ØRIC USER MONTHLY

with Alternative Micros

THE EDITORIAL

HELLO ONCE MORE,

I'D LIKE TO TAKE THIS OPPORTUNITY TO THANK YOU FOR YOUR CONTINUED SUPPORT TO THE ORIC.

FROM ME TO YOU ALL - A MERRY XMAS AND A HAPPY & HEALTHY NEW YEAR.

PLENTY OF VARIETY IN THIS ISSUE. SOMETHING FOR THE 'TAPPERS',THE 'GAMESTERS',AND ALL AND SUNDRY.

IT HAS BEEN YOUR ENTHUSIASM OVER THE PAST YEAR THAT HAS KEPT ME AT IT. I DID HAVE A SPELL WHERE MY INTEREST WANED,BUT HAVE COME THROUGH THAT,AND LOOK AHEAD TO GOING FORWARD WITH YOU ALL.

IT HAS BEEN INTERESTING PUTTING THIS ISSUE TOGETHER WITH THE HELP OF 'WORDSPEED' AND THE UTILITY - "LISTINPUT".

NOW IS THE TIME TO LOOK FORWARD TO 1995 AND TO RELISH THE THOUGHT OF NEW HARDWARE/SOFTWARE FROM DR.RAY, SEEING THE COMPLETED VERSION OF 'MAGNETIX' FROM JONATHAN BRISTOW,AND OF COURSE - MEETING UP WITH FACES OLD AND NEW AT THE NEXT AYLESBURY ORIC MEET.

WITH OUMDISC#5 SAFELY OUT OF THE WAY, I HAVE ALREADY STARTED WORK ON THE SIXTH DISC.

I WILL BE SHORTLY ENTERING IN TO MY BUSY PERIOD AT WORK. THEREFORE I WILL BE UNAVAILABLE FOR ANSWERING QUERIES BETWEEN DECEMBER 12th and JANUARY 3rd.

PLEASE KEEP THOSE ARTICLES COMING IN.

THE INDEX

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JANUARY ISSUE

ARTICLES FOR INCLUSION IN THE JANUARY ISSUE OF O.U.M ARE REQUIRED AS SOON AS POSSIBLE PLEASE.

AFFAIRE.HIR

YOU ARE UNABLE TO LOAD PROGRAM 6 (HIRES SCREEN) FROM OUMDISC #5,THEN IT IS BECAUSE YOU HAVEN'T TYPED IN - HIRES PRIOR TO !AFFAIRE.HIR. APOLOGIES FOR NOT MAKING THE INSTRUCTIONS CLEAR ENOUGH.

NEWS....NEWS...NEWS

NOT MUCH IN THE WAY OF NEWS THIS MONTH.

MAGNETIX

THE LATEST EPIC FROM JONATHAN BRISTOW WILL NOW NOT BE READY BEFORE 1995. DUE ENTIRELY TO THE FACT THAT IT IS NOT FINISHED. COME ON J.B - GET YOUR BUTT IN GEAR! I JUST HOPE HE HASN'T FOUND HIMSELF A WOMAN,OR ELSE THE GAME WILL NEVER BE FINISHED!

8-BIT

COMING SOON TO O.U.M WILL BE "THE A to Z OF 8-BIT MACHINES". AUTHOR IS STEVE MARSHALL. NOW, STEVE HAS A WOMAN AND STILL FINDS TIME TO GET PLENTY DONE!

ACORN SHOW

OUR ROVING REPORTER, PETER BRAGG,RECENTLY ATTENDED THE 'ACORN' SHOW,AND SAYS THERE IS NOTHING MUCH TO REPORT. APPARENTLY,THE NEW 'ACORN RISC PC' IS NICE,IF YOU HAVE A COUPLE OF GRAND TO SPARE. UNTIL SUCH TIMES AS PETER WINS THE LOTTERY,THEN PETER INTENDS TO STICK WITH HIS ORIC/ARCHIMEDES COMBINATION.

THE NATIONAL LOTTERY

SPECULATE TO ACCUMULATE SOUNDS LIKE A GOOD IDEA TO ME, AND THEREFORE I INTEND TO TAKE 5 POUNDS FROM O.U.M FUNDS AND TRY TO WIN A FORTUNE FOR FULLY PAID UP SUBSCRIBERS. ANY WIN OVER 1000 POUNDS WILL BE SHARED EQUALLY BETWEEN OUM FUNDS AND MEMBERS. WINS UNDER 1000 POUNDS WILL GO DIRECTLY INTO FUNDS TO GIVE YOU FREE SUBSCRIPTIONS,SOFTWARE ETC.ETC.

I WILL ENTER 5 TICKETS FOR THE DRAW TAKING PLACE ON SATURDAY DECEMBER 17TH.

THE SETS OF NUMBERS ARE AS FOLLOWS:

A) 14,23,36,38,42,47
B) 3,12,29,37,41,43
C) 1,5,29,41,42,48
D) 7,11,24,33,38,48
E) 4,14,22,23,39,41

KEEP YOUR FINGERS CROSSED FOLKS - YOU COULD BE IN FOR A LUCKY XMAS.

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THE SERIAL PORT

TREVOR SHAW IS HOPING TO FIND TIME TO WRITE AN ARTICLE ABOUT THE 'INTERNET' AS A CONTINUATION OF "THE SERIAL PORT" ARTICLES.

B I T S ' N ' B O B S

RESPONDING TO THE DOCTOR

David Wilkin telephoned me recently to say that Dr.Ray's planned upgrades (as per the letter from Ray in the last issue) were very interesting. As I pointed out to David - the sort of response we are looking for is that which is put in writing to me or direct to Ray. If you have an opinion,and haven't yet made it,then please do so.

I have had some good response from readers and will re-produce their feelings for the sake of Ray; just in case no one has written to him direct.

" On the first reading of Ray McLaughlin's letter re-EPROM ; I,for one, would certainly be interested in the more expensive completed one." - ALLAN MOORE (Sheffield).

" The hardware and software upgrade,being developed by Dr.Ray, sounds very promising. On a purely personal basis,I would prefer to be provided with a fully assembled package,but if the cheaper version is the majority preference,no problem. Mark me down as a potential purchaser." - W.FALCONER (Kirkcaldy).

" I like the idea of Dr.Ray's hardware and software upgrades, and hopefully it will be ready by the time that I am ready to upgrade from tape to disk. I intend to write to Dr.Ray and tell him of my interest in his project." - ROBERT CRISP (Leeds).

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WANTED

Peter Thornburn is seeking information on add-ons and the +1 extension for the ACORN ELECTRON.

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WAVE

Northern company 'WAVE' are still able to supply new AMSOFT CF2 (3") discs at 14.99 incl. V.A.T and postage.
Address is as previously printed.

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HIT THE HI-NOTES

Don't forget that 'tenner' that can be won,as mentioned on page 7 of the last issue of O.U.M.
BE FAMOUS FOR FIVE MINUTES!
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MAIL ORDER PRICE LIST

Matthew and I have now finished our cassette price/stock list. It will be printed and sent out A.S.A.P

BRIAN'S PAGE - THE RETURN.......

HOPEFULLY THIS WILL BE THE START OF A SEMI-REGULAR FEATURE , SO HEAR GOE'S:

FIRSTLY THE PUZZLE - NO PRIZES JUST THE FUN OF DOING IT. GIVEN THE FOLLOWING NUMBERS : 1734,5363,7179,9903 : CAN YOU FIND THE LARGEST NUMBER THAT CAN BE DIVIDED INTO ALL OF THEM , THAT IN ALL CASES WILL LEAVE THE SAME REMAINDER (ie. No-(INT(No/x)*x)=yyy). ANSWER NEXT MONTH.

NOW FOR SOMETHING TOTALLY DIFFERENT , BUT ABLE TO RIVAL COLIN COOKS CEO 'FRACTALS' (WELL I HOPE ANYWAY....!)

'LIFE'-THE GAME WAS INVENTED BY J.CONWAY IN 1968.THE BASIC IDEA OF WHICH IS TO START WITH A GRID AND AN INITIAL POPULATION OF CELLS,AFTER WHICH EACH GENERATION OF CELLS DIES AND SOME ARE BORN-HENCE THE NAME.'LIFE'IS AN EXAMPLE OF A MORE GENERAL IDEA-THAT OF CELLULAR AUTOMATON.
THE IDEA IS THAT YOU DEFINE A SPACE OF CELLS AND A SET OF RULRS THAT DETERMINE HOW THEY CHANGE STATE FROM TIME TO TIME.

THE 'ANT' IS ONE SUCH CELLULAR AUTOMATON.IT'S UNIVERSE CONSISTS OF SQUARE CELLS THAT CAN BE EITHER BLACK OR WHITE.IT FOLLOWS ONLY THRRE RULES , NAMELY:
1) IT CAN MOVE ONLY ONE CELL PER GENERATION - BUT NOT DIAGONALLY.
2) IF IT LANDS ON A WHITE CELL IT CHANGES ITS HEADING BY TURNING LEFT.IF IT LANDS ON A BLACK CELL IT TURNS RIGHT.
3) EACH CELL THAT THE ANT LANDS ON FLIPS TO ITS OPPOSIT COLOUR.

BY PLACING AN ANT ON THE SCREEN AND LETTING IT GO ABOUT ITS LIFE YOU CAN SEE QUITE COMPLEX PATTERNS APPEAR.WHY NOT TYPE IN THE FOLLOWING LISTING TO SEE WHAT I MEAN.FURTHER READING ON THE MATTER CAN BE FOUND IN 'COMPUTER SHOPPER' ISSUE 80 - OCT 1994 - pp 576-568.

THATS ALL FOR THIS MONTH - ALL THE BEST - BRIAN///

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100 'GAME OF LIFE - ANT MOVEMENT      105 :
110 HIRES:INK 1:POKE #26A,10          115 :
120 ' SET SCREEN SIZE                 125 :
130 XM=239:YM=199                     135 :
140 ' SET NUMBER OF ANTS              145 :
150 NA=1                              155 :
160 ' DIMENSION ARRAYS TO SUIT        165 :
170 DIM AX(NA),AY(NA),N(NA)           175 :
180 ' WORK OUT START POSITIONS AND THE  185 ' INITIAL ANT DIRECTIONS...
187 '                                 190 '
195 FOR I=1 TO NA                     200 AX(I)=INT(XM/2)
205 AY(I)=INT(YM/2)                   210 D(I)=I
215 NEXT I                            220 :
225 ' READ IN HEADING ARRAYS          230 :
235 DIM AV(3,2)                       240 FOR I=0 TO 3
245 FOR J=0 TO 1                      250 READ AV(I,J)
255 NEXT J                            260 NEXT I
265 DATA -1,0,0,-1,1,0,0,1            270 M=0
280 ' CLEAR KEYBOARD BUFFER           285 :
290 K$=KEY$                           295 :
300 ' NOW MOVE THE ANT/S              305 :
310 REPEAT                            315 FOR I=1 TO NA
320 S=POINT (AX(I),AY(I))             325 S=ABS(S)
330 IF S=1 THEN 370                   335 :
340 ' FLIP COLOUR TO FOREGROUND       345 :
350 D(I)=(D(I)+1)                     355 IF D(I)>3 THEN  D(I)=D(I)-4:GOTO
355
360 CURSET AX(I),AY(I),1:GOTO 400     365 :
370 'FLIP COLOUR TO BACKGROUND        380 :
385 D(I)=(D(I)-1+4)                   390 IF D(I)>3 THEN  D(I)=D(I)-4:GOTO
390
395 CURSET AX(I),AY(I),0              400 AX(I)=AX(I)+AV(D(I),0)+XM
405 IF AX(I)>XM THEN AX(I)=AX(I)-XM   407 IF AX(I)>XM THEN 405
410 AY(I)=(AY(I)+AV(D(I),1))+YM       415 IF AY(I)>YM THEN AY(I)=AY(I)-YM
417 IF AY(I)>YM THEN 415              420 NEXT I
425 M=M+1                             430 CLS:PRINT "GENERATION = ";M
435 UNTIL KEY$<>""
```

T H E   G A M E S T E R

WARANGAL

Just in case you are having trouble with WARANGAL, a few hints.

1) Get your opponent to go first.
2) Move so that the total of both your moves is 4. e.g if ORIC moves 1 then you move 3. Advantageous squares are: 5,9,13,17 & 21. Once on square 21, it doesn't matter how many moves your opponent selects - you can win.
3) The error checker doesn't work. If stuck,you can put minus values,or values of over 3 in.

The actual rules of the game are as follows:
You take turns to move a counter 1,2 or 3 places around the board. The payer to land on the last box (number 25) is the winner. The number of moves (1,2,3) are recorded in the box,from which the counter is to be moved,as crosses. The level selection is a 'red herring' - there is only one solution.

CHEAT,CHEAT
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WITH THIS OR THE NEXT ISSUE YOU WILL RECIEVE JAMES GROOM'S "CHEATS GUIDE FOR ORIC SOFTWARE".
IT DEPENDS ON COSTS AND TIME AS TO WHEN IT IS DESPATCHED. I AM LOOKING AT HAVING THE 13 PAGE TOME TURNED INTO A BOOKLET.

MONTANA PATIENCE
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AS PROMISED - THE RULES TO NICK HAWORTH'S 'MONTANA PATIENCE',AS SENT OUT ON OUMDISC#5.

THERE ARE 4 ROWS OF RANDOMLY PLACED CARDS (THE 2 TO KING OF EACH SUIT). THERE ARE ALSO 4 SPACES (BLANK BOXES).
THE IDEA IS TO END UP WITH 4 ROWS CONTAINING,IN ORDER,AND IN SUITS,THE 2 TO KING,WITH THE 2 AT THE BEGINNING OF EACH ROW.
THE 2'S CAN BE MOVED TO THE BEGINNING OF A ROW ONLY IF THAT BOX IS VACANT. TO DO THIS,MOVE THE 'HIGHLIGHT' BY WAY OF THE CURSOR KEYS UNTIL IT IS OVER THE 2 THAT YOU WANT TO MOVE,AND THEN VERIFY THE MOVE WITH THE 'SPACE BAR'.
THE OTHER CARDS CAN ONLY BE MOVED TO A SPACE,IF THAT SPACE FOLLOWS A CARD THAT IS ONE NUMBER LESS THAN THE CARD YOU WANT TO MOVE,AND IS OF THE SAME SUIT.
E.G: IF THERE IS A BLANK BOX AFTER THE 6 OF CLUBS,THEN THE 7 OF CLUBS CAN BE MOVED THERE.
BE CAREFUL ABOUT MOVING THE KINGS. SAY FOR INSTANCE THAT YOU HAVE A COUPLE OF CARDS,FOLLOWED BY A QUEEN OF HEARTS AND THEN 2 BLANK BOXES. IF YOU MOVE THE THE KING OF HEARTS TO THE BOX AFTER THE QUUEN, THEN THE COMPUTER WILL BLOCKS OUT THE NEXT BLANK BOX. IN THE END YOU WILL EITHER WIN THE GAME OR WILL HAVE BLOCKED OUT ALL THE SPARE BOXES.
GOOD LUCK!

SOPHIE

Funny name for a title you may think - well that is the name given to this Sedoric Disc program from Arthur Crawford,which allows you keep a Book List.

```
10 REM  To change the application of   this program make the
mods outlined
12 REM below.
15 REM Modify DATA in lines 120,130 &135 to reflect new
application.
17  REM modify lines 284,288,530,600, 800&900 to reflect
application.
19 REM modify FILE NAME in lines 810, 910&1200 to reflect
application.
20 REM MENU items 7&8 are included to allow simple modification
& SAVING
22 REM When development is complete.
23 :
24 REM The maximum number of
26  REM  characters  in each entry is 37 this can be changed by
altering
28 REM the value of W in line number  515.
30 REM program. When development is  complete modify line  180
to
32 REM UNTIL P$(X)="Edit Entry"
100 CLS:PRINT CHR$(17):DIM P$(15),A$(50):PRINT CHR$(20)
110 INK 4:PAPER 1
120 DATAEnter New Books,/,Display Book List,/,Print Book List,/
130 DATASave Book List,/,Recall Book List,/,Edit Entry,/
135 DATASAVE PROGRAM,/,EXIT TO BASIC
140 REPEAT
150 X=X+1
160 READ P$(X)
180 UNTIL P$(X)="EXIT TO BASIC"
280 REPEAT
281 CLS:GOSUB 3000
282 PRINTCHR$(27)+CHR$(4)
284 PRINT@12,1;"JS O P H I E"
286 PRINT CHR$(27)
288 PRINT@6,5;"JL I B R A R Y  B O O K S":PRINT CHR$(4)
290 Y=1
300 FOR C=1 TO X STEP 2
305 Y$=STR$(Y)
310 PRINT@10,7+C;Y$+"-"+P$(C)
315 Y=Y+1
320 NEXT C
360 GET S$:S=VAL(S$)
380 IF S<1 OR S>X THEN 360
400 ON S GOSUB 500,600,700,800,900,1000,1200,1300
420 UNTIL M=-1
440 PRINT CHR$(17):PRINT CHR$(20):END
500 CLS
502 GOSUB 2000
503 CLS
505 P$="To End Entries Type end":GOSUB 3010
510 REPEAT
515 W=38
520 B=B+1
525 PRINT@4,25;"Entry Number "B
530 PRINT@2,10;"New Title"
540 LINPUT@11,10,W-1;A$(B),C,J
547 AA$=A$(B)
550 REPEAT
555 W=W-1
560 T$=MID$(AA$,W,1)
565 UNTIL T$<>CHR$(32)
570 A$(B)=LEFT$(AA$,W)
585 UNTIL LEFT$(A$(B),3)="end"
590 B=B-1
595 RETURN
600 CLS:GOSUB 3000:P$="Displaying Book List":GOSUB 3010
610 FOR R=1 TO B
620 PRINT R" "A$(R)
630 V$=KEY$:IF V$="" THEN 650
640 REPEAT:V$=KEY$:UNTIL V$<>""
650 NEXT R
660 GOSUB 3000:P$="List Complete m for Menu":GOSUB 3010
670 GET R$:IF R$<>"m" THEN 670
680 RETURN
700 FOR R=1 TO B
710 LPRINT CHR$(27)+"w"+CHR$(3);
720 LPRINTCHR$(27)+"A"+CHR$(8);
740 LPRINT R" "A$(R)
750 NEXT R
755 LPRINT CHR$(27)+"@"
760 RETURN
800 CLS:Y=0:GOSUB 3000:P$="Storing Book List":GOSUB 3010
810 OPEN S,"SOPHIE2.DAT",1
830 FOR Y=1 TO B
840 PUT 1,A$(Y)
850 NEXT Y
860 CLOSE
870 RETURN
900 CLS:GOSUB 3000:P$="Loading Book List":GOSUB 3010
905 Y=0
910 OPEN S,"SOPHIE2.DAT",1
930 REPEAT
935 Y=Y+1
940 TAKE 1,A$(Y)
950 UNTIL &(1)=-1
955 B=Y
960 CLOSE
970 RETURN
1000 :
1005 CLS:GOSUB 3000:P$="Edit Entry":GOSUB 3010
1010 PRINT:PRINT:INPUT"No of Entry To be Edited";E
1020 PRINT@17,4;A$(E)
1030 PRINT@2,8;"Correct Title?"
1040 LINPUT@17,8,26;A$(E),C,J
1060 RETURN
1200 SAVEO"SOPHIE",AUTO:RETURN
1300 M=-1:RETURN
2000 CLS
2010 PRINT@4,10;"At End Of Each Entry press RETURN"
2020  PRINT@4,22;"Now  Press  c  To Continue":GET R$:IF R$<>"c"
THEN 2020
2030 RETURN
3000 FOR V=48000 TO 48039:POKE V,32:NEXT:RETURN
3010 POKE 48001,2:L=LEN(P$):D=INT((39-L)/2):PS=48000+D
3020 FOR V=1 TO L:POKE PS+V,ASC(MID$(P$,V,1)):NEXT
3030 RETURN
```

MARSHALL'S MUSIC part 14 *by Ally Scott*

Last time I left you thinking about *The Animals went in Two by Two* -heavy stuff, this Oric music! Below you'll see the melody laid out, with guitar chords. By now you should be able to work out the notes involved in the chords, but to help a little, here's a reminder.

Am - A C E	C - C E G	Em - E G B	G - G B D

The an - i - mals went in two by two, hur - rah_____! Hur -rah_____! The

an - i - mals went in two by two, hur - rah_____! Hur-rah_____! The

an - i - mals went in two by two, the el - e -phant and the kan - ga - roo and they

all went in - to the ark for to get out of the rain_____

To make an accompaniment for *The Animals...* using arpeggios is just as easy as for the previous tunes, except that this time group your quavers in threes. You'll have 2 groups of 3 quavers for each bar (see the first example in the **COMPOUND TIME** box in OUM No.86/87).
Let's look at the third line of the song, which has several chords to work with.

ch.	C					G					Am					Em					
	an - i - mals	went	in	two		by	two,	the	el - e - phant	and	the	kan - ga -	roo	and	they						
b.	1	2	3	2 2	3 |	1	2	3	2 2	3 |1	2	3	2 2	3 |	1 2 3		2 2	3 |		
m	E5 E5 E5 E5------			C5		D5-------	D5 D5-----	B4	C5 C5	C5	C5------	A4	B4---- B4	B4 C5	D5						
a.	C3 E3 G3 C4 G3 E3			G3		B3 D4	G4 D4	B3	A3 C4	E4	A4 E4	C4	E3 G3 B3	E4 B3	G3						
b.	C2--------------------------					G2------------------------			A2-------------------------			E2-------------------------									

NOTE: In the above accompaniment, **ch.** is the chords, **m.** is the melody, **a.** is the arpeggio accompaniment and **b.** is the bass line.

NOTE 2: On *Sonix* use Note tempo 19 and samples described in the **Sonix Special**, OUM 78 p.6.

Of course, this is only one way to harmonise a melody. There are probably as many different ways to do it as there are tunes, and for some methods you'd need years of study! For our purposes, though, if you base your harmony on the guitar chords you won't go far wrong. (For tunes with no chords given you'd need to learn a bit more - if anyone's interested in this please let us know!)

Sometimes the arpeggio approach isn't quite appropriate - sometimes there's a chord for nearly every note! Some of our traditional Christmas carols, for example, are usually played on an organ, and an arpeggiated accompaniment makes it sound more like a fairground tune. Here you need good solid chords for your accompaniment. Since it's that time of year (I hope this comes out before Christmas!), let's have a look at *Hark the Herald Angels Sing.*

CHORDS

There are some slightly complex chords in *Hark...!* Here's a quick rundown of the notes in each of them.

G: G, B, D

D: D, F#, A

Em: E, G, B

C#m7: C#, E, G#, B

Bm: B, D, F#

A: A, C#, E

A7: A, C#, E, G

D7: D, F#, A, C

Am: A, C, E

C: C, E, G

Hark the her-ald an-gels sing____ Glo-ry to the new-born king!

Peace on earth and mer-cy mild_____ God and sin - ners re - con-ciled.

Joy-ful all ye na-tions rise____ Join the tri - umph of the skies____

With th' angel-ic host pro-claim, "Christ is____ born in Beth-le-hem!"

Hark, the her-ald an-gels sing, glo-ry____ to the new-born king!

* There are 4 beats in each bar.

* On each beat, play a chord for the accompaniment.

* When choosing which notes to use, generally include the key note (eg: for Am use an A) and one other.

* If a chord occurs two or three times in succession (eg: in the first bar G occurs 3 times) vary the other note used along with the keynote.

* When using 7th chords, be sparing with use of the 4th note of the chord - the best rule is *try it and see!* If it doesn't sound right, don't use it!

* Make the keynote the lowest.

* You should know enough by now to be able to work out which octaves to use. Let's face it - I may know a lot about music but you know more about the Oric! I get Steve to try things out on his machine before I publish them, but it's really up to you, the individual user, to decide what sounds best to you. Music can be a very individual thing.

* In general, it's best to use the lowest octave that sounds OK for the bass line, the next octave up for the rest of the accompaniment, and the one above that for the melody.

Well, I'd like to think you've all had a try at working out harmonies on your Orics.
It's not as hard as it looks – you just have to use your brains a bit, and I know that
Oric People are clever people!!
Go on – work out an accompaniment to *Hark the Herald Angels sing* and entertain your guests this Christmas!!
And a very happy Christmas to all good Oricfolk from both the Musos!!

Ally *the other* Muso

THE ULTIMATE HI-SCORE TABLE

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3D BATTLESTAR     - 58,500 (level 5.5) - Brian Kidd
3D FONGUS         - 150,850 - Stephane Rezette
3D STARTER        - 75,400 -  Robert Cook (Founder of OUM)
ANTICS/SINGERIE   - 131,372 - Peter Thornburn
ATLANTID    - 13,990 (Duree 62) - Matthew Dick
A.T.M        - 67,990 -        Robert Cook
ATTACK ON KIXI   - 12,500 -  Steve Marshall
ARENA 3000 - 2,953,750 (level 200 - 13 lives) - James Groom
ATTACK OF THE CYBERMEN - 4,730 - Henry Marke
BERING      - 168 DAYS - Graeme Burton. Still the Arcade King
BOMBYX      - 28,530 -    Robert Cook
THE BOTTLE - 81 -         Steve Marshall
BOZY BOA   - 4,270 -      Steve Marshall
BREAKOUT IJK - 4,720 -  Steve Marshall
BRICKY      - 338 -       Steve Marshall
CATEGORIC - 23,057 -     James Groom
CENTIPEDE - 59,240 -     Henry Marke
CHUCKFORD - 185,050 -    Robert Cook
CHOPPER    - 69,950 -    Vincent Talvas
COBRA      - 2,699,993 - Rene Marke The highest score on the chart !
COCK'IN  - 133,057 - Steve Marshall
COCORIC - 3,620 -    Stephane Rezette
Columns - see separate entry at the end!
COSMORIC - 908 -     Steve Marshall
CROCKY   - 142,735 - Steve Marshall
DAMSEL IN DISTRESS - 4,860 - Graeme Burton
DEFENCE FORCE - 1,268,020 - Tim Colgate
DELTA FOUR      - 9,810 -      Steve Marshall
DOGGY           - 16,250 -      Stephane Rezette
DON'T PANIC    - 25,490 -      Henry Marke
DON'T PRESS THE LETTER Q - 1,229,620 - Bruno Dossier
DRACULAS REVENGE - 13,600 - Graeme Burton
DRIVER            - 66,500 - J-Yves Brun
ELEKTROSTORM      - 25,600 - Tim Colgate
ESQUIRE           - 5,650 - Steve Marshall
FIREFLASH         - 69,010 - Romain Dasse
FLY FOR YOUR LIFE - 172 -    Graeme Burton
FORMULE 1 - 27,487 -      Arnt Isaksen
FRELON      - 17,095 -     Stephane Rezette
FRIGATE COMMANDER - 504 - Keith Thompson
GALACTOSMASH  - 50 -      Matthew Coates
GALAXIANS     - 69,600 -  Robert Cook & Nicholas Menoux
GASTRONON     - 11,050 -  Dave Dick. The Editor has a go.
GHOST GOBBLER - 32,505 -  Steffan Jacobsson
GHOSTMAN      - 70,000 -  Elise Dasse
GOLDMINE      - 60,900 (GAME COMPLETED) - Henry Marke
GRAVITATOR    - 5,204 -   Arnt Isaksen
GRID WARRIORS - 55,494 -  Graeme burton
GUBBIE        - 339,360 - Staale Eikbraaten
HARRIER ATTACK- 105,700 - Staale Eikbraaten
HELLION    - 257,550 -    Matthew Green
HONEY KONG - 11,436 (level 11) - Peter Thornburn
HOPPER     - 40,170 -  Tim Colgate
HU*BERT    - 3,120 -   Steve Marshall
HUNCHBACK  - 750,200 - Benedicte Gareau
HYPERBALL  - 15,330 - Stephane Rezette
ICE GIANT  - 16,170 - James Groom
INSECT INSANITY    - 105,500 - Dennis Bonfield
INTERTRON          - 10,800 (level 15) - Brian Kidd
INVADERS (ARCADIA) - 3,390 -   Steve Marshall
INVADERS (IJK)     - 23,650 -  Peter Thornburn
INVADERS (PSS)     - 5,530 -   James Groom
IMAGO - 8,010 - Stephane Rezette
JEUX OLYMPIQUES - 50,147 - Arnt Isaksen
JIMMY POUBELLE  - 11,440 - Peter Thornburn
KARATE   - 23,800 - Arnt Isaksen
KINGDOM - 109 -     Graeme Burton
KRILLYS - 28,290 - Graeme Burton
KROKATILE WALTZ    - 10,025 - Graeme Burton. G.B SCORES A HAT-TRICK
LIGHT CYCLES       - 4,530 -  Steve Marshall
LOCHNESS MONSTERS - 14,683 - Graeme Burton
LODE RUNNER        - 16,738 - Arnt Isaksen
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LOKI              - 62,675 -  Tim Colgate
LONE RAIDER       - 80,500 -  Espen Andersen
LUNAR MISSION     - 13,129 -  Graeme Burton
MACADAM BUMBPER   - 178,700 - Stephane Rezette
MANIC MINER - 38,156 (AT THE CENTRE OF THE EARTH) - Graeme Burton
MANIC MINER with infinite lives - 115,583 - Robert Cook
MAHJONG - 16,200 (Cleared level 5 twice to give 6 levels) - Henry Marke
M.A.R.C           - 1,560 -   Graeme Burton
MARIO BROS        - 396 -     Steve Marshall
MAZE RALLY        - 88,920 -  Graeme Burton
MIDNIGHT FEAST - 1,500,120 - Henry Marke
MINED OUT         - 4,100 -   Graeme Burton
MLUCH             - 22,000 (All 18 levels completed and 7 lives left) - Henry Marke
MR.WIMPY          - 16,549 -  Espen Andersen
MUSHROOM MANIA - 471,420 -  Tim Colgate
OLIVE AND POPEYE  - 69,570 - Rene Marke
OPERATION GREMLIN - 22,617 - Graeme Burton
ORION             - 61,200 - Stephane Rezette
ORIC MUNCH        - 895,439 - Michel Leclerc
ORICAL INVADERS   - 1,790 -   Steve Marshall
PAINTER           - 103,850 - J-Phillipe Merc
PAINTER (with 255 lives) - 143,310 - Peter Thornburn
PANIC             - 823 -     Peter Thornburn
PASTA BLASTA   - 34,480 - Matthew Coates
PIERROT        - 6,270 -   Steve Marshall
PLAYGROUND 21 - 92,000 - Tim Colgate
PSYCHIATRIC    - 41,070 - Henry Marke
PROBE 3        - 2,450 -   Robert Cook
PROTECTOR      - 99,594 - Thierry Avannier
Q*BERT         - 15,470 - Dave Dick
QUACK A JACK   - 95,671 - Colin Cook
QUARKFLIGHT    - 709 -     Graeme Burton
RABBIT - 169,760 (level 29) - Peter Thornburn
RATSPLAT       - 20,150 - Staale Eikbraaten
ROCK RUN    - 2,264 -   Paul Hutton
SCUBA DIVE  - 9,000 -   James Groom
SNAKE VENOM - 102,822 - Staale Eikraaten
SORVIVOR       - 1,155 -   Romain Dasse
SPACE WALL  - 3,248 -   Brian Kidd
SPOOKY MANSION - 2,100- Steve Marshall
STANLEY        - 43,480 - Romain Dasse
STARFIGHTER - 434 -     Steve Marshall
STRESS         - 1,688 -   Peter Thornburn
STOCKMARKET - 82,936 - Graeme Burton
STYX           - 194,600 (wave 18) - Graeme Burton
SUPER JEEP  - 138,250 - Stephane Rezette
SUPER METEORS - 364,700 - Graeme Burton
SUPER ADVANCED BREAKOUT - 17,050 - Arnt Isaksen
TALISMAN       - 8,068 - Elise Dasse
TETRIS         - 2,418 - Denis Bonfield
TETRIS GB   - 15,835- Henry Marke
TETRIX         - 9,983 - Jon Haworth
THEM           - 2,400 - Steve Marshall
TRIATHLON   - 5,270 - Stephane Rezette
TRICKSHOT   - 4,128 (screen 14) - James Groom
TRIDENT NEPTUNE - 7,200 -    Dave Dick
TROUBLE IN STORE - 1,060,758 - Graeme Burton
TWO GUN TURTLE  - 5,890 -    Graeme Burton
ULTIMA ZONE     - 148,860 -  Staale Eikbraaten
ULTRA           - 35,780 (level 32) - Peter Thornburn
VIDEO FLIPPER   - 55,350 -   Graeme Burton
VISION          - 285 -      Brian Kidd
WILLY        - 624 -     P.Hutton
XENON I      - 117,230 - Eric Eduezi
XENON III    - 9,927 -   Staale Eikbraaten
YAHTZEE      - 306 -     Dave Dick
ZEBBIE       - 945,560 - Staale Eikbraaten
ZEBULON      - All screene completed in 8 minutes - Henry Marke strikes again.
ZOOLYMPICS      - 13,677 - Graeme Burton
ZORGONS REVENGE - 155,830 - E.Tollemer
```

COLUMNS -

O/E- 235,650 - Brian Kidd		O/N- 16,485 -	Henry Marke
O/H- 4,725 - Liz Coates		F/E- 3 secs -	Brian Kidd
F/N- 5 secs - Brian Kidd		F/H- 8 secs -	Henry Marke

TREAT YOURSELF TO SOME NEW SOFTWARE - GET YOUR NAME ON THE CHARTS

DEAR DAVE,

OUM Disc #5 recieved. The disc contains a wide variety of good material. Well worth the wait.
- W.FALCONER (Kirkcaldy).

DEAR Mr. FALCONER,

I'd like to address you by your forename,but unfortunately don't know it.
Glad you enjoyed the disc. I'd spent so long on it, I wasn't able to give a clear opinion of it,though in retrospect the games from Colin & Nick,plus of course the utilities,probably made it value for money. I asked Steve Marshall his opinion. He was unable to give one,as he had got as far as Montana Patience and been hooked on that.
- DAVE

==

DEAR DAVE,

congratulations on how well you are keeping the OUM going,and such a consistently high standard. Recieved my subscription reminder (cheque enclosed) - glad to hear another year's issues confidently expected,in spite of the time it must take you to do them.
Incidentally,I've now got my EINSTEIN also up & working. I gather Tony Adams is stepping down and passing the EINSTEIN Magazine to a new Editor. Don't know his name,though.
- NORMA WRANGHAM (Halstead)

DEAR NORMA,

glad to hear you are still enjoying the magazine. The quality is all down to our contributors. Though membership has now dropped below the 100 mark, I still confidently expect to be publishing for some time yet!
As soon as we find out the name of the new Editor of the EINSTEIN magazine,then of course we will publish it.
- DAVE

==

DEAR DAVE,

It had been a while since I used my ORIC and then I only played games on it,or made small hardware modifications. Now that I've joined your user group I'm looking at it's BASIC language more closely,and have written 2 short programs.
I hope that these programs are of high enough standard to be included in your OUM, so that others may have as much fun playing with them as I have had learning about my ORIC ATMOS.
- PAUL HILL (Stevenage).

DEAR PAUL,

though the ideas for your programs are not original, it is always nice to see variations,so as to see how others set about tasks. The explanations that came with the programs will obviously be of great help to others in their programming. You'll be pleased to learn that both programs are in this issue.
Welcome to our user group. I'm sure that you will benefit from us,and us from you;especially as I know that you have just gone on to a disc based system. By doing so you will have prolonged your interest in the ATMOS for at least a couple more years.
- Dave

===

C O L O U R   D E M O

This program is a simple colour demo concentrating on the attributes for the foreground & background colours. It works as follows:

line 20   Clear the screen & turns off the cursor.
line 30   Sets up all the variables.
line 40   Start of the main loop,and is the final position of the PLOT commands.
lines 50-80 Keeps the colored block on the screen.
line 90   Gets a random foreground colour.
line 95   Makes the foreground block that colour.
line 100   Add 16 to the foreground colours to get the background colours. Then changes that line only to the random background colour.
line 110   Puts the foreground block on the screen.
line 115   Do it 400 times then pauses and clear the screen.
line 120   End of loop,go round again (line 40).

```
10 REM COLOUR DEMO BY P.A.HILL
15 :
20 CLS:PRINTCHR$(17)
30 X=0:XX=1:Y=0:YY=1:C=1
40 X=X+XX:Y=Y+YY:T=T+1
50 IFX<2THENXX=2
60 IFX>38THENXX=-1
70 IFY<2THENYY=1
80 IFY>24THENYY=-1
90 C=RND(1)%7
95 PLOT1,Y,C
100 PLOT0,Y,C+16
110 PLOTX,Y,CHR$(255)
115 IFT>400THENT=0:WAIT200:CLS
120 GOTO40
```

THIS SPACE

RESERVED

FOR YOUR LISTINGS!

KEEP ON TAPPING !

C H A R A C T E R   D E M O

This program is a utility for converting a data statement (which contains a re-defined character of your choice) into a visible example on the screen. It displays it in standard and double height format,but only one character can be converted at a time. I've seen many DATA statements in books e.g: 10 DATA a,1,2,3,4,5,6,7,8;but drawing each one out on paper becomes very tedious after a few minutes. So I wrote this program to speed up the process.

I had thought of displaying more than one charcter and being able to move them about the screen independently,so as to create a larger character, but decided to keep it simple and let others have something to play with in the long Winter months ahead....

The program works as follows:
line 13   Sets up the screen & variables.
line 14   Turns off the cursor & on the lower case mode.
line 16   Enter the character to be re-defined.
line 17   Turns on the double height attribute & prints your lower case character.
line 18   Turns off the double height attributes & prints the character in standard format.
line 23   Character data string.
line 24   Calculates the address of the character to be re-defined.
lines 25-29 Takes each decimal number separated by / and pokes it to the right address.
line 30   Returns an error to the screen if more than 8 DATA numbers are entered.
line 32   Turn on the cursor and upper case modes.

```
10 REM CHARACTER DECODER BY
11 REM P.A.HILL
12 :
13 TEXT:PAPER0:INK7:N=0:CLS
14 PRINTCHR$(17);CHR$(20)
15 PRINT"WHICH LETTER TO REDEFINE "
16 GETCL$:PRINT
17 PRINTCHR$(4);CHR$(138);CL$
18 PRINTCHR$(4):PRINT:PRINT " ";CL$
19 PRINT:PRINT
20 PRINT"NOW ENTER THE DATA - SEPERATE EACH"
21 PRINT"DECIMAL NUMBER WITH / ":PRINT
22 PRINT"(8 MAX.PLEASE).":PRINT
23 INPUTD$
24 B=#B400+(ASC(CL$)%8)
25 FORA=1TOLEN(D$)
26 IFMID$(D$,A,1)="/"THEN31
27 D=VAL(MID$(D$,A,1))
28 POKE(N+B),D
29 N=N+1
30 IFN>8THENPRINT:PRINT"TOO MUCH DATA ?":GOTO32
31 NEXTA
32 PRINTCHR$(17);CHR$(20)
```

M O R E   R E A D E R S   L E T T E R S

DEAR DAVE,
                    a number of points,namely:
A) TANDATA MONITORS - the final word.
  Last year,you & other members of OUM offered suggestions aboutconnecting my
Tandata monitor to an Oric. Earlier this year I bought a portable PC,which
can use an external RGB colour monitor,so I decided to make a lead to
connect the PC to the monitors. I have two monitors - the Tandata with it's
8-pin socket,and a Microvitec Cub with it's 6-pin socket. Therefore to
connect each of my computers to both of the monitors, I would need 2 leads
for each computer. Since the Tandata is a re-cased version of the Cub, I
decided on a permanent solution to the problem. I took the Tandata monitor
apart & replaced the 8-pin socket with a 6-pin. Now I only need one lead for
each computer.
  B) After previously writing to you about the Classic Computer Club and the
willingness of one of it's members to travel 200 miles for a desirable
computer, I find that I have recently done a 300 mile round trip - LEEDS to
St.NEOTS and back (via Peterborough).
  I had seen an advert in Micro Mart,whereby someone wanted to swap an APPLE
11c for PC bits.
  In exchange for my complete (non-working) 386SX base unit c/w MS-DOS 4and
manuals, a Zenith desk top case and poer supply, a Modem (no leads or
info.), 2 full height disk drives from an obscure Burroughs,and some Amstrad
PC manuals; in return I recieved: Apple 11c with extra external disk drive,
an Apple 11 clone (ever heard of a SOLAR-TRON computer?) with 2 disk drives
with extra plug-in cards, a Torch Z80 disk unit for a BBC and a Psion
Organiser with plug-in Theasaurus + spelling checker and Formulator.
  C) Over the past few months I have changed computers a bit & the details as
shown on the Contact list have changed. My collection of computers now looks
like this:

  286 PC-AT with 3.5" floppy & 20 meg hard disk c/w mono VGA display &
Panasonic KXP1124 printer (24 pin).
  ZENITH Z180 portable.
  8 complete ORIC's (not all working).
  APPLE 11c with external drive.
  APPLE 11 clone with twin drives,extra memory cards & Z80 (CP/M) card.
  PSION ORGANISER with 2 plug-in modules.

                                        - ROBERT CRISP (Leeds).

DEAR ROBERT,
                  you have been busy!
  I assume it was the St.Neots in Cambridgeshire and not the one in
Cornwall, otherwise I'd of tried a different route than via Peterborough!
  Never heard of a SOLAR-TRON. I do remember seeing a film called TRON!

                                        - DAVE

==

DEAR DAVE,
                I have a spare copy of issue 12 of the magazine
'I.O.U.G',which I am enclosing. Perhaps you can find a home for it.
                                        - DENNIS REDFORD (Leigh).

DEAR DENNIS,
                I thank you.
  I have the full set (no not teeth!).
  If anyone wants the mag.,then please drop me a line.
  I also have the masters to all the other issues of I.O.U.G and can supply
copies at cost.
                                        - DAVE

Machine Code for the Oric Atmos (Part 41)   Peter N. Bragg

The Story so far
---------------- We have been looking at programming technique. Last time,
we looked at a short memory "swap" routine, which was initially aimed at
preserving an area of memory, such as Zero Page. However, you can really
forget about the "Zero Page" aspect. Essentially, the routine provided a
simple way to swap the contents of two areas in memory. This can be used for
a lot of things, depending on your imagination. A simple form of animation,
done by swapping sprites in the HIRES screen, is one possibility.

Having shown how such a routine is written, the last article ended by
pointing out some the routines failings. Even if you have produced something
that works, it still pays to be critical. There is usually more than one way
to achieve the result that you require. The routine worked but it was
limited to areas of no more than 100 bytes. The new pair of routines shown
here are better. They can be reset to achieve exactly the same results, as
the routine in the last issue by simply changing the memory area addresses.
However, now there is no longer a restriction on the size of memory area.
The addresses (variables, if you wish) are located in a Parameter Block at
the start of a Page (Page10 in this case), which makes them easier to locate
and reset for any area. Use CALL#1020 or JSR 1020 to call up the operation.
The addresses set up here, swap the two halves of the Text screen. Why not
try re-setting the addresses to operate on the HIRES display ?
The main routine is relocatable. This means that if you extend the Parameter
Block to include the small subroutine (JSR 1010), you will find that while
the Parameter Block has a fixed location, the larger main routine can be
moved and called from anywhere you like in the RAM. More next month........

Oric   Utility Routines   30 Sep 94
----   ---------------   ---------
[-------------------------------[Parameter Block 1000]---------------------[1/2]

1000:FF   : "FF"   : Page Marker only (optional)
1001:   :   :

                               ---1st RAM Area---
1002:A8   : "BBA8"   : Start Address Lo byte
1003:BB   :   : Start Address Hi byte
1004:62   : "BD62"   : End Address Lo byte
1005:BD   :   : End Address Hi byte

                               ---2nd RAM Area---
1006:63   : "BD63"   : Start Address Lo byte
1007:BD   :   : Start Address Hi byte

[JSR 1010]-------------------[Swap Contents of Two Addresses]--(sub)---------]

                               ---Fetch 2 Bytes and Swap them over---
1010:AD 00 00 : LDA 0000 : Fetch byte from 1st Area address and
1013:48   : PHA   :   preserve it on the Stack.
1014:AD 00 00 : LDA 0000 : Fetch byte from 2nd Area and
1017:8D 00 00 : STA 0000 :   copy it into 1st Area address.
101A:68   : PLA   : Retrieve 1st Area byte from Stack and
101B:8D 00 00 : STA 0000 :   copy it into 2nd Area address.
                               ---Finish---
101E:60   : RTS   : Return to main routine.
             ---end---

```
         ---start---          ---Set 1st Area Addr in Instructs 1010 & 1017---
1020:AD 02 10 : LDA 1002    : Fetch Addr Lo byte from Param 1002 and
1023:8D 11 10 : STA 1011    :     put it into location 1011
1026:8D 18 10 : STA 1018    :  and also into location 1018.
1029:AD 03 10 : LDA 1003    : Fetch Addr Hi byte from Param 1003 and
102C:8D 12 10 : STA 1012    :     put it into location 1012
102F:8D 19 10 : STA 1019    :  and also into location 1019.


                              ---Set 2nd Area Addr in Instructs 1014 & 101B---
1032:AD 06 10 : LDA 1006    : Fetch Addr Lo byte from Param 1006 and
1035:8D 15 10 : STA 1015    :     put it into location 1015
1038:8D 1C 10 : STA 101C    :  and also into location 101C.
103B:AD 07 10 : LDA 1007    : Fetch Addr Hi byte from Param 1007 and
103E:8D 16 10 : STA 1016    :     put it into location 1016
1041:8D 1D 10 : STA 101D    :  and also into location 101D.


                              ---Test Address in "Swap" Instruct 1010---
1044:AD 11 10 : LDA 1011    : Fetch Addr Lo byte from instruct 1010
1047:CD 04 10   CMP 1004    :  Test - is it the same as End Lo of 1st Area ?
104A:D0 08    : BNE "1054"  :    No - so skip next 3 instructions.
                                 Yes - so......
104C:AD 12 10 : LDA 1012    : fetch Addr Hi byte from instruct 1010
104F:CD 05 10   CMP 1005    :  Test - is it the same as End Hi of 1st Area ?
1052:F0 2E    : BEQ "1082"  :    Yes - so swap is completed, skip to finish
                                 No - so .....
                              ---Swap Two Bytes---
1054:20 10 10 : JSR 1010    : Swap 1st Area byte with byte from 2nd Area.


                              ---Update "Swap" Addr in instructs 1010 & 1017---
1057:18       : CLC         : Clear CARRY Flag.
1058:AD 11 10 : LDA 1011    : Fetch Addr Lo Byte from "swap" instruct 1010
105B:69 01    : ADC# 01     :  and add 01 to it and then
105D:90 06    : BCC "1065"  :   skip two instructs if CARRY is still clear.
105F:EE 12 10 : INC 1012    : If CARRY not clear, add 01 to Addr Hi Bytes
1062:EE 19 10 : INC 1019    :  of both instructs 1010 and 1017.
1065:8D 11 10 : STA 1011    : Copy updated Addr Lo Byte back to instruct 1010
1068:8D 18 10 : STA 1018    :  and also instruct 1017.


                              ---Update "Swap" Addr in instructs 1014 & 101B---
106B:18       : CLC         : Clear CARRY Flag.
106C:AD 15 10 : LDA 1015    : Fetch Addr Lo Byte from "swap" instruct 1014
106F:69 01    : ADC# 01     :  and add 01 to it and then
1071:90 06    : BCC "1079"  :   skip two instructs if CARRY is still clear.
1073:EE 16 10 : INC 1016    : If CARRY not clear, add 01 to Addr Hi Bytes
1076:EE 1D 10 : INC 101D    :  of both instructs 1014 and 101B.
1079:8D 15 10 : STA 1015    : Copy updated Addr Lo Byte back to instruct 1014
107C:8D 1C 10 : STA 101C    :  and also instruct 101B.
                              ---Return to do another "Swap"---
107F:18       : CLC         : Clear CARRY Flag and use it
1080:90 C2    : BCC "1044"  :  to make a Branch back to "Test Addr" again.


                              ---Finish---
1082:60       : RTS         : Exit
         ---end---
```
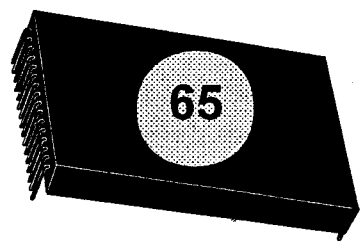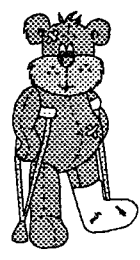
RAMBLING

IN THE

ROM

65

MICROWAVES

Oric gains colours

After you have experienced the colours on the Oric, you might like to add some more to your collection.

The program shown below produces every possible colour using the Oric colours. The colours are produced by POKEing two alternate colours onto the HIRES screen so that they merg together, and give the impression of another colour.

Using this method, colours such as pink and orange can be produced.

```
10      HIRES
20      FOR A=17 TO 23
30      FOR B=17 TO 23
40      FOR   C=40960   TO
49000
        STEP 80
50      POKE C,B
60      NEXT C
70      FOR   D=41000   TO
48960
        STEP 80
80      POKE D,A
90      NEXT D
100     WAIT 200
110     NEXT B
120     NEXT A
```

Graham Bailey,
Camberley, Surrey

Right, to reply...

The last issue issue of OUM prompted a number of thoughts. Firstly, the spelling of 'disc', which featured in this column in issue 32 of OUM back in April 1990. To quote:

> "I've noticed a fairly indiscriminate use of the two spellings of disc/disk in O.U.M. as well as the computer press in general. Which is correct? I went to the 1988 Chambers' Dictionary for help. It gives 'disc drive' and 'disc file' as computer-related words. It also gives 'diskette', defined as a computer disc. I wonder if 'disk' has crept in as a shortened word for 'diskette'? So, for me it will remain a 'disc', or a 'diskette', and not a 'disk', not least since it's written that way on the front of my disc drives."

Since then, the abbreviation 'disk' has become commonplace amongst PC users. So do we remain purists, or join the crowd? My vote goes for sticking with what Oric called them!

This again is one I don't have the date for - any clues?

By the by, it was interesting to pull out issue 32. Robert Cook was still editor, and a certain Dave Dick contributed 'Dave's Data' - it reads a bit like a practice for Dave's wonderful editorials. Dave reviewed 'Tetris' from CEO. Robert was pressing readers for contributions, and yours truly introduced the brand new PD library! The issue, as was common then, ran to a total of 10 pages. It's good to think that almost five years later we're twice the length (eh?!) and twice as strong... oh, I give up.

Incidentally, I'm in the process of producing a fully revised version of the Sedoric manual. It will give more details of using commands, and include lots of details for the more advanced user. Talking of which, if Dr. Ray gets enough support to go ahead with his Eprom

project (count me in, Ray), we should reach a Version 3 manual!

Club Europe Oric

A big thankyou to Laurent for his sterling work in producing yet anothr year's worth of CEO magazines. Thanks too to my family for rallying round to help distribute on time during my 'incapacity'. We shall be up to date with discs by the end of the year; another big thankyou to members for their forbearance - I haven't had one moan, which is marvellous. I've almost caught up with orders and letters, so if you have something outstanding by now, please drop me a line in case it got mislaid. I'm also in the process of sorting out next year's subs, etc. and will write to members with the December mag. If you don't subscribe, but would like to, just drop me a line at the usual address:

3 Madingley Road
Cambridge
CB3 0EE

Spotted recently...

The adjoining ad was in the latest issue of Internet & Comms Today - shall we send the heavies round?

And finally.. Rambling on...

'RIGHT$' (Function)

Principle:
The routine calculates the position of the start of the string to recopy. The principle of the complement is used to give C a value enabling it to carry out the same error tests as for LEFT$, thus avoiding a repetition of this test.

D79B	JSR $D7D0	D856	JSR $D88B	recover the parameters
D79E	CLC	D859	CLC	calculate start of string to transfer
D79F	SBC (BF), Y	D85A	SBC (BF), Y	remove the total length of the string
D7A1	EOR #FF	D85C	EOR #FF	and end the complementing
D7A3	JMP $D775	D85E	JMP $D830	and end as for LEFT$

'MID$' (Function)

Principle:
As with RIGHT$, the routine calculates the position in the original string and the llength of the resulting string, while keeping a lookout for errors.

D7A6	LDA #FFF	D861	LDA #FF	take default value
D7A8	STA D4	D863	STA D4	of last parameter
D7AA	JSR $00E8	D865	JSR $00E8	take current character
D7AD	CMP #')'	D868	CMP #')'	and test if ')'
D7AF	BEQ D7B7	D86A	BEQ D872	jump, we have all the parameters

D7B1 JSR $CFD9	D86C JSR $D065	seek a ','
D7B4 JSR $D80D	D86F jsr $D8C8	and an integer in #D4
D7B7 JSR $D7D0	D872 JSR $D88B	recover the other parameters
D7BA BEQ D807	D875 BEQ D8C2	if length totake=0, error
D7BC DEX	D877 DEX	adjust position in string
D7BD TXA	D878 TXA	
D7BE PHA	D879 PHA	and save on the stack
D7BF CLC	D87A CLC	
D7C0 LDX #00	D87B LDX #00	prepare for empty string
D7C2 SBC (BF), Y	D87D SBC (BF), Y	remove length of string
D7C4 BCS D77C	D87F BCS D837	if shorter than parameter, take empty
D7C6 EOR #FF	D881 EOR #FF	if not, calculate remaining length
D7C8 CMP D4	D883 CMP D4	and compare to length demanded
D7CA BCC D77D	D885 BCC D838	if too long, take what's left
D7CC LDA D4	D887 LDA D4	if not, take length demanded
D7CE BCS D77D	D889 BCS D838	in all case, do the end of LEFT$

RECOVER PARAMETERS FOR THE STRING FUNCTIONS

D7D0 JSR $CFD3	D88B JSR $D05F	Look for ')'
D7D3 PLA	D88E PLA	take return address
D7D4 TAY	D88F TAY	in Y
D7D5 PLA	D890 PLA	
D7D6 STA C4	D891 STA C4	and #C4
D7D8 PLA	D893 PLA	remove return address to avoid
D7D9 PLA	D894 PLA	the numeric result test
D7DA PLA	D895 PLA	then leave the whole parameter
D7DB TAX	D896 TAX	in X
D7DC PLA	D897 PLA	then pointer address low byte
D7DD STA BF	D898 STA BF	in #BF
D7DF PLA	D89A PLA	and high byte
D7E0 STA C0	D89B STA C0	in #C0
D7E2 LDA C4	D89D LDA C4	recover return address
D7E4 PHA	D89F PHA	and restore it
D7E5 TYA	D8A0 TYA	to the stack
D7E6 PHA	D8A1 PHA	
D7E7 LDY #00	D8A2 LDY #00	initialise Y
D7E9 TXA	D8A4 TXA	and second parameter in A, set Z
D7EA RTS	D8A5 RTS	

'LEN' (Function)

D7EB JSR $D7F1	D8A6 JSR $D8AC	remove the reservation, length in Y
D7EE JMP $D3FD	D8A9 JMP $D4B6	Y --> ACC1

REMOVE RESERVATION AND INDICATE NUMERIC RESULT

Entry: the string pointer is in ACC1
Exit: the temporary reservation has been removed, A=Y=length of string, Z and N set according to length.

Principle:
The routine removes the final temporary reservation, and places the string address in #91-#92. It then indicates that the result is going to be numeric so as not to create a TYPE MISMATCH.

D7F1 JSR $D712	D8AC JSR $D7CD	take pointer
D7F4 LDX #00	D8AF LDX #00	
D7F6 STX 28	D8B1 STX 28	and indicate numeric result
D7F8 TAY	D8B3 TAY	set Z according to length
D7F9 RTS	D8B4 RTS	

'ASC' (Function)

D7FA	JSR $D7F1	D8B5	JSR $D8AC	take pointer
D7FD	BEQ D807	D8B8	BEQ D8C2	if empty string, ILLEGAL QUANTITY
D7FF	LDY #00	D8BA	LDY #00	
D801	LDA (91), Y	D8BC	LDA (91), Y	take first character of string
D803	TAY	D8BE	TAY	in Y
D804	JMP $D3FD	D8BF	JMP $D4B6	Y -- > ACC1 unsigned
D807	JMP $D2A0	D8C2	JMP $D336	ILLEGAL QUANTITY

JUMP A CHARACTER AND TAKE AN INTEGER IN X

D80A	JSR $00E2	D8C5	JSR $00E2

TAKE AN INTEGER IN X

Entry: TXTPTR properly set
Exit: X contains the evaluated integer. A, Z and C are set according to the next character of the expression.

D80D	JSR $CE77	D8C8	JSR $CF03	evaluate a numeric expression
D810	JSR $D210	D8CB	JSR $D2A2	ACC1--> #D4-#D3 unsigned
D813	LDX D3	D8CE	LDX D3	if high byte not nul,
D815	BNE D807	D8D0	BNE D8C2	ILLEGAL QUANTITY
D817	LDX D4	D8D2	LDX D4	if OK, take low byte
D819	JMP $00E8	D8D4	JMP $00E8	and position according to next character

'VAL' (function)

Principle:
The routine is going tocall the usual eevaluation of a number. It is based on TXTPTR, which it is going to save, then place at the start of the string to evaluate. It is also necessary to watch for the evaluation ending, since a terminator (#00) must be placed at the end of the string. TXTPTR is then recovered after the evaluation.

D81C	JSR $D7F1	D8D7	JSR $D8AC	take the pointer
D81F	BNE D824	D8DA	BNE D8DF	
D821	JMP $DB27	D8DC	JMP $DBB2	if string empty, ACC1 =0
D824	LDX E9	D8DF	LDX E9	
D826	LDY EA	D8E1	LDY EA	take TXTPTR
D828	STX E0	D8E3	STX E0	
D82A	STY E1	D8E5	STY E1	and save it
D82C	LDX 91	D8E7	LDX 91	string address low byte
D82E	STX E9	D8E9	STX E9	in TXTPTR
D830	CLC	D8EB	CLC	add the length
D831	ADC 91	D8EC	ADC 91	
D833	STA 93	D8EE	STA 93	and save it
D835	LDX 92	D8F0	LDX 92	
D837	STX EA	D8F2	STX EA	high byte of string in TXTPTR
D839	BCC D83C	D8F4	BCC D8F7	jump if no carry
D83B	INX	D8F6	INX	adjust high byte of end
D83C	STX 94	D8F7	STX 94	and save end address
D83E	LDY #00	D8FB	LDY #00	index start of next string
D840	LDA (93), Y	D8FB	LDA (93), Y	and take next character
D842	PHA	D8FD	PHA	save it
D843	LDA #00	D8FE	LDA #00	and place a terminator (TYA would have been better)
D845	STA (93), Y	D900	STA (93), Y	to convert correctly

Have a very happy Christmas and see you in the New Year   Jon Haworth