to us and let's all have a look at it! Support your User Group, and we'll support you!

Confused? Desperate? Baffled? Is an Adventure game driving you up the wall, round the bend, and generally bonkers? Then fear not, for in this issue we start a new service to all of our adventuring members. The Doppel-Ganger's adventure helpline. Write in to us with your Adventuring problems and we'll pass them on to the Doppel-Ganger, who will read your letters and answer them in the magazine. Also, if you have the answer to any really baffling part of an adventure, just write in with your answer and this information will be used to help any others who may be stuck at that particular part.

From Czechoslovakia with Oric.

This issue of O.C. sees the first Oric program to come from behind the Iron Curtain. Oric supported health care by Ales Satanek M.D. of Prauge, Czechoslovakia, is a prime example of how a humble Oric can be used in a serious application, in this case Medical. This program allows a Doctor to keep a record of his patients and their illnesses and to search this record by either name or diagnosis. So now the next time anyone says to you that the Oric is "Just a games machine" you know how to reply!

SECTOR 7 "COMPOSER"

Competition Results

Sector 7 announced the winners of it's Music competition this week. Based on it's excellent software package "Composer", which we reviewed in the February edition of 'O.C.', three lucky entries resulted in first place.

SABRE DANCE - - - - -M. Houghton.

POP CORN - - - - -T. Shaw.

ONLY YOU - - - - -J. Collins.

The winners share the 100.00 prize for producing the most entertaining music using 'Composer'.

Please note Sector 7's address is:-

Sector 7 Software
P.O. Box 8
Newton Abbot
Devon. TQ12 1UE
Tel:- (06267) 4504

MEMBERS NOTICE

Firstly we would like to apologize for the delay in our members receiving their O.C. issues March/April but unfortunately due to a long illness our editorial department was closed down for several weeks. We are pleased to say that all is now coming back to normal and this double issue will help us to get back into our routine. Don't forget, User Groups such as ours do require your support.

ADVENTURE HELPLINE CORNER

Dear D.G.

I am having trouble getting into the shed in the garden of Crowley's House. I have tried several times but I seem to be running around in circles. What can I do about it? Is it a dead end?

Clue - The key to your problems lies in the cellar, with a little Christmas spirit you can sweep your troubles away.

Dear Dop.

I have so far visited every location in Crowley's House, but cannot get any further than the cellar. What do I do now?

Clue - I suggest you Push your problem out of the way, or have you read the Paper?

Dear Dopple-Ganger.

In that super Hell's Temple I keep falling down trapdoors into deep holes, is there any way I can avoid this as I get killed quite easily and I never seem to get reincarnated - tough life isn't it?

Clue - Using your spell-power you can detect whether any treasure seemingly in a room is real or an illusion. Illusory treasure can often be the bait in a trap! so spell power is the answer here.

Dear Dop.

I just bought the Hobbit adventure game, because I read about it in one of the mags and it seemed to be quite good, but every time I start to do well, the game crashes, very often when I'm in the Goblins' dungeon.

Clue - So does mine! The only thing I can suggest is saving it regularly, then if it does crash you won't have to start from the beginning again. My copy of The Hobbit also tends to crash mainly in the Goblins' caves

Dear D.G.

I recently bought a copy of Severn Software's Moira, but I can't seem to get far in it.

Clue - Well I haven't tried that adventure program fully yet, but when I saw it I wasn't too impressed anyway.

Dear Dopple-Ganger.

I like Crowley's House and these types of supernatural adventures but how can I find out how to fight things like the Mara, or the Redcap, and what are they anyway?

Clue - I suggest you go down to your local Library and look through the Supernatural book section, if they have one. Most big libraries should have books which will contain details of these creatures, and how they should be dealt with.

Dear Dop.

I recently bought a copy of Hell's Temple, and I think it's great, but I've never been reincarnated, what do I have to do to get another life?

Clue - To be reincarnated you have to travel deep within the temple and gain many experience points. You gain these points by defeating the denizens of the temple, and the more points you amass, the greater the chance of you being reincarnated.

Dear D.G.

I recently bought a copy of Level 9's Snowball adventure game, but I keep being killed by the Nightingales. What should I do, and how can I get to anywhere on the spaceship?

Clue - As soon as you hear a noise you should wait until the noise fades. Saying silly things can result in you being taken to a padded cell, which is another way to get out of the circle of mortuaries, but the best thing to do is to learn the colour code which can help you find your way about.

Dear Dopple-Ganger.

I have recently purchased the Salamander Software game, Franklin's Tomb, and so far I have collected most of the things I need, but I can't find the last object, can you give me a clue?

Clue - Have you read your Horoscope this morning?

Dear Dop.

Could you tell me what to do in Crowley's House. I've been up and down the stairs and all around the garden, but I can't see what I have to do.

Clue - Brush up on your Dennis Wheatley novels.

ORIC CROSSWORD PUZZLE

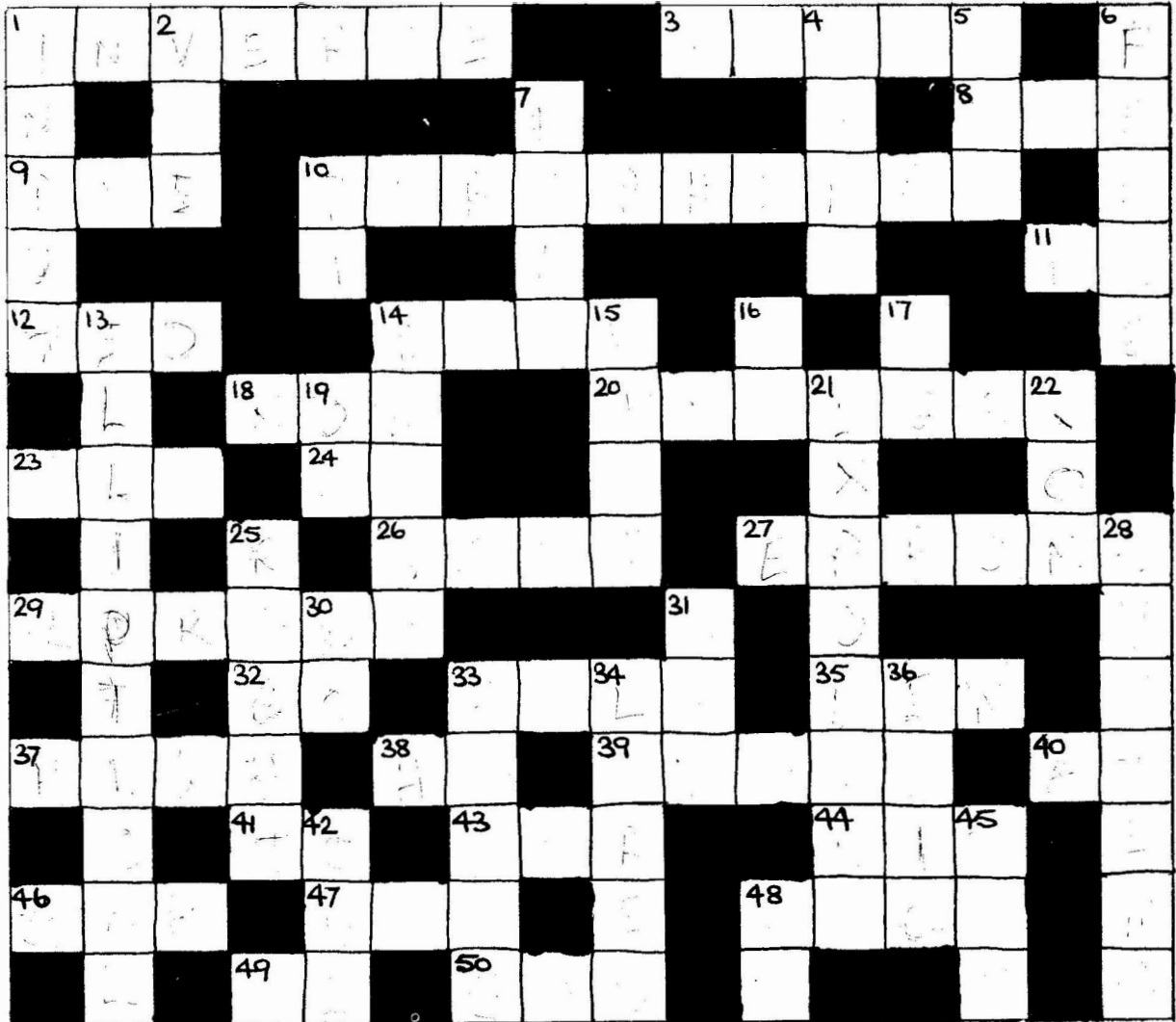
Some easy clues, some not so easy - do on, have a go!!!!

ACROSS

DOWN

1. Not NORMAL on an ATMOS ? (7)
3. If this is the same as INK you could have problems. (5)
8. Memory or Accumulator. (3)
9. Edible version of 10 down. (3)
10. You could be buying one of these for your ORIC. (10)
11. I Left a bit off this one. (2)
12. Transfer Eddie to X register. (3)
14. Move from one nested loop. (4)
18. 8 across isn't as exclusive as this one!! (3)
20. No place for decimals on this. (7)
23. CHR\$(12) (3)
24. See 10 down. (2)
26. Without this your loop would have difficulty. (4)
27. Early ORICs had these fitted!!!! (6)
29. You might need this if you want it on paper. (6)
32. Redundant keyword in V1.0 ROM. (2)
33. Best place to put a V1.0 ROM!!!! (4)
35. Get rid of your old program. (3)
37. This byte comes last-it's the tops. (4)
38. --MEM #97FF does the trick! (2)
39. ORIC -----S USER GROUP. (5)
40. Useful addition to PRINT in the V1.1 ROM. (2)
41. Added to 32 across it now makes sense. (2)
43. Absolutely 6E. (3)
44. A real bug, stupid!! (3)
46. Alien sound. (3)
47. This is not quite the end!! (3)
48. You have to do this to copper to make any sense of your circuit. (4)
49. Store your pattern like this. (2)
50. If all else fails with your problems , try this Mr.Morse!! (3)

1. Not the output? (5)
2. Lovely lady down in Worle. (3)
4. Computer connection point-hello sailor!! (4)
5. Send 43 across the other way. (3)
6. Untrue! (5)
7. Useful command for a computer artist. (4)
10. 22/7 approximately. (2)
13. ORIC circles are like this. (10)
14. A question mark will do nicely. (5)
15. Storage code BC. (4)
16. --MOS. (2)
17. GO backwards. (2)
19. This code is a must for Assemblers. (2)
21. Gives your number some power. (8)
22. Where you will find your operating system. (3)
25. Some people don't know this from their left!! (5)
28. Computers + peripherals = (7)
30. B4 you check your storage code, is it the right way round? (2)
31. Same as 35 across (O.K. so no-body's perfect!!). (3)
33. Lots of resolution with this. (5)
34. The alternate (1) looks interesting. (5)
36. This lad was very active down at Tug (a good friend of Ernie!). (4)
42. Somewhere between zero and two!! (3)
45. Definate article-how's your English? (3)
48. On your bike alien, pay for your own phone calls!!!!!! (2)



- EXTENSION MONITOR - EXTENSION MONITOR -

THIS POWERFUL MACHINE CODE EXTENSION MONITOR IS NOW AVAILABLE THROUGH O.U.G. AT A SILLY PRICE OF 5.00 TO GROUP MEMBERS - ORIGINAL RRP 15.00 - SAVE 10.00 WITH O.U.G.

FACILITIES INCLUDE:- MEMORY DISPLAY & MODIFICATION - PROGRAM DEBUGGING FACILITIES - DISPLAY BREAKPOINT TABLE - DISPLAY BREAKPOINT HIT - HEX LISTING DISPLAY - DISSASSEMBLED LISTING SET BREAKPOINTS - SINGLE STEP PROGRAM CONTINUE FROM LAST BREAKPOINT - SEARCH FOR BYTE STRING & DISPLAY ADDRESS - SEARCH FOR CHARACTER STRING & DISPLAY ADDRESS - RETURN TO BASIC COMMAND MODE - INITIALISE A PROGRAM - ELIMINATE BREAKPOINTS - A, X, Y, P, K REGISTER DISPLAY & MODIFICATION - USER DEFINED COMMAND FACILITY - HEXIDECIMAL ARITHMETIC WITH HEX DISPLAY & DECIMAL DISPLAY - DISPLAY LAST RESULT - DISPLAY OVERFLOW & REMAINDER - PRINTER ON/OFF FACILITY - COMPREHENSIVE USER MANUAL

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THE DOPPEL-GANGER SCENARIO

"A friend of yours is the latest owner of Old Hall House, and invites you over to stay for the weekend. The evening you arrive you sit by the roaring fire whilst you are told tales of insanity, disappearances and deaths, all of which have befallen the previous owners.

The following morning you awake, to discover that your friend has mysteriously vanished! Searching the house, you discover a note, and have just time to read it before a gust of wind wafts it into the flames. From this note you gather that the house was once owned in the mid 'Twenties by Aleister Crowley, and used for mysterious rites, and that your friend had come to believe that somewhere in the house was concealed a great occult treasure. You know your course of action, somehow you must find this object and put an end to the evil that has tainted the very Stones of the house, and the minds of its owners, but how?"

A visit to Crowley's House.

A Supernatural Adventure for the real connoisseur, no swordplay, no sorcery, just you and your wits versus the dark forces of evil.

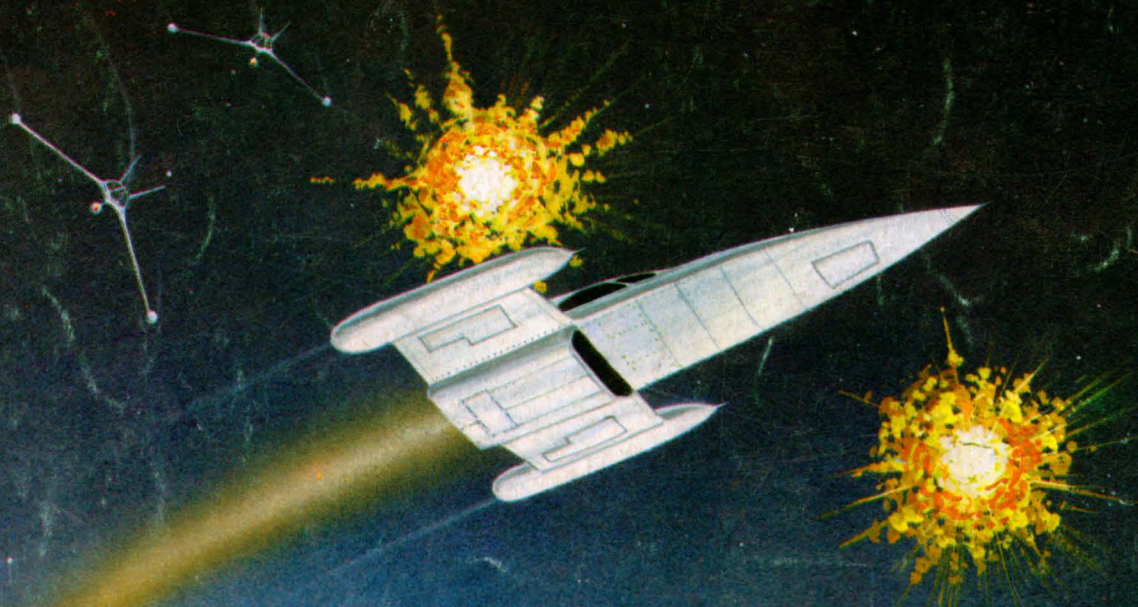
Using the time-honoured methods related in the legends you must decide upon which objects you can use to repel or destroy the supernatural creatures who inhabit Crowley's House and defend the evil treasure concealed within.

Only time can tell who will win. Will it be you, or will it be Crowley's House?

"CROWLEY'S HOUSE"

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GALAXY 5



An exciting new compendium of 5 all arcade action games from Durell Software. GALAXY, ASTRO-WAR, SPACECHASE — 3 games in pure machine code. LUNAR LANDER, ASTEROIDS — 2 games in Basic, including autolist at end of play with line-by-line program explanation.



GALAXY



ASTRO-WAR



SPACECHASE



LUNAR LANDER



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