ØRIC
USER
MONTHLY
with Alternative Micros

Keeping the

Oric alive
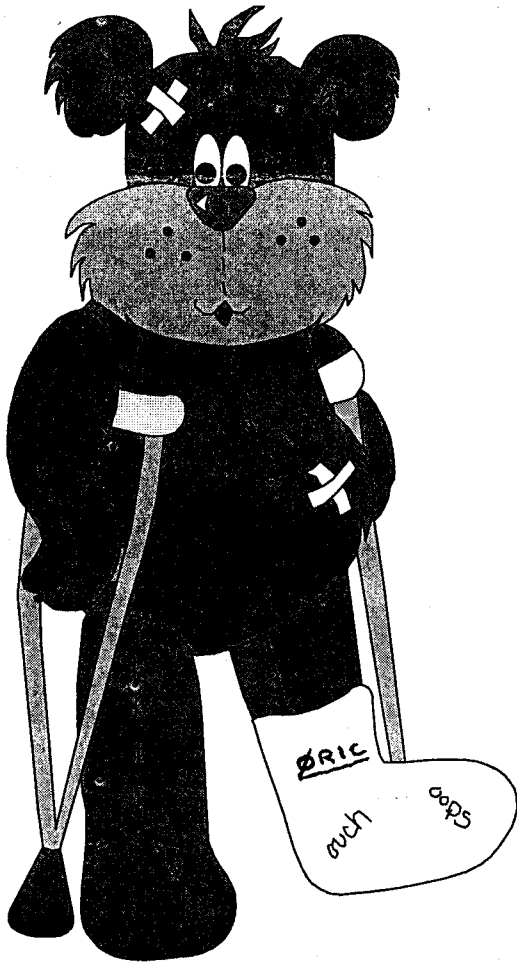
I was there!!

ORIC MEET

REPORT

- see inside

THE   EDITORIAL

HELLO AGAIN,

SUMMER HAS FINALLY ARRIVED!

THE 'MEET' IS OVER AND I HAVE BEEN BUSY SORTING THROUGH EVERYTHING THAT CROPPED UP AS A RESULT.

THE 'MEET' PROVED THAT THERE IS STILL PLENTY OF INTEREST IN OUR TRUSTY OLD ORIC,AND IT WAS NICE TO SEE THAT MANY THINGS ARE STILL UNDER DEVELOPMENT.

MY THANKS GO OUT TO MY DAUGHTER LOUISE. SHE HAS BEEN RECOVERING FROM HAVING HER TONSILS OUT,AND I HAVE SECONDED HER IN TO TYPING UP PARTS OF THIS TOME AND SOME OF MY LETTERS. SHE HAS ALSO BEEN CATALOGING MY COMPACT DISC COLLECTION ON MY PC-XT VIA DBASE 1V. NEARLY 1000 TRACKS STORED SO FAR, AND WE ARE NOT YET A THIRD OF THE WAY THERE. THEN IT'S THE L.P'S AND SINGLES!

ROLL OF HONOUR

ALL THOSE WHO ATTENDED THE MEET DESERVE A MENTION,AND SO HERE WE GO! -

GERRY AMATO + 3, JEAN BOILEAU,FRANK BOLTON + LUIS, PETER BRAGG, JONATHAN BRISTOW, LAURENT CHIACCHIERINI,TONY CLARK + FAMILY, MATTHEW COATES, COLIN COOK, ARTHUR CRAWFORD, DAVE DICK + MATTHEW AND ANN, RON EVANS,RICHARD FARRELL, JIM GROOM, JON HAWORTH, CHRIS HEARN, JOHN HURLEY + WIFE, STEVE HOPPS, ROB KIMBERLEY, DAVID LEIBNIZ, STEVE MARSHALL + ALLY, RAY McLAUGHLIN, ALLAN MOORE, JOHN PEACH, KIERON SMITH, BOB TERRY, PETER THORNBURN, DAVID UTTING + STEVE WRIGHT, AND ALLAN WHITAKER.

THAT'S 30 SUBSCRIBERS PLUS FAMILY AND FRIENDS. A MARVELLOUS TURN OUT.

AND NOW TO WHAT IS IN THIS HUGE ISSUE.

INDEX

WANTED

JONATHAN BRISTOW HAS A MICRODISC (3") PLUS AN ATMOS SPARE. IN EXCHANGE HE WANTS A COLOUR MONITOR. JONATHAN HAS RECENTLY MOVED - PLEASE UPDATE YOUR CONTACT LIST. HE IS NOW AT: THE FLAT, 6 HIGH STREET, WATTON, THETFORD. TELEPHONE NUMBER IS 0953 885850

THE   GAMESTER

Yes folks - the GAMESTER section is back!

SOME NEW HI-SCORES

INVADERS (PSS) - 5,530 - JIM GROOM (EAT YOUR HEART OUT PETER THORNBURN).

CATEGORIC (NO MANS LAND) - 23,057 - JIM GROOM.

INSECT INSANITY (MIRAGE) - 105,500 - DENIS BONFIELD
 NOTE TO STEVE MARSHALL - PLEASE UPDATE THE HI-SCORE TABLE.

THE GAMES GUIDE

THE GUIDE TO GAMES AND ADVENTURES WITH POKES FOR INFINITE LIVES, TIPS ON DOING BETTER, AND ADVENTURE MAPS IS NOW WITH ME. JIM GROOM HAS DONE A GREAT JOB. I NOW HAVE THE ARDUOS TASK OF PHOTOCOPYING THE MANY PAGES FOR DISTRIBUTION.

MAHJONG

SINCE THE 'MEET', WIFE ANN, AND DAUGHTER LOUISE HAVE BEEN HOOKED ON 'MAHJONG' FROM THE C.E.O.
 IF YOU HAVEN'T GOT IT THEN IT IS DEFINITELY WORTH THE OUTLAY - ORDERS TO JON HAWORTH.

A QUESTION OF DEATH

JIM GROOM TELLS ME THAT HE IS WORKING ON 'A QUESTION OF DEATH',WHICH WAS A TYPE-IN PROGRAM FROM 'ORIC OWNER'. IT IS BUGGED. HE HAS REPLACED SOME OF THE MISSING COMMAS FROM THE DATA STATEMENTS, BUT SUSPECTS THE 'DIM' STATEMENTS OR MISSING DATA ITEMS ARE TO BLAME. IF ANYONE CAN HELP TO SOLVE THE PROBLEM,OR IF INDEED THEY HAVE A WORKING VERSION,WOULD THEY PLEASE CONTACT JIM, AS HE FEELS IT IS A GOOD ENOUGH PROGRAM FOR PUBLIC DOMAIN. JIM IS NOW OPERATING ON 3.5" DISC SUPPORTING SEDORIC.

FANTASY QUEST

FROM JIM GROOM COMES THE SOLUTION TO I.J.K's 'FANTASY QUEST'.
 S,S,S,S,S,S,S,GET   OIL,N,N,N,W,GET   TORCH,E,N,N,N,E,E,E,OIL   DOOR,OPEN DOOR,DROP   OIL,E,E,S,S,E,E,GET   KEY,W,W,S,S,E,S,S,LIGHT   TORCH,S,E,GET FEATHER,N,GET   ORB,S,W,W,N,N,DROP   TORCH,DROP   ORB,GET   SCROLL,W,UNLOCK DOOR,KEY,OPEN DOOR,W,W,N,W,GET COINS,E,S,S,W,S,S,E,E,TRANSLATE   SCROLL, (NOTE DOWN 5 LETTER CODE), WRITE FEATHER, (ENTER 5 LETTER CODE), W,W,N,W,GET CROSS,N,E,N,N,N,YES,W,S,W,W,N,N,W,UNLOCK   CHEST,KEY,OPEN CHEST,E,S,S,E,E,E,S,E,E,E,DROP   KEY,GET   ORB,W,N,N,E,E,E,E,E,OPEN CASE,W,W,W,N,N,E,E,GIVE   ORB,E,E,E,S,S,S,S,S,E,W,W,W,S,S,W,W,N,UP,S,W,W,GET WAND,W,W,W,W,N,GET   ROPE,N,E,N,DOWN,E,E,N,N,E,E,E,S,E,S,OPEN DOOR,E,S,E,E,E,E,DROP   ROPE,E,S,N,W,N,N,GIVE   DISC,N,N,GIVE CROSS,S,E,E,S,N,W,W,N,N,E,THROW   EYE,E,GET   TREASURE,W,W,S,S,S,S,S,GET ROPE,E,S,S,W,W,W,UP,N,E,N,N,W,W,W,W,GIVE   WAND,W,W,S,W,W,N,N,USE ROPE,DOWN,S,W,W,S,W,S,S,E,E,GET KNIFE,W,W,CUT WEB,W,W,N,N,N,N,N,N,N,N,N.
  P.S.. -   THE END IS A REAL ANTI-CLIMAX

MESSAGE TO DENIS BONFIELD

YES,I'M SURE YOUR LISTING ALLOWING ONE TO SAVE 'INSECT INSANITY' HI-SCORES TO DISC WOULD BE OF INTEREST TO OTHERS.

THE   GRAND   RAFFLE

Yet another great raffle at this year's Aylesbury Oric Meet. Thanks to
some arm twisting by Rob Kimberley, we again had a week in NERJA donated by
Steve Hopps. Rather than make it the first prize for the first ticket out of
the hat, we made it the 29th - thus adding to the excitement. Kimbo again
sold tickets on the day, and thanks to him 137 pounds was gleaned.
   Some items took a while to be off-loaded. Shouts of"put it back" filled the

room. Just when we thought the raffle had finally finished and Allan
Whitaker came up with another 5 prizes. In all there were 34 prizes. Those
not at the MEET,who won,should of now recieved their prizes.
   Sincere thanks to all who bought tickets. The profit helps OUM to survive
for another year.
   Winner of the week's accomodation in an apartment in NERJA was Steve
Wright (a relative of David Utting), who made the trip from Leicester.

PRIZE / DONATOR	TKT.NO.	WINNER	
1. ALTAI JOYSTICK I/FACE (A.BOWERS)	120	SYLVIA HURLEY	
2. METER (A.CRAWFORD)	30	W.FALCONER	
3. YRS SUBS TO OUM (P.BRAGG)	24	D.J.SMITH	
4. BOX OF DISCS - 3.5" (D..DICK)	18	R.FARRELL	☆
5. BAR OF SOAP (A.DICK)	136	R.KIMBERLEY	
6. ACORN ELECTRON (R.FARRELL)	63	P.THORNBURN	
7. MODEM (R.KIMBERLEY)	70	S.MARSHALL	
8.SHARP COMPUTER AND PRINTER (C.HEARN/A.WHITAKER)	5	J.PEACH	
9. BOTTLE OF LAMBRUSCO (C.HEARN)	116	J.BRISTOW	
10. BOX OF LISTING PAPER (A.MOORE)	109	B.TERRY	
11. REAM OF A4 PAPER (A.MOORE)	72	J.HAWORTH	
12. ORIC JOYSTICK (T.CLARK)	26	D.J.SMITH	
13. ORIC-1 COMPANION (R.CRISP)	16	R.FARRELL	
14. ORIC-1 BOOK (J.HAWORTH)	51	C.EVANS	
15. ORIC - 1 BOOK (R.CRISP)	43	D.WILKIN	
16. SPEED-KING JOYSTICK (J.HAWORTH)	44	A.BOWER	
17. POWER SUPPLY (J.BOILEAU)	77	A.CRAWFORD	
18. 1 FREE CEO DISC (CEO)	76	A.CRAWFORD	
19. 6 MONTHS SUBS CEO (CEO)	85	C.HEARN	
20. BOTTLE OF RED WINE (R.KIMBERLEY)	94	D.UTTING	
21. INVITATION TO FORTH (S.MARSHALL)	25	D.J.SMITH	★
22. ATMOS M/C BOOK (A.CRAWFORD)	54	C.EVANS	
23. TASWORD TWO (A.CRAWFORD)	40	F.BOLTON	
24. 5.25" DRIVE (J.GROOM)	19	R.KIMBERLEY	
25. ONE WEEK IN NERJA (S.HOPPS)	91	S.WRIGHT	
26.ORIC CHEAT DIRECTORY (J.GROOM)	98	J.BOILEAU	
27. SPEEDKING JOYSTICK (J.HAWORTH)	48	A.BOWER	
28. CASSETTE SOFTWARE (D.DICK)	12	A.MOORE	
29. COLOSSAL ADVENTURE (A.WHITAKER)	46	A.BOWER	
30. 2 CASSETTES (A.WHITAKER)	128	P.BRAGG	
31. 2 CASSETTES (A.WHITAKER)	99	J.BOILEAU	
32. 2 BOOKS (A.WHITAKER)	113	B.TERRY	
33. 2 BOOKS (A.WHITAKER)	39	F.BOLTON	
34. MCP PAPER - 2 ROLLS (J.BOILEAU)	74	A.CRAWFORD	

R E A D E R S   L E T T E R S

DEAR DAVE,
            I discovered a bug in 'COLUMNS'. When the numbers of blocks
is large (> approx. 16,000), I get an 'illegal quantity error' (in line
45 - I think). This was very annoying as I had a score of over 260,000.

                                            - TIM COLGATE (Shaw)

DEAR TIM,
            bit of a sickener eh!
 I've passed the problem on to Nick Haworth (the author). When resolved
I will be sending out updates to all purchasers of the game.

                                            - DAVE

DEAR DAVE,
            I want to thank you for an excellent MEET.
 Also I would like to purchase a copy of SONIX.
                                    - JOHN PEACH (London)

DEAR JOHN,
            glad you enjoyed the MEET, and obviously Jonathan Bristow's
demo of his SONIX musical editor was a hit with you.
                                            - DAVE

DEAR DAVE,
            I am travelling to London on July 9th for a week, and would
like to get to visit you in Aylesbury if possible.
 I have been thinking about writing a new series for OUM called:- "
LOOKING AT THE NOW CLASSIC GAMES". This series would maybe bring back
some memories from the old days.
 I must admit that my ORIC is placed in my closet and has not been used
since I visited Stale at Easter. My Macintosh is,however,used frequently
(school work,writing letters,games etc.). I have got some games that are
newer versions of ORIC games like LIGHT CYCLE,SUPER METEORS,OTHELLO,and
TETRIS. Some of the popular commercial games like CIVILIZATION take too
much time to play,so I stick to the real games (like those for the real
computer: ORIC).
 A few weeks ago I bought an ATARI 2600 games console for less than five
pounds (not second hand). Do you know any shops that sell games for it in
London?

   What about this picture of a Parrot? More pictures like this should be
transferred to the ORIC.

                        PARROT   - ARNT ERIK ISAKSEN

L E T T E R S (CONTD)

DEAR ARNT,

I will check my diary and contact you before you leave for London.

I would be happy to publish your article as I'm sure many of our newer readers won't know about some of those classic ORIC games.

I do not know any particular shops in London. You probably not find any ATARI games in most computer shops. It would be a case of checking out the second-hand shops and searching the Car Boot sales , which take place in many locations on Saturdays and Sundays. To find out a venue try visiting a newsagent and getting one of those 'free' newspapers,which show events for a particular local area. Here in Aylesbury we get the BUCKS ADVERTISER,which is full of adverts and a little news. There should be similar papers for each locality in London. I do know of a shop in Aylesbury that was recently selling ATARI games cheaply - I will see if they still have any, or if young Matthew has bought up all their stock.

Nice picture - is it from the ORIC or the MACINTOSH?

- DAVE

==

DEAR DAVE,

I have just started writing an ORIC emulator on the PC. The heart of it will be the 6502 emulator. I hope to finish it this year, if it gets finished at all.

- ANDRE WIDHANI (Hamburg)

DEAR ANDRE,

on the same day that I recieved your letter I also recieved a telephone call from Steven Haigh, who wants to do the same thing. I think perhaps you and Steven should get in touch with each other and split the workload - his address is to be found in this issue.

- DAVE

DEAR DAVE,

set out below are updates to my personal details for the ORIC CONTACT LIST:

Printer: STAR SJ48 Inkjet

Computers: Amstrad GX 4000 Console, ATARI STE (1MB), and AMSTRAD MEGAPC (386 version).

I have just purchased a Spectrum emulator for the MEGAPC,which is amazing as it supports full sound,joystick options,VGA graphics,and runs at a slightly faster speed than the original games. Unfortunately no one seems to have written a similar Oric emulator for the P.C.

I was surprised to hear that Allan Whitaker is not renewing his subscription to OUM. He has certainly been a lot of help to me in the past in supplying me with an Atmos and Cumana Disc interface,as well as transferring numerous cassette games on to disc. Without his efforts I would probably have consigned my Oric to the loft. Perhaps he could be made an honorary member of OUM?

I am currently in the process of transferring some French cassette games onto disk, e.g. HU▓BERT. The game appears to consist of 3 blocks of code,which I have saved to disk,but wonder if you know what the basic loader should be so that I can get the game to run?

- PAUL HUTTON (Worcester)

DEAR PAUL,

thanks for the update. For your info, young Matthew also has the GX4000 for which games can still be obtained direct from Amstrad.

Regarding an ORIC emulator - please check out Andre's letter.

Regarding Allan's non-renewal: I think Allan has found it increasingly difficult to find time for the ORIC. It was nice to see him again at the MEET. I will send Allan a copy of this issue as it contains a MEET report, but do not intend to make him an honorary member i.e free subscription to OUM. I see no point in spending subscribers monies on sending out issues to someone who no longer uses the ORIC. Like you I have found Allan to of been of great assistance over the years,and I know he will be sorely missed by others. However,he is still only a telephone call away and I have no intention of not contacting him.

Regarding HU▓BERT - I'll send you a disc copy.

- DAVE

Before I start this months extavaganza, I would like to thank all those who
helped to make this year's meet the enjoyable occassion it was. Cheers !

THE TONE GENERATOR. Straight from my college notes comes this little
electronics project for you to build. Anyone who's smart enough to buy an Oric
should manage to build this without too much difficulty. There should be a few
tips here for those new to electronics, so is worth a read even if you arn't
going to build the project

A diagram is provided for those with a kit to make their own PCB's. Everyone
else should use a piece of Veroboard, or breadboard. Below the PCB diagram is
the same with components added. This should be useful to locate components if
you arn't using Vero or breadboard.
SOLDERING NOTES. When soldering two pieces together, both parts must be hot
enough to melt the solder. Push the wires of the component through the hole in
the board and bend them back a little so the component stays in place. Then
touch both the circuit track and the component wire with the tip of the
soldering wire. Apply enough solder to fill the hole and form a little cone up
around the wire. Then remove the iron.
When soldering the ends of (stranded) wire, heat the wire and then apply the
solder. It will run into the wire when hot enough. Don't 'brush' the solder on.
This doesn't give a good connection.
THE 555 TIMER CHIP. This is a much used chip and is is often used to produce
simple sounds. I suggest using a DIL socket to mount it in so as to avoid
damaging it with heat from soldering. Remember to 'break' the connections
between the legs of the chip on the Veroboard, or else it won't work !
CAPACITORS. Ceramic disc capacitors can be inserted either way round.
Electrolytic ones must be the right way round. They are marked with arrows
pointing to negative.

The tone generator will produce a square wave, a triangular wave and a pulse
sound. Switch 1 operates these. Vibrato can be added with switch 3. Switch 2 is
an on/off switch.

The output should be connected to an amplifier to hear the results.

That's about it for this month. If you have any subjects you'd like me to cover
in this article then drop me a line.
AND DON'T FORGET TO SEND IN THOSE HI-SCORES !!!

    MUSO...

COMPONENT LIST

Resistors	Capacitors	Transistor
R1 = 3.9k	C1 = 68nF	TR1 = BC109C
R2 = 3.9k	C2 = 10μF	
R3 = 1.5k	C3 = 47nF	Integrated Circuit
R4 = 1.5k	C4 = 100nF	
R5 = 22k	C5 = 100μF	IC1 = 555 Timer
R6 = 22k	C6 = 220nF	
R7 = 2.2M	C7 = 220nF	Variable Resistors
R8 = 8.2k	C8 = 220nF	
R9 = 120k	C9 = 1μF	VR1 = 220k log

ALSO 1 DIL SOCKET (8 PIN)

VR2 = 5k lin

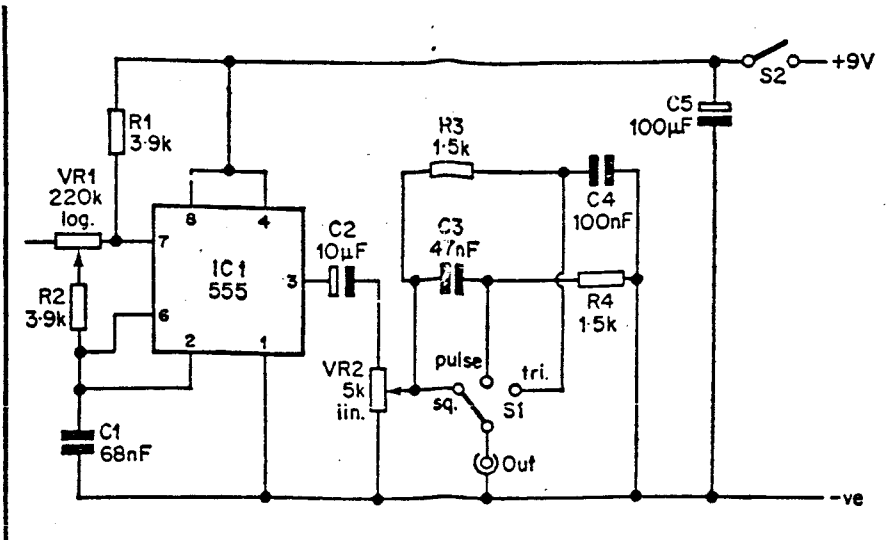2 SINGLE POLE MINI SWITCHES   1 3 PIN SWITCH   VR3 = 50k lin
(2 PIN - ON/OFF)

Fig. 18 The circuit diagram of the Tone Generator.

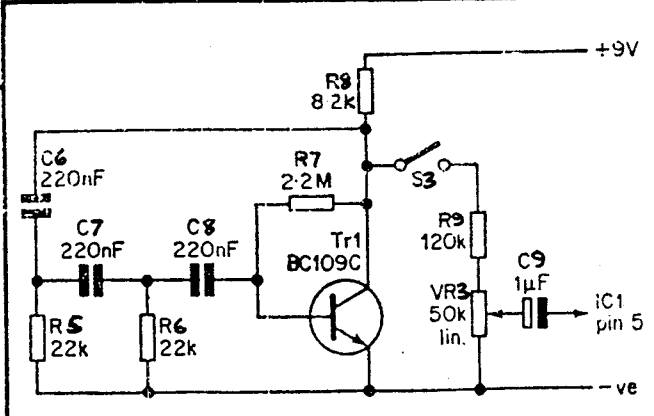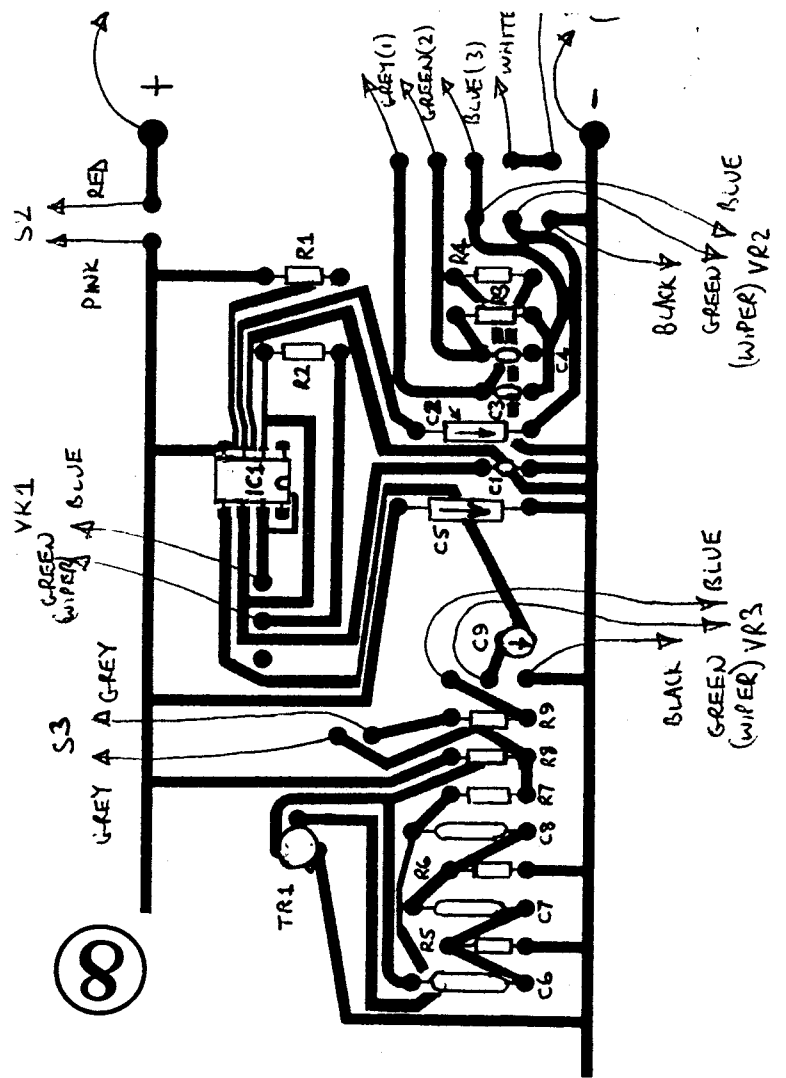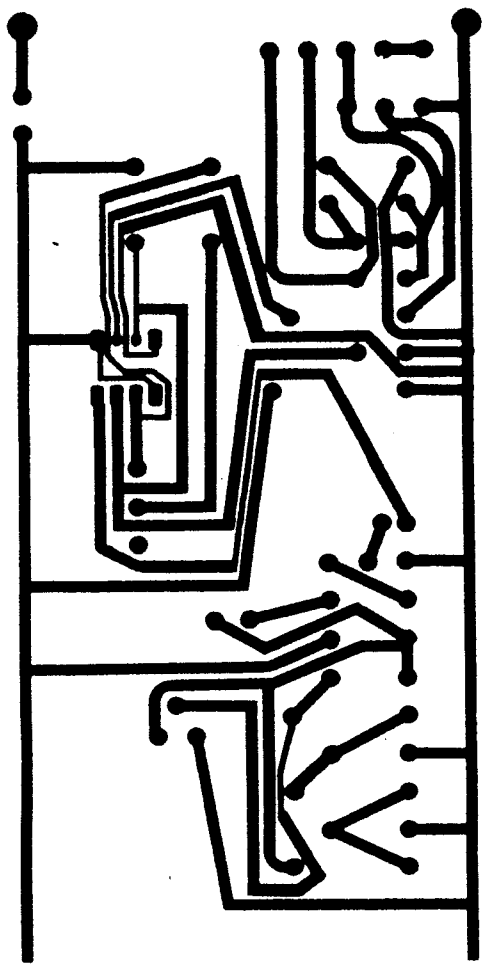

Fig. 19 The circuit of a Vibrato Oscillator for the circuit of Fig. 18

VIEW THROUGH BOARD

⑧

MEET   REPORT - Dave Dick

PRELUDE

After a few days re-charging my batteries on Bournemouth & Southsea beaches, it was time to set about finalising the plans for June 18th.

On the Thursday I remembered that I hadn't paid the balance on the hire of the venue. I strode into the club and said: "Hello John; I've come in to pay the balance on the hire charges".

"Too late" - mutters John. "You know the rules. The balance is due 2 weeks prior to the function. I'm afraid I've let it out to someone else"

I gulp and then panic. After what seems an eternal silence,first his wife and then his daughter burst in to laughter. Some joke John. Panic over.

The first to arrive on Friday afternoon are Frank Bolton and Senor Luis. I make the customary coffee and Frank opens the first bottle of Brandy.

Soon we are joined by Jonathan Bristow and Richard Farrell. We are given English lessons by Frank and then set about Oricing.

At midnight I force them to turn the Atmos off and retire to bed.

Saturday starts at 7 a.m for me. I go off for a run to relax myself for the long day ahead.

By 9.30 we are setting up at the venue, though it is nearer 11 before I finally arrive officially e.g shaved and wearing my ORIC T-Shirt.

THE MEET

Jon Haworth had set up a couple of tables with Jean and Laurent to demonstrate CEO products and all manner of things. During the day the attendees were witness to demos on Anksemnon, Nibble, PC to Oric file transfer, and probably a lot more that I missed.

Meanwhile I was busy with a multitude of tasks; namely: explaining their new acquisitions of disc driving systems to James Groom and Gerry Amato, checking out John Hurley's 5.25", testing a batch of other drives, and trying to sell everything in sight.

It was nice to put faces to some of the newer names, who up until then had been merely voices at the end of a telephone. Steve 'Muso' Marshall was balder than he had sounded.

Kimbo was busy twisting everybody's arm's so that they would buy raffle tickets. He even managed to persuade Johnathon Bristow to buy two! Then the coupe de grace, as Steve Hopps with left arm forced way up behind his back finally agreed to donating a week's free accomodation at his appartment in Nerja. Young Matthew Dick meanwhile, was busily taking orders for lunch.

As we settled to consume our beefburgers etc.,which were washed down with a liberal supply of ale, Kimbo set about the arduous task of setting the raffle draw in motion. Many of the winners decided to let certain prizes be re-drawn. The draw seemed to go on forever.

During the afternoon session Steve Hopps repaired Atmos keyboards. I sold off all manner of things (cassette software, un-tested drives, books, power supplys, and other bits and bobs), with monies gleaned going to OUM funds and many of the items purchased being donated by the vendors to Frank Boltons Romanian appeal. All manner of things were packed into David Uttings car for onward delivery to Frank's.

All the while Matthew was trying to video the event.

Jonathon Bristow demonstrated his as yet un-finished MAGNETIX - a super arcade strategy with very smooth graphics, the likes of which are yet to be seen on a game for your Oric.

Now it was competition time. A dartboard was set up and a picture of Arnt was stuck to it! All participants were allocated three darts each. It aws a close run contest. In the end the adjudicators decided that Jonathon Bristow's two darts in the mouth and one dart in the heart had just beaten my own three darts which all ended up in private parts! (THIS IS ONLY A JOKE, ARNT!).

My wife Ann took a couple of the wives to the shopping centre to relieve their boredom.

WELL - WHAT ELSE HAPPENED? Of course the usual conversations were struck up. The time seemed to fly past and I never really found enough time to chat with everyone. Tony Clark brought along some P.C.s to sell and Bob Terry bought one,whilst Dr.Ray sorted out a printer and discussed his Sedoric Cartridge. I now have the rights to distribute his WORDSPEED. Ray also gave me an updated SECTMAP program,which will be on the forthcoming OUMDISC. The younger element played games. Alan Whitaker sold off some Graphics Tablets extremely cheaply. All the time the younger element played games.

THE EVENING

By 6.P.M we had bade farewell to those who were setting off early!
 Jon H,Jean,Laurent,Gerry Amato and his clan, and I retired to the pub to try the burgers and jacket potatoes.
Soon we were joined by Peter Thornburn,Matthew Coates,Jim Groom,Frank Bolton,Luis,Jon Bristow,Ann,Matthew and my daughter Louise.   The conversations continued and Matthew started the Camcorder again.
 At around 8 o'clock Jon and the French bade farewell and I started up the Disco, whilst Peter and the lads finished off their game of Bar Billiards.
 After a few hours I decided that the regulars were looking quite jolly and decided to start up a collection for Frank's Romanian appeal - nearly 20 pounds was collected.   Matthew left for home,whilst Ann drove Jonathan,Frank,Luis and Jim back to our house,where along with Matthew they started ORICING again. A game of AROUND THE WORLD IN 80 DAYS was the highlight around midnight.
 Ann and I finally arrived home at 4.30 a.m on Sunday. On the way we had picked up a drunk who was now in tow. He was placed in a chair and the front room was now scattered with bodies. Peter Thornburn had arrived back separately - how is she Peter?
 Not much was seen of Sunday morning - reports were vague. I will not name names,but who wet themself?, who showered in lager?, who tried to kiss who? (come on chaps!!!).
 The rest of the day was spent quietly - to begin with!
 Jonathan sorted out some routines for Frank. Frank helped Louise and Matthew with their homework. Peter returned to Kent and Jim to the Midlands.
 The evening session began in earnest when Frank discovered that there was still plenty of Brandy left. At midnight I left them to it.
 All was quiet at 3.30 am on Monday as I prepared for work. On my return (11 am), Frank and Luis had set off for Leicester, leaving me at the mercy of Jonathan Bristow.
 We had an interesting few hours. He passed on some nice routines that he had written as well as the music files for his MAGNETIX. The main theme is 29 minutes long.
 In the middle of the afternoon I drove Jonathan to the Bus station and the MEET was officially over!
 My sincere thanks to all those who came along and also to Ann (the wife) for putting up with us all. We must all do it again some time - but NOT until next year!

PICTORIAL

On the next page are the pics from the meet: Left to Right - Top Row - 1) Jean (Mr.Atmos) Boileau shows why French barbers are alwasys skint, 2) Dr.Ray and Arthur Crawford discuss Pythagoras, 3) Ann and Dave Dick eagerly await their turn in the competition.
 Middle Row - 1) Kimbo practices the Shake'n'Vac, 2) Laurent C is trying to remember what letter he still needs for his pretty badge - you've got the 'C' and the 'E' ,so try the 'O' Laurent!, 3) Steve Marshall and Ally prepare to do their 'Sonny and Cher' - sorry Muso; the Karioke is next week.
 Bottom Row - 5 guys in deep thought - Steve Hopps,Jim Groom,Frank Bolton,Chris Hearn and Peter Thornburn - How is it that Peter is the only one with a glass of ale?
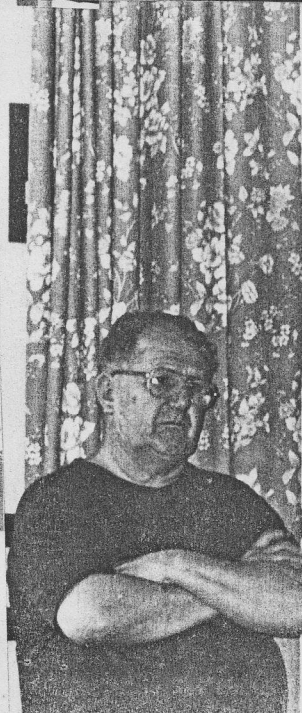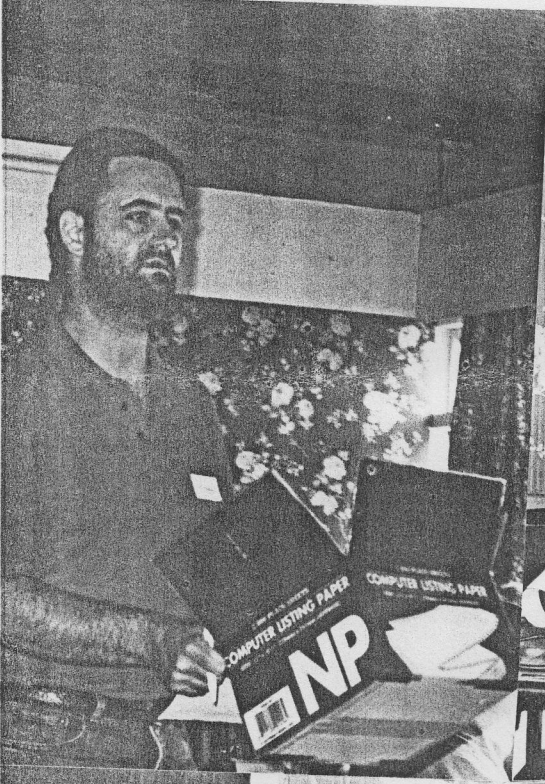
B I T S ' N ' B O B S

CONTACT LIST UPDATES

It is time to amend your Contact Lists folks, and so here we go:

ROD TITCHENER has moved to 41 CHESTNUT GROVE, S. CROYDON, CR2 7LL. New works number is: 081 666 7538, FAX is: 081 666 4285. Not sure if home number is as was - ROD please confirm.

PAUL HUTTON now has a new printer. It's a STAR SJ48 INKJET - see LETTERS page regarding other items.

NORMA WRANGHAM has discarded her old printer in favour of a HEWLETT PACKARD DESKJET 510

TONY CLARK has now moved away from Aylesbury. He no longer has an ATMOS or Disc Interface. Best wishes to Tony.
===

EPSON PRINTER DUMP

STEVE MARSHALL has amended the Epson Printer Dump that was in OUM a few months back. It now prints the right way round - i.e CLIPART etc. should now print as displayed on screen and not reversed.

```
10 LPRINTCHR$(27);"3";CHR$(7)
20 FORM=1TO199
30 LPRINTCHR$(27);"K";CHR$(223);CHR$(1);

50 FORN=1TO239
60 A=POINT(N,M)
70 IFA=0THENA=7ELSEA=0
80 LPRINTCHR$(A);
90 LPRINTCHR$(A);
100 NEXTN
110 LPRINTCHR$(13)
120 NEXTM
```

===

STEPHEN HAIGH

STEPHEN of GHOSTMAN, ATTACK OF CYBERMEN fame (and of course many others), is now back ORICING - you should have that ATMOS by now Stephen.

THE NEXT OUMDISC

The next OUMDISC will definitely go out with the August issue of OUM. I am just putting the final touches to it, and setting about typing up the instruction sheet. Price is the usual 3.50 with OUM funds again being boosted. If you do not want it ,thne please write now. Invoices will be sent out with discs, but I will be happy to recieve payments in advance to cover my outlay on discs.
Included on the disc will be two more tunes from Jonathan Bristow (a la SONIX). One is a new tune,whilst the other is an adaptation of TOLORE,which will help you pick up hints on the use of the Ornaments.
===

MORE BITS'N'BOBS

SONIX TIP

If you want all three sound channels on when you Boot up SONIX,then just do the following:

Load the file 'SONIX.COM' without auto-run (use the 'N' extension).
Insert a line 1120 - GOSUB300:GOSUB350:GOSUB400

Then save with the - SAVEO"SONIX.COM",AUTO

==

MEET PROFIT

Funds of OUM have been boosted by a grand total of 160.60 thanks to the latest Aylesbury Oric Meet. Thanks to all who helped.

==

BIRTHDAY WISHES

HAPPY 70th birtday to Frank Bolton for July 10th.

EVEN OLDER

Just starting his 96th year is ORIC user extraordinaire - Jack Brooks from Ipswich - affectionately known as Kimbo's pensioner. You may remember mention of Jack some while ago. As well as his ORIC-1, Jack also has other computers, and makes rugs.
Jack has a broken ORIC-1, and is looking for a cheap replacement. It must be an ORIC-1 - I think the ATMOS would be no good for his programs. If anyone can let Jack have a cheap ORIC-1,then would they please contact me in the first instance. Your price should include postage to Ipswich. PLEASE,PLEASE help this guy out - I THANK YOU IN ADVANCE.
==

SPECIAL THANKS

SPECIAL THANKS FROM JIM GROOM TO STEVE HOPPS FOR RE-SOLDERING HIS ORIC. IT ISN'T CURED, BUT IS SLIGHTLY BETTER!

FUTURE ISSUES OF OUM

ARTICLES FOR INCLUSION IN THE AUGUST ISSUE SHOULD REACH ME BY JULY 25th PLEASE.
ITEMS FOR INCLUSION IN SEPTEMBER ISSUE TO BE WITH ME BY AUGUST 20th PLEASE.
DUE TO HOLIDAYS, THERE WILL BE NO OCTOBER ISSUE.
THERE WILL BE A DOUBLE ISSUE IN NOVEMBER, AND ARTICLES ARE REQUESTED BY OCTOBER 20th PLEASE.

Machine Code for the Oric Atmos (Part 37)   Peter N. Bragg

The Story so far
---------------- We have looked at essentials for machine code programming
and a small selection of useful 6502 Instructions appeared in Part 22 of the
series. Last time we listed a simple utility that would enable us to show
any hex byte value, by producing the required pair of display codes for it.
As promised, listed immediately below is a simple demonstration routine that
makes use of that utility, plus an abreviated repeat of the utility listing.

```
Oric                            Demo Routines                       25 Apr 94
----                            -------------                       ---------
[ CALL#1010 ]----------------[ Demo - Display Key Code ]----------------[ / ]
                                ---Parameter Block 1001---
1001:              :            : Copy of Hex code item in Accu (Keyboard input).
1002:              :            : MSB/1st character for display
1003:              :            : LSB/2nd character for display

            ---start---         ---Fetch a Key---
1010:20 78 EB : JSR EB78        : Read Keyboard (OS "GTORKB")
1013:10 FB    : BPL"1010"       : until key pressed.

1015:8D 01 10 : STA 1001        : Save a copy of the Key press input and then
1018:20 40 10 : JSR 1040        : convert that input (Hex Code) to Display code.

                                ---Display the Hex Byte--
101B:8A       : TXA            : Copy Register X into the Accumulator and then
101C:48       : PHA            :  put that onto the Stack to preserve Reg X.

101D:AE 02 10 : LDX 1002       : Fetch MSB display code and put it into Reg X.
1020:20 7C F7 : JSR F77C       : Use OS "VDU" to display it.
1023:AE 03 10 : LDX 1003       : Fetch LSB display code and put it into Reg X.
1026:20 7C F7 : JSR F77C       : Use OS "VDU" to display it.

1029:A2 20    : LDX#"Space": load a Space code into Register X and then
102B:20 7C F7 : JSR F77C       :  use OS "VDU" to display two spaces
102E:20 7C F7 : JSR F77C       :  to separate each displayed hex value.

1031:68       : PLA            : Retrieve original Register X contents into Accu
1032:AA       : TAX            :  and copy them back to Register X.

                        ---Continue or Finish ?---
1033:AD 01 10 : LDA 1001 : Fetch copy of Key input again for test.
1036:C9 1B    : CMP"ESC" : Test - Was "ESC" key pressed ?
1038:F0 03    : BEQ"103D": Yes - so skip to finish now.
                          No - so........

                        ---Continue---
103A:4C 10 10 : JMP 1010 : back to read keyboard again for next key press.

                        ---Finish---
103D:60       : RTS      : Exit back to Basic.
            ---end---
```

The utility can produce display codes for a single hex byte, but it really
needed something to show how it could be used. The demonstration routine
listed above is limited in operation to the codes available on the keyboard,
but hopefully, it does illustrate what the utility can do and how it works.

The listing immediately below,   is for the display code conversion utility,
                                    which is called by instruction 1018, in the
1040:8D 01 10 29 0F 20 5C 10   above listing. This abreviated listing is
1048:8D 03 10 AD 01 10 4A 4A   only included here, to complete the working
1050:4A 4A 20 5C 10 8D 02 10   demo, above. To understand the utility you
1058:60 00 00 00 18 69 30 C9   really need the full listing and description
1060:3A 30 03 18 69 07 60 00   which appeared in last months article.

The routine was written for the Atmos, so Oric-1 users should change
instruction 1010 to 20 05 E9. Also instructions 1020, 1026, 102B and 102E,
should all be changed to 20 3F F7 in order to run it on the Oric-1.

The small Parameter Block 1001 is the same one featured in last months
listing, the hex byte stored in location 1001 is the keyboard input. All of
the operations listed in the above demo, have been covered in past articles,
however, it is worth having a brief look at how the demo routine works.

Once called by CALL#1010 the demo routine reads the keyboard using the
BPL Branch instruction to provide a loop which repeats the keyboard reading
until a key is pressed. As soon as that happens, the code for the key is
stored in location 1001 and the utility, covered in detail last time, is
called up by instruction at 1018 to produce the two display codes from the
key press input (hex byte). Those two display codes are then stored in the
Parameter Block, in locations 1002 and 1003, ready for use. Now we only need
to display the two codes in the correct order.

The display codes must to be loaded into Register X in order to use Oric's
display call "VDU". It is not essential here, but it is a good practice to
preserve Register X before using it. This is done by instructions 101B and
101C, which in effect make the Register X operations "transparent". Make it
easier for yourself by doing things this way, because when you write larger
pieces of software, you won't have to worry about whether you are going to
corrupt Register X for something else in your software. All you have to
remember is to reverse the procedure when you have finished using Register X,
in order to retrieve the original contents. This is done in the demo routine
by instructions 1031 and 1032.

The display codes are fetched into Register X and displayed using Oric's
"VDU" call. The "MSB" is displayed first and is followed immediately by the
"LSB" display code. The demo will display the result of any number of key
presses. The individual key codes really need a couple of spaces between
each one to make them easier to read, so instructions 1029 to 102E provide a
space and display it twice to provide visual separation.

Now, having displayed the key code, what happens next ? The obvious course
of action is to return and read the keyboard again. That is done by the JMP
instruction at 103A, which loops back to read the keyboard again. However,
we also need to provide some way to exit from the program, when we want it.
We could always just bang the Reset Button, but that is not the best way.
What we have here, are three instructions at 1033 to 1038, that fetch
another copy of the key input and test it, to see if it is "Escape Key"
(code 1B). If the CMP instruction finds the "Escape Key " code, it will
enable the BEQ Branch at 1038 and the operation will then skip the "loop"
instruction 103A and instead will go straight to the Exit (instruction 103D).
Of course, you dont have to use the "Escape Key", to quit the program, you
could try "X" for eXit or "Q" for Quit instead.

That's it. A simple demo that can be modified for your own use.............

RAMBLING

IN THE

62

ROM
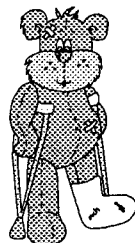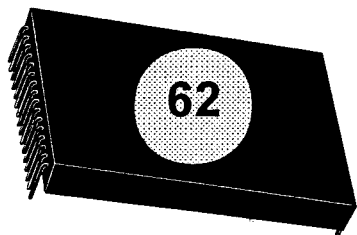
Hearing an echo on your Atmos

This following short program produces some interesting sound effects. Changing the values before and after STEP in line 30 either lengthens or shortens the echo. Changing the value taken from X, in line 60, will increase or decrease the number of echoes.

```
10   X=15
20   P=RND(1)*300
30   FOR N=P TO P+100 STEP 5
40   SOUND 1, N, X
50   NEXT N
60   X=X-2
70   IF X<2 THEN 10 ELSE 30
```

P. Brown,
Bexley, Kent

PCN 105   30 March 1985

What a Meet...

It was as good as ever to see all the old faces at Aylesbury; I trust everyone enjoyed it as much as I did. No doubt Dave will fill in the details elsewhere... It was also a pleasure to welcome Laurent and Jean again for the weekend.

Rambling on...

Lots of explaining to do this time as we embark on the section of the ROM that works away when you execute a FRE() command...

2 - Reorganisation of strings

REORGANISE STRINGS

Entry: #C2=0

Exit: String reorganised and #A2 initialised

Remarks:
> The flexibilty of use of alphanumeric variables in BASIC is due entirely to the dynamic management of strings. This routine is responsible for that dynamic management.

The problem:
> On each use of such a variable, a new zone in memory is reserved below the top of free menory, and the top of free memory thereby lowered. Little by little the strings zone is filled with redundant strings containing either temporary or old values. There comes a time when a string attempts to go below the top of the arrays zone in memory. It is then necessary to reorganise the strings in memory, i.e. to delete the redundant strings and retain only the active ones.

Principal:
> The only active strings are those which have a pointer, whether it be in the variable tables, the array tables or in the pointer stack. The general idea is simple: a temporary top of memory is fixed (the HIMEM at the start of the routine) and then the string found which is the nearest to that address in memory without being above it - the one immediately above will have been treated already during the previous pass.

Once the appropriate string has been located, it is moved so as to attach it just below the temporary top of memory, and that top of memory is then moved to a new address just below the last-moved string. The routine then starts again.

To ensure that the string selected is indeed the highest, it is necessary to check all the string pointers on each cycle of the routine. Global execution time is therefore proportional to the square of the number of strings, which explains the slowness of the routine.

When no further string fitting the criteria is found, reorganisation ends.

Figure D4-A illustrates the general principal.

The siginificance of the variables used in the routine is as follows:

#A2-#A4	temporary top of memory, moving little by little to the final value.
#CE-#CF	address of the highest (below top of memory) current string. This pointer is initialised to the end of arrays and not to 0 so that strings held within BASIC progam text are avoided.
#BD-#BE	address of the pointer to the highest current variable. This also acts as a flag to test whether the reorganisation is at an end. Initialised to 0, it is only used when a string corresponding to the criteria is found.
#91-#92	index to pointers
#C2	length of an element: 3 for the pointer stack, 7 for variables, 3 for arrays. Treated at the start as being 0 (see basic initialisation).
#C4	length of the element of the highest current string.

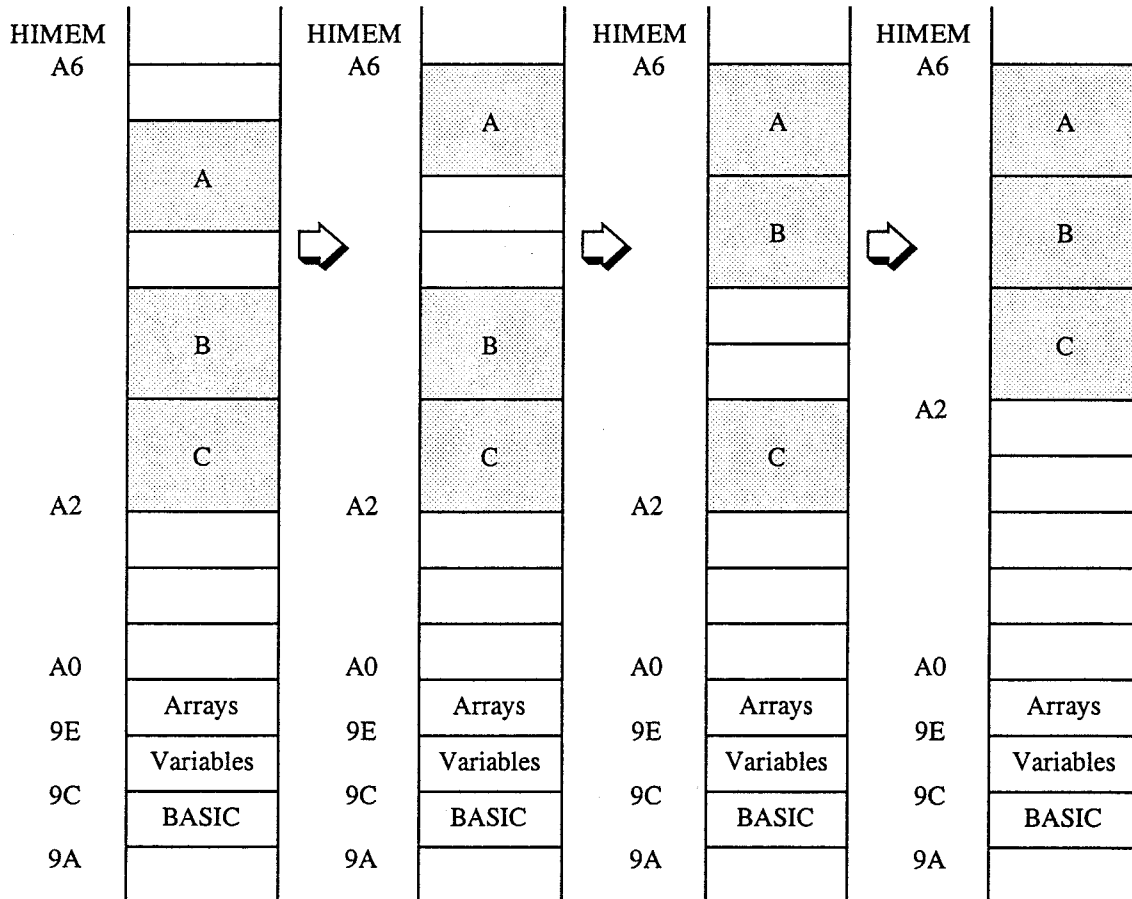Finally, there is a flowchart illustrating how the routine works (Fig. D4-B).

FIGURE D4-A
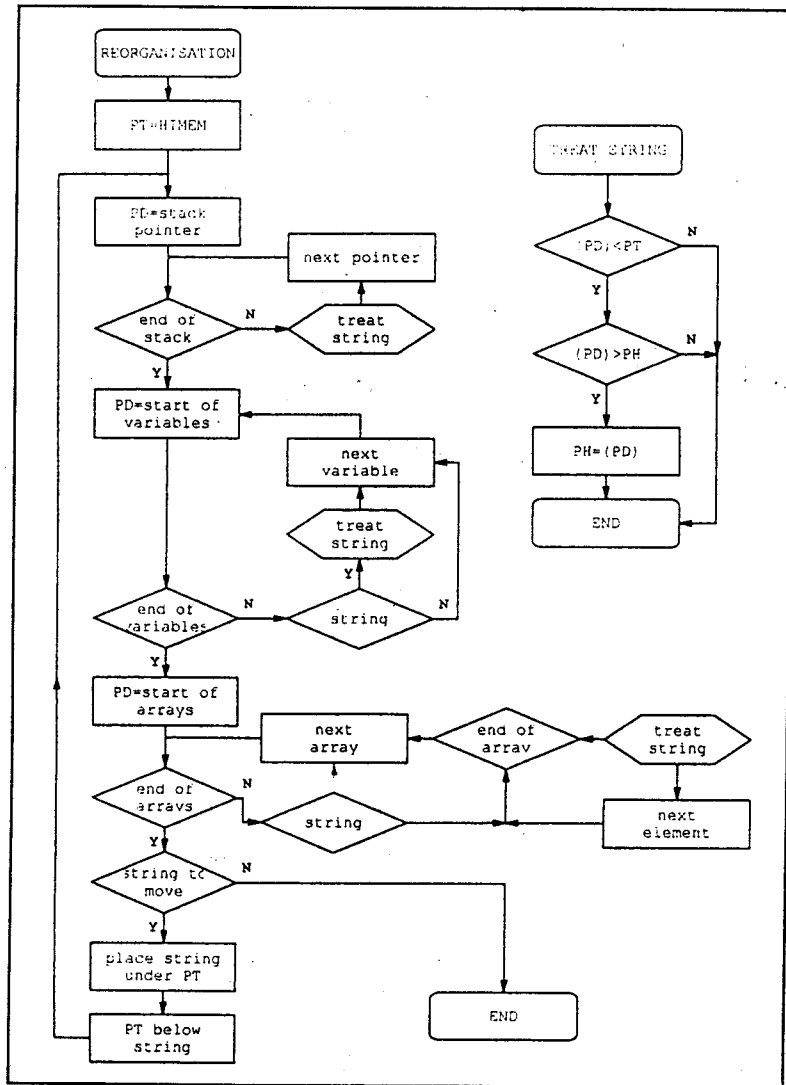
FIGURE D4-B

D595	LDX A6	D650	LDX A6		
D597	LDA A7	D652	LDA A7	Take HIMEM	
D599	STX A2	D654	STX A2		
D59B	STA A3	D656	STA A3	as current top of memory	
D59D	LDY #00	D658	LDY #00		
D59F	STY BE	D65A	STY BE	address of highest variable	
D5A1	STY BD	D65C	STY BD	set to 0 for the moment	
D5A3	LDA A0	D65E	LDA A0	take end of arrays	
D5A5	LDX A1	D660	LDX A1		
D5A7	STA CE	D662	STA CE	lowest current string	
D5A9	STX CF	D664	STX CF		

Check pointer stack

D5AB	LDA #88	D666	LDA #88	AX=pointer stack
D5AD	LDX #00	D668	LDX #00	
D5AF	STA 91	D66A	STA 91	in workspace pointer
D5B1	STX 92	D66C	STX 92	
D5B3	CMP 85	D66E	CMP 85	end of stack reached?
D5B5	BEQ D5BC	D670	BEQ D677	yes, move on to variables
D5B7	JSR $D636	D672	JSR $D6F1	no, find the nearest to top of memory

D5BA	BEQ D5B3	D675	BEQ D66E	unconditional: end of pointers

Check variables

D5BC	LDA #07	D677	LDA #07	Initialise length
D5BE	STA C2	D679	STA C2	of a variable
D5C0	LDA 9C	D67B	LDA 9C	
D5C2	LDX 9D	D67D	LDX 9D	take start of variables
D5C4	STA 91	D67F	STA 91	
D5C6	STX 92	D681	STX 92	as workspace pointer
D5C8	CPX 9F	D683	CPX 9F	end of variables reached?
D5CA	BNE D5D0	D685	BNE D68B	no, continue
D5CC	CMP 9E	D687	CMP 9E	
D5CE	BEQ D5D5	D689	BEQ D690	yes, move on to arrays
D5D0	JSR $D62C	D68B	JSR $D6E7	find nearest to top of memory
D5D3	BEQ D5C8	D68E	BEQ D683	unconditional

Check arrays

D5D5	STA C7	D690	STA C7	start of arrays (end of variables)
D5D7	STX C8	D692	STX C8	as workspace pointer
D5D9	LDA #03	D694	LDA #03	
D5DB	STA C2	D696	STA C2	initialise length of an element
D5DD	LLDA C7	D698	LDA C7	
D5DF	LDX C8	D69A	LDX C8	take address of current array
D5E1	CPX A1	D69C	CPX A1	is it the end?
D5E3	BNE D5EC	D69E	BNE D6A7	no, continue
D5E5	CMP A0	D6A0	CMP A0	
D5E7	BNE D5EC	D6A2	BNE D6A7	
D5E9	JMP $D675	D6A4	JMP $D730	yes, go to end

Test an array

D5EC	STA 91	D6A7	STA 91	Save start of array
D5EE	STX 92	D6A9	STX 92	in workspace pointer
D5F0	LDY #00	D6AB	LDY #00	prepare index
D5F2	LDA (91), Y	D6AD	LDA (91), Y	first character of name
D5F4	TAX	D6AF	TAX	in X
D5F5	INY	D6B0	INY	
D5F6	LDA (91), Y	D6B1	LDA (91), Y	the second
D5F8	PHP	D6B3	PHP	it's enough to save its sign
D5F9	INY	D6B4	INY	
D5FA	LDA (91), Y	D6B5	LDA (91), Y	length of array, low byte
D5FC	ADC C7	D6B7	ADC C7	and calculate the address of the next array
D5FE	STA C7	D6B9	STA C7	and save it
D600	INY	D6BB	INY	
D601	LDA (91), Y	D6BC	LDA (91), Y	repeat for the high byte
D603	ADC C8	D6BE	ADC C8	
D605	STA C8	D6C0	STA C8	
D607	PLP	D6C2	PLP	
D608	BPL D5DD	D6C3	BPL D698	pass to next if real array variable

(to be continued...)

J.H.

          Have you ever wanted a keyboard with fractions like a half,
or a quarter, or powers like "squared" and "cubed" or a character to
give you a root sign, a multiplication and division sign that children
can understand better than the * and / signs? If so, then you might
be interested in this month's listing (which will be on the next OUM
              disk for our more discerning Oric enthusiasts.)

          Have you ever wished you had a set of artificial quote
marks, commas and colons that you could use for your screens without
the computer taking them as BASIC instructions? If you don't
understand what I'm getting at, try writing a programme line:-
10 PRINT"He said, "Don't be stupid!" and left the room."

          You will find the print-out says:
   He said O
?SYNTAX ERROR IN 10

          How would you like to be able to put spaces at the beginning
of a DATA statement without using quotation marks, use commas without
sending the message "END OF DATA STATEMENT", or put in a colon without
stopping the DATA statement stone dead? All these things can be done
with "false keys", keys which are programmed to print on screen the "
and the : and the , without acting as BASIC instructions for the
computer because they come from a different key.

          I have always resented having to write cafe and pate without
an accent, and now I have a key programmed to give it to me. Roots and
powers are included in the re-designed keyboard. I don't intend it to
be all-inclusive. You can take out some of the less essential keys
and re-design them to your own requirements.

          For those of you that have ATMOS and use SEDORIC we can move
one step further and programme these new characters to come up with
the function key in much more appropriate places (pressing FUNCT + E
would give an accented E.) CHR$ (96) and (126) will give us an extra
two keys transferring the redefined characters to keys which are FUNCT
controlled.

          If Dave thinks that anyone might be interested I'll re-design
another set of keys for next month and explain how I use KEYDEF,
KEYUSE and KEYSAVE to the best effect.

 AND NOW FOR THE LISTING - PLEASE NOTE THAT THE CHARACTERS IN LINES
60245 AND 60275 AND 60276 DON'T MAKE SENSE IN THE LISTING UNTIL THE
PROGRAMME IS 'RUN'.
THEY THEN ARE RE-DESIGNED AS: X, $\div$ AND é

                                              - FRANK BOLTON

```
10 CLS
20 PRINT:PRINT"WE SHALL REDESIGN 13 CHARACTERS."
30 PRINT:PRINT"   Please make a note (NOW) of the   "
40 PRINT"   following symbols before they are  redesigned."
50 PRINT:PRINT"@ & * / ! \ { } [ ] # $ !"
60 PRINT:PRINT"There you have the 13 old characters."
70 PRINT"When you have copied them down        press any key."
80 GETK$
60000 REPEAT
60010 READA
60020 FORN=0TO7
60030 READP
60040 POKE46080+8*A+N,P:NEXT
60050 UNTILA=1
60100 DATA38,0,16,0,7,0,16,0,0
60110 DATA124,8,8,62,8,8,0,0,62
60120 DATA92,0,0,0,0,0,4,4,8
60130 DATA125,34,36,40,22,41,2,4,15
60140 DATA91,0,0,8,0,0,8,0,0
60150 DATA64,4,8,28,34,62,32,30,0
60160 DATA47,0,8,0,62,0,8,0,0
60170 DATA42,0,34,20,8,20,34,0,0
60180 DATA93,34,36,42,22,42,31,2,2
60185 DATA123,10,10,0,0,0,0,0,0
60186 DATA35,24,36,8,16,60,0,0,0
60187 DATA36,56,4,56,4,56,0,0,0
60188 DATA33,7,4,4,4,4,4,20,40
60190 DATA1,0,0,0,0,0,0,0,0
60200 PRINT:PRINT"NOW COPY THE RE-DESIGNED CHARACTERS    UNDER THE OLD ONES."
60210 PRINT:PRINT"   You now have a false set of quote"
60220 PRINT"marks,colon and comma for screen use."
60240 PRINT"The advantage is that they won't be"
60242 PRINT"interpreted as BASIC instructions."
60245 PRINT"For children, * and / have much more"
60250 PRINT"meaning than the keyboard originals."
60260 PRINT"Fractions, powers, roots, and other"
60270 PRINT"symbols are handy for maths lessons."
60275 PRINT"You can also, from now on, write caf@"
60276 PRINT"and pat@ instead of cafe and pate."
60280 GETK$:GETK$
```

WELL DONE FRANK - A GREAT ASSET WILL THAT ONE BE,AND I FOR ONE LOOK FORWARD TO MORE.

WE REALLY HAVE SOME NICE UTILITIES COMING INTO THE OUM OFFICE AT PRESENT,AND I AM DESPERATELY TRYING FIND TO GET THEM ALL INTO PRINT.
                                                    - DAVE

T H E   B A C K   P A G E

NEARLY AT THE END OF ANOTHER ISSUE. PLENTY OF VARIETY THIS TIME. WE FINISH OFF WITH SOME ODDS AND ENDS.

MESSAGE TO DENIS BONFIELD FROM PETER BRAGG

Did you solve your BBC disk format problem. I have some formatting routines on disk. Do you have a Master 128 or BBC Model B?

SEDORIC V2.1

Jon Haworth is now dealing with orders for SEDORIC.

WORD-SPEED

I am now dealing with orders for WORD-SPEED.

THE NET

Apparently a program on BBC2 has a program called 'THE NET'. It had a feature on the 'Classic Computer Club', a bunch of guys who collect all the old computers and software. Steve Marshall asks if anyone has their address?

PARAS

Note to Brian Kidd - apparently PARAS from Lothlorien was missing from the A to Z.

ODDMENTS FROM THE 'MUSO'

Steve Marshall came across a Micropride Ltd., who had a Trackball for the ORIC-1/ATMOS, and wants to know if anyone has one.

He has also found a listing for 'HERO ZERO', which is on Jon's Public Domain Listings. He wants to know if anyone has tapped it in. (NOTE FROM THE EDITOR: I wonder if it is the same HERO ZERO commercially released by Prosoft?)

GAMES REVIEW

The first part of ARNT ERIK ISAKSEN's Games Review series is about finished.

Also promised is a simple program called 'MATTHEW'S HITMAN DOES THE JOB', which is apparently both cool and NASTY (sounds a bit like me!).

I hope Arnt enjoys his stay in London. Please note that less than a week's notice to get a new ATMOS fro Steve Hopps is not really on. Steve has not got them pre-built. It is a case of putting boards and a keyboard together and then a lengthy soak test. Plus of course delivery. If it wasn't ready for your visit, then it was for lack of trying.

HARD ROCK

Peter Thornburn is on the look out for Albums from Hard Rock guitarist - Ronnie Montrose. Can anyone help? - more to the point - has anyone heard of him?