ØRIC USER MONTHLY

and Alternative Micros

Helping to keep the Oric alive

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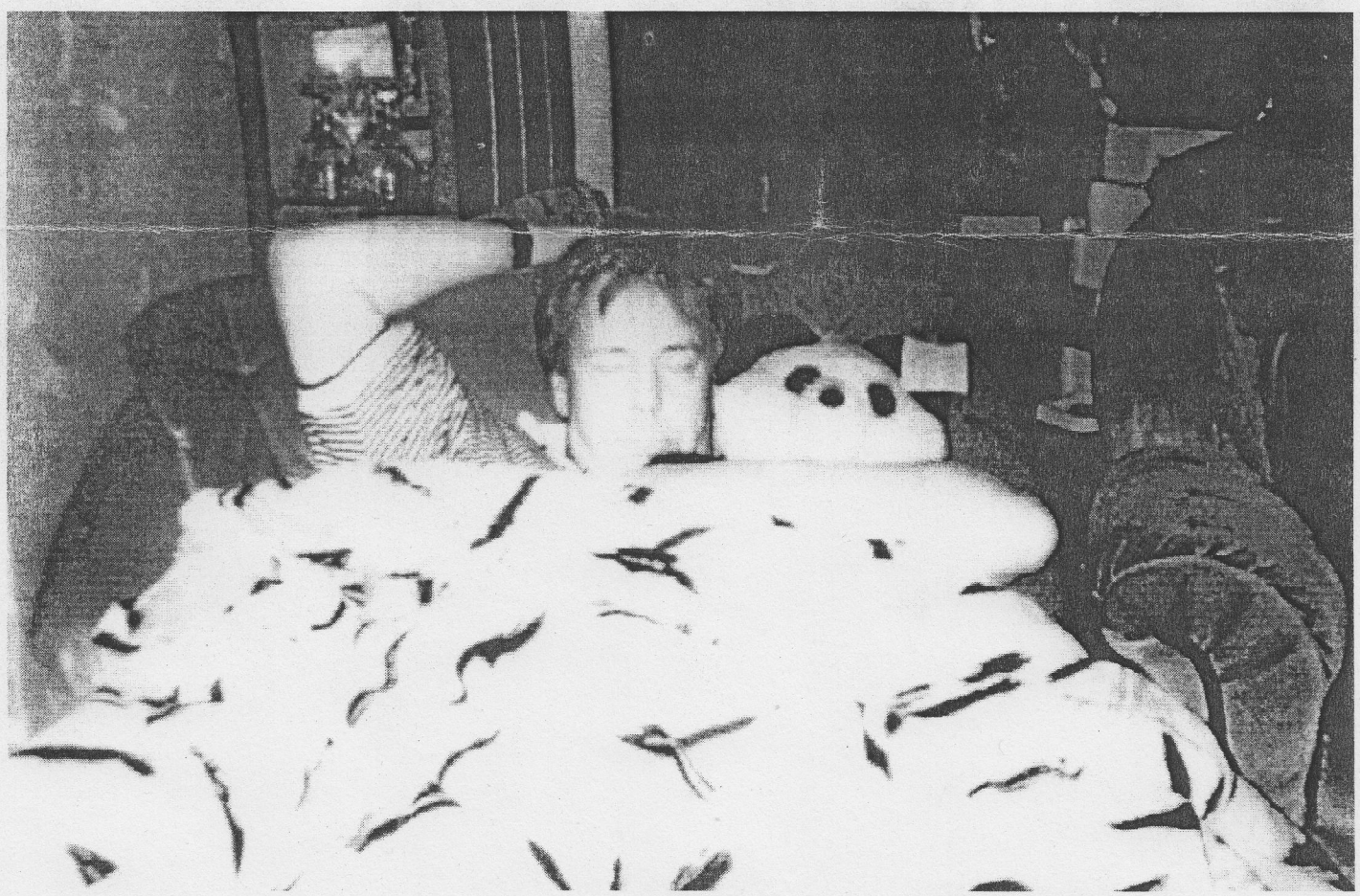

AND THE USER ASLEEP !!

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T H E E D I T O R I A L

HELLO AND WELCOME,

to yet another issue of Oric User Monthly. Plenty of new features this time around and hopefully some new techniques to help you with your programming.

I am trying to get to grips with WORDSPEED on this page and on others in this issue. There is a splattering of pages in which I use EASYTEXT. Meanwhile young Matthew is in his room beavering away on a page of text with his borrowed LAPTOP.

The INDEX to this issue will appear at the back. Let's get on.

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O R I C I N T H E S T A T E S

A letter from Denis Bonfield states: " By the time you read this I should be in the U.S.A. When I am settled in I will forward you my new address so that you may restart delivery of O.U.M to me.

- Denis Bonfield (NO FIXED ABODE)

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O R I C G O O D I E S F O R S A L E

Jon Haworth has been busy sorting through some Oric items after an excursion to Belgium. Amongst the hardware and NOT for sale are: a serial interface, light pen, calculator pad,extension cards, a Rom box and (WAIT FOR IT) - A MIDI INTERFACE.

Yes the Midi is built. Jon has all the instructions on how it was built and will tell all in a series of articles in O.U.M.

FOR SALE - many Oric books,both English and French. Some are the standard type of Oric book,whilst others contain interesting projects.

For a full book list (with some narrative), please send an S.A.E direct to Jon.

FOR SALE - "THE'ORIC" magazines. A great read in French. Even if you are not a linguist,you will still find your way around these magazines.

Issues available are nos: 4 to 21, 23 to 26, and 28 - 37. One each of the above available,except for the following for which there are two off: - issues 18,19,20,29,36 and 37.

PRICE IS 1 pound each + postage.

Also FOR SALE - "MICR'ORIC" magazines. Again French and again excellent material. Issues available are : 4, 5 (two off),6 (no cover), 7 and 8.

Again 1 pound plus postage.

"ORIC OWNER" magazines FOR SALE are issues 1 to 8 (issue 7 has no cover).

Price on these is 50 pence plus postage.

TERMS: Strictly first come,first served. Send no money as postage will not be known until they are despatched. You will be invoiced for goods on despatch. All correspondence on the above direct to Jon Haworth at the usual address.

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NEWS ... NEWS ... NEWS ... NEWS .... NEWS ..

ORICALL

YOUR BULLETIN BOARD NEEDS YOU

Okey Cokkey! We have had the Summer (what there was of it). The nights are starting to draw in. There is nothing on the box. So why oh why aren't you logging back onto the Bulletin Board? Forgotten all about it had we? ORICALL was set up for your use and to meet your demands. Nick has worked long and hard through the Summer improving it and adding more to it. O.U.M will be using it as a way of keeping you up to date with the latest news and starting this month will advertise special offers just to those who log on.

Let's keep ORICALL alive. PLEASE LOG ON.

==========

CUMANA INTERFACES

In 1991 the quoted price for these disc interfaces was 45 pounds. It was assumed that this included postage/insurance.

Steve Hopps has just realised the cost of putting these units together and the work involved. Steve like all involved with the ORIC has a full-time job to do first. Selling Oric bits will never feed the family.

I whole heartedly agree with Steve when he says that the price must WITH IMMEDIATE EFFECT increase to 50 pounds incl. post.

If you have been 'umming and aahing' about whether to splash out your cash, then I'm afraid you'll have to fork out another fiver.

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JEO FROM THE CEO

CEO members who subscribe for the Disc may of found a couple of errors with the latest.

MUSIRAMA,though on the menu,was not on the disc. It will be on a future disc.

AFFAIRE UN'OR (I think that was it's title) has a bug in it. You can return your disc to Jon Haworth to have it corrected.

What else was on the disc? LORIGRAPH (super design aid) with English manual and indeed an English screen. Also TRIDENT DE NEPTUNE (a fun arcade). What else? Can't remember,but worth the money alone for LORIGRAPH.

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THE BACKLOG

Orders and letters have been flooding in to the OUM office. Please be patient. As I type this (last week of September), I have taken a week's holiday to: a) relax prior to the Xmas rush at work, b) get back into my Running, and c) to catch up on Oric matters. The later seems to be taking up most of the week. I have recently become involved in some Disco work on Saturday nights. The name D. J. Dick has taken on a whole new meaning! I enjoy doing it,the money is handy, but it does mean less free time. Also the hardware side of the Oric has been busy. By next week I will of delivered 8 disc drive systems in less than a month.

==========

NAME CHANGE

OUM reader,new Oric owner and computer salesman Tony Clarke of Aylesbury has changed the name of his business. After being a partner in SHADOWRAM,then setting up COMPUTER SUPPLIES (really naff title eh!), then of late being CYBORG COMPUTERS; he has now opted to call himself DYNAMIC COMPUTING. You'll have to lose a few stone in weight to live up to that name Tony!

WATCH THIS SPACE for all the latest in how to fork out a hundred notes to change your image!

After all, I recently had a letter from Steve Marshall,and I quote: " I don't see the point in printing Tony Clark's address as he doesn't reply to letters. At least he didn't reply to mine. If he had then he could of sold a couple of computers!"

Come on Tony defend yourself.

RAMBLING IN THE ROM - 53

Summer's gone...

One advantage of the summer is that after all the flurry of the July Meet, there's time to get your breath back and have a break whilst others go on holiday, tend their gardens, etc. In short, less post for a month or two, and time to think about a useful project or two.

For some time now the desk has been full to overflowing with an Atmos, disc interface, four drives, monitor, modem, printer and cassette, not to mention all the discs. Wouldn't it be nice, I mused, if most of it could be tucked way inside a PC case! To cut a long story short, I got the chance to buy an empty mini-tower case cheap, and away I went. I now have an Atmos PC. In the case are the Atmos motherboard, the disc interface card, the power supplies and the four drives. There are four ports - printer, keyboard, monitor and cassette (with RS232 to follow), and the keyboard is of course an Atmos minus its motherboard. It took a good few hours to put it all together, but the result is very pleasing, if only in that all the wires trailing about the desk have disappeared. It's also made more room, enough perhaps for one of the Telestrats...

In due course a full description of the construction will appear in the CEOMAG (I've been promising Laurent a proper article for years).

Oricall BBS

We now (early September) have some ten registered users of the BBS, which is only just about a viable number. I appreciate that the real problem is that modems and RS232 interfaces are simply no longer available, and we are working hard on resolving the problem. We now have one of the £29 modems from First Surplus of Bedford, and a splendid piece of kit it is too. Nick is well on the way to adapting the BBS software to suit, and the two Daves are working on the interface. Hopefully we can put a package together that will enable others to take advantage of the BBS at modest cost. More news as we have it.

By the by, watching Nick put together 'Columns', I was mightily impressed by Dr. Ray's Assembler. Source files are written within 'Wordspeed', with all its agility in editing text, and then simply compiled into executable machine code. I am familiar with nearly all the other Assemblers available on the Oric (including Toolkit, Oric-Mon, Orion and EAD65C), and while this one does not have break-points or a stepping facility, in terms of sheer usability and reliability it beats the pants off the lot of them. Nick's full review should be in this issue; either way, if you program in machine code, or want to give it a try, this is the Assembler to have.

Don't forget that Part 1 of the Rambler's Guide (#C000-#CFFF) is available for £3.50 plus 50p post and packing, which brings us neatly on to...

Rambling on...

The going is getting a little heavier now as we delve into the treatment of operands and move onto the DIMming of arrays...

' <=> ' (OPERATOR)

Principal:

This is a very complicated routine. Remeber the structure of the system variables used:

#BC : %0000>=<C #2D : %00000>=<

In effect, a single routine treats all the comparison tokens (= , <> , > , >= , etc...). The token is condensed in the above system variables. Moreover, the system variable #BC (which #2D is drawn from) includes at its first bit a string (1) or numeric (0) indicator.

As with all the operators, ACC1 contains the right-hand operand and ACC2 the left-hand. Remember also that at the start C is set to 1 (string) or 0 (number).

The classic result of a comparison (X and Y) is: #00 if X=Y, #01 if Y>X and #FF if X<Y. To begin with an attempt is made to reach this result (remeber that to compare X and Y one evaluates the sign of the difference Y-X).

It is however easy to pass from #FF (<), #00 (=), #01 (>) to #00, #01, #02 by adding one. You then get the same binary pattern for the result of the comparison as the required token: %00000>=<. A logical AND is therefore all that needs to be done between the result obtained and that expected. If none of these conditions is filled, the result is 0. Otherwise, it is not nul.

Reminder: >= means greater OR equal, i.e. one of the two conditions needs to be met. It is clear that in a comparative sense > AND = is impossible.

```
D087  JSR $CE7D      D113  JSR $CF09      Verify conforming type
D08A  BCS D09F       D116  BCS D12B      jump if a string
```

Compare two numbers

```
D08C  LDA DD         D118  LDA DD         Take the sign in ACC2
D08E  ORA #7F        D11A  ORA #7F        and add 1 so as not to
D090  AND D9         D11C  AND D9         affect the exponent...
D092  STA D9         D11E  STA D9         so you now have exponent and sign...
D094  LDA #D8        D120  LDA #D8
D096  LDY #00        D122  LDY #00        AY = #00D8 = ACC2
D098  JSR $DF34      D124  JSR $DF4C      compare (AY) and ACC1
D09B  TAX            D127  TAX            put the result in X
D09C  JMP $D0D2      D128  JMP $D15E      and go and treat it
```

Compare strings

Principal:

The two strings are compared character by character. If all characters match the length decides the result. The result of the length is calculated first because it is in any case necessary the find the shorter string to make the comparision.

```
D09F  LDA #00        D12B  LDA #00        Indicate numeric and not
D0A1  STA 28         D12D  STA 28         alphanumeric result
D0A3  DEC BC         D12F  DEC BC         remove string flag (reducing to 0,1,2)
D0A5  JSR $D715      D131  JSR $D7D0      remove the reservation (second operand)
D0A8  STA D0         D134  STA D0         save the length of the right-hand operand
D0AA  STX D1         D136  STX D1
D0AC  STY D2         D138  STY D2         and the address of the string
D0AE  LDA DB         D13A  LDA DB         take the pointer address
D0B0  LDY DC         D13C  LDY DC         of the left-hand operand
D0B2  JSR $D719      D13E  JSR $D7D4      and remove the reservation
D0B5  STX DB         D141  STX DB         save the address of the first string
D0B7  STY DC         D143  STY DC
D0B9  TAX            D145  TAX            and the length in X
D0BA  SEC            D146  SEC            compare to the length of the second string
```

```
D0BB  SBC D0          D147  SBC D0
D0BD  BEQ D0C7        D149  BEQ D153      if equal, jump
D0BF  LDA #01         D14B  LDA #01       prepare for the second and longer string
D0C1  BCC D0C7        D14D  BCC D153      yes, it's OK
D0C3  LDX D0          D14F  LDX D0        the second one is shorter, so take
D0C5  LDA #FF         D151  LDA #FF       its length as a reference and indicate it
D0C7  STA D5          D153  STA D5        save the result of the comparison of lengths
D0C9  LDY #FF         D155  LDY #FF       prepare index
D0CB  INX             D157  INX           and adjust the comparison length
D0CC  INY             D158  INY           next character
D0CD  DEX             D159  DEX           is it the last one to compare?
D0CE  BNE D0D7        D15A  BNE D163      no, jump
D0D0  LDX D5          D15C  LDX D5        yes, so the length decides the result
D0D2  BMI D0E3        D15E  BMI D16F
D0D4  CLC             D160  CLC           adjust C for the comparison
D0D5  BCC D0E3        D161  BCC D16F      unconditional: do the test
D0D7  LDA (DB), Y     D163  LDA (DB), Y   compare the two strings
D0D9  CMP (D1), Y     D165  CMP (D1), Y   character by character
D0DB  BEQ D0CC        D167  BEQ D158      if equal, on to the next
D0DD  LDX #FF         D169  LDX #FF       if different, calculate the sign
D0DF  BCS D0E3        D16B  BCS D16F      of the comparison
D0E1  LDX #01         D16D  LDX #01       as for the length of the strings
D0E3  INX             D16F  INX           X = 0, 1 or 2
D0E4  TXA             D170  TXA           in A
D0E5  ROL A           D171  ROL A         X = 1, 2 or 4: %00000>=<
D0E6  AND 2D          D172  AND 2D        is it what was required?
D0E8  BEQ D0EC        D174  BEQ D178      no, FALSE
D0EA  LDA #FF         D176  LDA #FF       yes, TRUE
D0EC  JMP $DF15       D178  JMP $DF24

D0EF  JSR $CFD9       D17B  JSR $D065     Request a ' , '
```

'DIM' (COMMAND)

Principle:

The following routine takes care of everything. In short, a number that is not nul is placed in X to indicate that it is a declaration of a variable, not a simple reference.

A is normally not nul since it contains the first character of the variable. If that is not so, a syntax error will be generated. So since A is a letter, b6=1 (token above #40). These two characteristics (<>0 or b6=1) are both tested.

```
D0F2  TAX             D17E  TAX           X<>0 shows a declaration
D0F3  JSR $D101       D17F  JSR $D18D     and calculate the address of the variable
D0F6  JSR $00E8       D182  JSR $00E8     take the current character
D0F9  BNE D0EF        D185  BNE D17B      start another declaration
D0FB  RTS             D187  RTS
```

TAKE ADDRESS OF A VARIABLE

Entry: TXTPTR points to the variable to find and #2B contains a code enabling the prevention of certain types. #2B is set to 0 on an explicit or implicit CLEAR.

#2B = #00: all types authorised (integer, string, arrays)
#2B = #40: only an array, and only its name, as for example given on a STORE or RECALL (V1.1 only).
#2B = #80: forbids arrays and integers (for example for the indexing of FOR-NEXT loops)

#27 indicates a DIM (not nul, b6=1)

Exit: AY points to the address of the variable, which must contain its value. In addition #B6-#B7 = AY.

Principle:

This is the central routine for the creation of variables. Firstly its name is taken (including its type), checking that it is authorised. If it is a variable, and not an array, it is found or possibly created, it's that simple.

For arrays the name is also taken, then its dimension and the components of each dimension are stored. The array is then searched for. If found, a check is made to ensure the routine is not called by a DIM instruction (error), and the address of the element is calculated.

If the array is not found, on a mere reference an exit is done. If not, the array is created. Each dimension will then have the value specified (if dealing with a DIM) or 10 by default if there is an implicit dimension. Finally the adddress of the element is calculated.

```
D0FC  LDX #00       D188  LDX #00       Indicate reference (for arrays)
D0FE  JSR $00E8     D18A  JSR $00E8     take the first character of the variable
D101  STX 27        D18D  STX 27        save the reference/declaration flag
D103  STA B4        D18F  STA B4        and the first character of the variable
D105  JSR $00E8     D191  JSR $00E8     take the first character (if DIM)
D108  JSR $D186     D194  JSR $D216     and verify it's alphabetic
D10B  BCS D110      D197  BCS D19C
D10D  JMP $CFE4     D199  JMP $D070     no, 'SYNTAX ERROR'
D110  LDX #00       D19C  LDX #00       second significant character = 0
D112  STX 28        D19E  STX 28        and initialise the string flag
D114  STX 29        D1A0  STX 29        and the integer flag
D116  JSR $00E2     D1A2  JSR $00E2     take the next character
D119  BCC D120      D1A5  BCC D1AC      if numeric, it's OK
D11B  JSR $D186     D1A7  JSR $D216     is it alphabetic?
D11E  BCC D12B      D1AA  BCC D216      no, jump
D120  TAX           D1AC  TAX           yes, put the second character in X
D121  JSR $00E2     D1AD  JSR $00E2     and jump the second character
D124  BCC D121      D1B0  BCC D1AD      and all those which are not significant
D126  JSR $D186     D1B2  JSR $D216     verifying that they are numeric
D129  BCS D121      D1B5  BCS D1AD      or alphabetic
D12B  CMP #'$'      D1B7  CMP #'$'      is it a string indicator?
D12D  BNE D135      D1B9  BNE D1C1      no, jump
D12F  LDA #FF       D1BB  LDA #FF       yes, set the string flag
D131  STA 28        D1BD  STA 28
D133  BNE D145      D1BF  BNE D1D1      unconditional: adjust the variable
D135  CMP #'%'      D1C1  CMP #'%'      is it an integer indicator?
D137  BNE D14C      D1C3  BNE D1D8      no, go to adjust the variable
D139  LDA 2B        D1C5  LDA 2B        yes, is an integer permitted?
D13B  BNE D10D      D1C7  BMI D199      no, 'SYNTAX ERROR'
D13D  LDA #80       D1C9  LDA #80       yes, set integer flag
D13F  STA 29        D1CB  STA 29
D141  ORA B4        D1CD  ORA B4        and immediately adjust
D143  STA B4        D1CF  STA B4        the name of the variable
D145  TXA           D1D1  TXA           X always contains the second character
D146  ORA #80       D1D2  ORA #80       indicate integer or string
D148  TAX           D1D4  TAX           according to the starting-point
D149  JSR $00E2     D1D5  JSR $00E2     jump the type indicator
D14C  STX B5        D1D8  STX B5        and finally save the second character
D14E  SEC           D1DA  SEC
D14F  ORA 2B        D1DB  ORA 2B        adjust the authorisation flag
D151  SBC #'('      D1DD  SBC #'('      and take the '(' token
D153  BNE D158      D1DF  BNE D1E4      if '(' and an array is authorised
D155  JMP $D229     D1E1  JMP $D2BB     and treat the table
.....  .....        D1E4  BIT 2B        if not, were we wanting just the name?
.....  .....        D1E6  BVS D1E1      (STORE especially) yes, treat the array
```

Machine Code for the Oric Atmos (Part 29)

Peter N. Bragg

The Story so far

We have looked at the basic requirements for machine code programming. A small selection of useful 6502 Instructions appeared in Part 22 of the series. I have also tried to illustrate a few programming techniques that I have found useful. Last time, we looked briefly at a couple of simple utility routines. Now for something a little different..

Two Bits Worth

Programs are no longer written in binary code, thank goodness. So far in this series, I have deliberately kept a low profile on the subject of binary numbers, because many of us find all those "1's" and "0's" a bit intimidating and I did not think that it was a good way to start out. As far as I know, Binary Code is no longer in use for programming. However, you will soon notice if you do a fair bit of program writing, even in Basic, that binary numbers do crop up occasionally and can be very useful. Before we go on to look at specific instructions, it may help to have a brief look at the binary system and why it was used in the first place.

Switch ON !

So why do computers use such an awkward system, like binary ? The reason; is that it simplifies computer design and manafacture. Computers need to use and store large amounts of data, in the form of numbers, which are then used to produce the action, words and pictures that we require. The easiest way to store the numbers which make up all the raw data, is to use an ordinary common ON/OFF switch.

We are all familiar with the common household light switch. The idea that an array of simple electrical switches could be used as a memory chip, may seem a bit far fetched, but in fact there is a fair chance that you have actually programmed one, using binary code in the process !

How come ? Well, if you have a printer, it's a fair bet that you have had to set the "dip switches", when you used it for the first time.

Take a close look at one of these sets of "dip switches" and you will find that it is a row of small, but very ordinary electrical ON/OFF switches in a single block, mounted on a circuit board just like any RAM chip. In fact it is a memory chip, a sort of finger operated ROM.

It is also possible to go even smaller and produce microscopic switches using transistor technology, to put many thousands on a tiny silicon chip. These too, can be flipped ON and OFF. They are too small to be operated by hand, so the job is done by an electrical signal, produced automatically for us by the computer electronics, when required. Each and every switch on a silicon memory chip, can be separately set to either ON or OFF by the computer user. This means that a computer memory chip, is just a vast array of tiny transistorised ON/OFF switches. Such a chip has the advantage of being extremely cheap to produce. That helps to make it easier and cheaper to manafacture microcomputers, capable of handling large amounts of data. However it does raise the question, how do you store large numbers on an array of simple ON/OFF switches. This brings us to binary numbers.

Each switch can store one of two digits. When it is OFF it is considered to be at "0" and when it is ON, it is considered to be set to "1". So each can in effect, store one binary number and for this reason each of the tiny transistor switches is referred to as one "Bit".

Programming individual bits, using binary digits, is a quick way to go bananas. A better way is to group the switches on the memory chip into sets of four. Each set of four will give sixteen different switch combinations, from all four switched off, to all four switched on. This covers the numbers 0 to 15 inclusive, but as it is much easier to use a single digit for each number we use the letters "A" to "F" instead of numbers 10 to 15. This is the basis of the Hexdecimal numbering system, that we have been using for our programs.

So four bits in a computer memory chip are in effect, four switches and can store one hex digit. Alternatively, you can look at it the other way round and say that one hex digit can be used to program those four bits to any combination of four binary digits (0000 to 1111). Hex digits are much easier to handle than binary digits and hex code listings are much smaller, so hex code is the main basis of all programming and also most high level languages such as "C" and Basic etc. The majority of early microcomputers, such as the Oric, handled data in eight bit lots, written as two hex digits. We normally refer to this as one byte.

So there you have it, computer memory is just an enormous binary array of ON/OFF switches, grouped in sets of four and programmed initially in hex code, to produce the necessary languages and software.

Show the Flag

---------- OK, so we do not need binary code for programming any more, but we do need to use the odd binary number, even in Basic. So why is that ? For the explanation, let's stay with simple ON/OFF switches for a moment. A switch actually does two things. First of all, it acts as an indicator. It is best to put in a light bulb, when the power is off. How do you know that the power is off ? ..... Simple, you just look at the switch toggle ! Once the light bulb is installed, the switch can be used for its second function, which is to turn the light on and off.

OK, so that is a little elementary, but it does illustrate how the computer uses binary numbers. Firstly, individual memory bits can also be used as indicators by setting them to "1" or clearing them to "0" in just the same way as we use the position of the light switch toggle to indicate whether the power is ON or OFF.

In the computer, bits used as indicators are usually referred to as "Flags". We met a set of these, way back when we looked at the Status Register. That holds eight bits (one byte), seven of which are used as "Flags". These "Flags" indicate the result of many operations and can then be used for various purposes such as controlling the operation of Branch instructions. Set a bit to "1" to make one Branch instruction active. Clear the bit to "0" to disable that instruction and make another active instead.

Secondly, individual memory bits can be real electrical switches. A lot of the hardware is actually mapped into the computer memory. These have memory locations that can be written to. They are genuine arrays of ON/OFF switches, that control items such as the sound chip, disk drive and the screen display.

Of course, many of the above items are automatically controlled by the built-in software, in particular the ROM that holds the Operating System. However, there is plenty of scope for anybody who feels like experimenting, particularly with any new hardware item.

Next time, we can have a look at some easy ways to make use of binary values.

B I T S ' n ' B O B S

FOR SALE

The following TANGERINE bits for sale: -
Mini backplane, Vero rack box including full backplane, 2 & a quarter CPU boards (the quarter is a bare board), 2 times TANEX, TanRam, Eprom Switcher Card, ZX Printerface, Keypad, Carter Keyboard (cased), Cherry Keyboard, + any other bits that the vendor can find. e.g: Manuals,Mags,Tapes,Eproms (Basic & Forth),and Hardware.
It's all in ex-attic,unguaranteed,well abused condition.
Alan Bowers is willing to exchange it all for a two-week Caribbean holiday for two. Failing that he is open to swaps, cash,or in fact anything.
You can telephone Alan at home over the week-ends on 098 3614593 or indeed at his works during the week on 051 254 3993 (a Liverpool number).

FOR SALE

BOB TERRY has a NEC (Epson compatible) printer for sale. Complete with manual,the asking price is 65 pounds or near offer. Bob from Aylesbury can be reached on 0296 26050

AUTHOR

There are 3 versions (as far as I know) of the AUTHOR word processing package currently doing the rounds.
Version one is the original Tansoft cassette. Version two was disc,based on the cassette,but with a couple of functions missing.
The third version is Owe Fransson's update to the disc version with a little less free memory, an extra feature,and a slight bug.
Let's look at Owe's version.
Firstly the bug. Well not really a bug if you are running on twin drives,but if you aren't then you need a tweak to put it right. On entry to the front menu it appears that the system is set up for single drive,but is in fact not. To make it single drive,you must press 'D' four times so that it cycles back to zero.
This version allows '.A' and '.B' - justification On/Off and unlike the original disc version will allow APPEND.
If you ever find that TEXT won't load into screen,then instead of using: Retrieve, Y = Cancel & File Name; do the following:- press 'A' for APPEND and enter the file name. Apparently it is possible to load cassette stored files to this disc version.

UPDATES TO PART ONE OF THE CONTACT LIST

O.K folks - it's time to get your pens and part one of THE CONTACT LIST (supplied with the last issue). Just as we think we are up to date and someone moves,sells/buys something or spots a boob!.

No. 232 - ALAN BOWERS - Works Tel. 051 254 3993 (His Home no. is for week-ends only).
No.207 - IAN BRADBURN - now has an MCP40.
No. 87 - TIM COLGATE now resides at: 50 Church Road, SHAW, Oldham,Lancs. OL2 7AU (Tel: 0706 882246).
No. 187 - CHRIS EVANS - about to be disc based with a Cumana interface and 3.5" drive.
No. 196 - RICHARD FARRELL - no longer the owner of an MCP40
No. 230 - JOHN FOGGIN - is at 8 Linnet Court and not 9 as published.

Also just moved is ADRIAN MATTHEWS whose new address is in the second part of our contact list.

IT's A FACT

75% of O.U.M readers are now disc based.

MESSAGE TO DAVID DEMPSTER FROM THE EDITOR

Some time ago I sent you a disc formatted to Sedoric standards to enable you to ascertain whether your system supports that Dos. Well does it?

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

DEAR DAVE,

I ENJOYED THE LAST DOUBLE ISSUE; IT TOOK ME QUITE A WHILE TO ROUND TO READING IT RIGHT THROUGH. IN PARTICULAR, "PROGRAMMERS CORNER" BY MATTHEW COATES, STRUCK A CHORD. IT WAS ALL VERY INTERESTING.

THE MAIN AIM FOR ME,WHEN WRITING SOFTWARE, IS TO MAKE IT WORK WITHOUT ANY BUGS. TROUBLE IS THAT PRODUCING A NICE PRETTY MENU,IS A JOB THAT TENDS TO GET LEFT TO LAST. THE INTENTION TO TIDY UP SUCCESSFUL SOFTWARE OFTEN GETS LOST IN THE ENTHUSIASM FOR THE NEXT SOFTWARE PROJECT. THERE GOES MATTHEW'S "USEABILITY". STILL,NONE OF US IS PERFECT! WE ARE AMATEURS AND DO IT FOR FUN,WHEREAS SO CALLED "PROFESSIONALS" DON'T HAVE THAT EXCUSE.

IT WOULD BE VERY NICE TO OF HAD MATTHEW'S ARTICLE HANDY A FEW YEARS AGO SO THAT IT COULD BE READ IN A VERY LOUD VOICE TO CERTAIN PROFESSIONAL PROGRAMMERS, WHO PRODUCED SOFTWARE FOR OUR DIVISION AT WORK.

THEY NEVER GOT TO THE "FUNCTIONALITY" STAGE, LET ALONE "USEABILITY". I REMEMBER SOME ITEMS QUITE WELL, THE FREQUENTLY USED "HOT KEYS",WHICH INCLUDED A "FORMAT THE DATA DISK" KEY IN THE MIDDLE.....OH WHOOPS!!
SURE ENOUGH,SOMEONE HIT IT ACCIDENTALLY (THE BOSS!) AND WE SPENT THE NEXT TWO WEEKS TRYING TO RAISE THE DEAD. THEN OF COURSE THERE WERE THE MENUS. ONE FALSE MOVE AND YOU WERE DOOMED TO CIRCULATE AROUND THE WHOLE SET FOR THE NEXT TEN MINUTES. IT TOOK ALMOST AS LONG TO RE-BOOT,SO THERE WAS NO WAY OUT. WE HAD A LOT OF FUN AND I LEARNT LOTS OF NEW WORDS.

- PETER BRAGG (Sutton)

DEAR PETER,

NICE TO SEE THAT MATTHEW'S ARTICLES ARE APPRECIATED. THEY ARE GETTING ALMOST AS POPULAR AS YOURS ARE. IN FACT I HAVE ANOTHER BATCH OF YOUR M/CODE ARTICLE BACK ISSUES TO PHOTOCOPY.

PERHAPS MATTHEW COULD PUT US TOGETHER ANOTHER ARTICLE FOR INCLUSION IN THE NOVEMBER OR DECEMBER ISSUE.

- DAVE

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DEAR DAVE,

GB here!

Three points for the postbag.

A) Steve Marshall may like to know that my high scores have been made over ten years,having always written down a good score. Sadly,they are slowly getting shot down, but when I get over 10,000 on DON'T PANIC, you'll be the first to know.

B) I will be investing in a new machine. It will be either an ARCHIMEDES 3010 or AMIGA 1200. The ACORN seems a little pricey,particularly the 'Desk Top Publishing' software for which I'll be buying the machines (the AMIGA also seems to have a better Golf game as well!). Although I'll probably ignore it, I would appreciate any comments and advice as to the merits of both machines.

It goes without saying that the ORIC will remain in everyday use.

C) Please tell me why I should splash the cash on WORDSPEED?

- GRAEME BURTON (Petts Wood)

DEAR GRAEME,

answers as follows:

A) 10,000 points would certainly be a great score for a Brit on DON'T PANIC. However,it would not beat the 12,110 attained by Frenchman - Bruno Dossier.

B) I'm in no position to advise you on the capabilities of either the ARCHIMEDES or the AMIGA. Perhaps ARCHIMEDES owner Peter Bragg could drop you a line with his views on that machine. Meanwhile perhaps other readers may advise on the AMIGA.

C) A couple of items that might persuade you to part with your cash.

Firstly, I refer to the review of WORDSPEED by Laurent C in issue 19 of the CEO-MAG. On a rating of 1 to 6 it was rated 6 - praise indeed. Laurent concluded his review with: " WORDSPEED is a well-designed ,powerful word processor with many features (such as print preview,tabs,headers & footers) which are usually found in far more expensive programs for IBM PC or APPLE MACINTOSH computers. And we recommend that you try and use it!"

Secondly, I would refer you to Issue 65 (Jan.'93) of Oric User Monthly. On the 'Readers Letters' page there was an excellent write-up on it from Peter Woolley.

In this issue of OUM you will find an article from Dr.Ray (the author),which was put together on WORDSPEED.

The upgraded version of WORDSPEED is now available from Allan Whitaker (see last issue for details).

- DAVE

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N E W S O F T W A R E

Title : COLUMNS Author : NICK HAWORTH Release Date : IMMINENT
Software House : BULLET PROOF SOFTWARE Format: DISC systems supporting ORIC
Price : To be agreed Distributor : MIRAGE/O.U.M

COLUMNS

- LET TIME PASS YOU BY

" Journey back to the ancient civilization of Phoenica,to play a game that originated with their merchants. COLUMNS. It's totally absorbing,yet very simple. What's more,you don't have to be a games freak to play at the hardest level.
Columns of rainbow-coloured blocks drop one after another. Arrange three or more blocks of the same colour horizontally,vertically or diagonally to remove them from the playing screen. If the columns reach the top of the screen the game is over. When you get the urge for a new challenge,try the Flash game. In this version you race the clock to make a flashing block disappear. Start on the easiest level and work your way up,or take on the challenge of a higher level from the start.
Columns is simple and captivating!"

Well folks the above is culled from the official instruction sheet that came with my preview copy of COLUMNS. By the way you can see the game in action at your local GAMEGEAR stockist,but it will cost you a helluva lot more than you will pay for the Oric Atmos version.
The game is a hybrid of TETRIS/TETRIX and DON'T PANIC/STACK UP, but with some exciting additional features. Who cares that the idea is not original as long as it is well written and what people want. It is certainly well written, especially as it is young Nick's first serious attempt at a machine coded game. It is certainly what people want. After TETRIX sold so well,you wouldn't of expected DON'T PANIC to be huge ,but it was. In my humble opinion - if this was prior to the other two titles then they would of sunk without trace - in fact their authors probably wouldn't of bothered in the first place.
FEATURES: - Top Score shows highest points scored at each level and difficulty, Music, Save hi-scores to disc (no less than 54 of them), start at any level (the higher the level the faster they drop), Easy (4 different colours), Normal (5 colours) or Hard Game (6 colours).
The Magic Column appears after you have cleared 300 blocks. At this point a White block drops and clears all of the particular colour that you drop it on. When you are doing this for the ninth time (i.e 2700 blocks cleared),then you can't be choosy where it lands,due to the speed of it.
Something I nearly forgot to mention is the formation of the coloured blocks. A block is in three sections and therfore can be of 3 different colours or 2 or all one. You can change the formation of that block as it drops. As an example : if a block falls as Red,Green,Blue then you can re-arrange it to be Blue,Red, Green if that helps your cause.
The FLASH GAME is an 'against the clock' optional game. You decide how many columns of the screen you want filled and then have to clear a path to the Flashing block at the bottom of the screen. An excellent variation.
This is certainly the type of game that the Dick family gets addicted to. We had to hide it from young Matthew to make sure he got to school in the mornings. My wife spent an entire Sunday evening on it and most of the next evening. Here folks is the result: Score to beat is : 64,662 pts. She started on the Easy Level and cleared 2,984 blocks. That takes some doing.
There are other nifty little features,but you'll have to buy the game to check them out for yourselves.
CONCLUSION: DO NOT BUY THIS UNLESS YOU HAVE AN HOUR OR MORE TO SPARE. ONCE YOU HAVE TRIED 'COLUMNS' YOU WILL NOT WANT TO STOP. Your household will be filled with those immortal words: " JUST ONE MORE GO!"
O.U.M Rating: 92%

- Dave Dick

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OTHER MEN SOFTWARE

Don't forget our other new software titles,which are OUT NOW and selling extremely well,namely: COMPILER (from Dr.Ray), ASSEMBLER (also from the Doc), SONIX (the musical editor from Jonathan "DON'T PANIC" Bristow), and of course MIND MADNEZ (super strategy from Arnt Erik Isaksen).
GET YOUR ORDERS IN NOW TO AVOID THE XMAS RUSH!

==========

A LETTER FROM Dr.RAY

[redacted]ar Dave,

regarding the bug on SECTMAP as released with SEDORIC V2.0 - please tell OUM readers to delete line 320 in SECTMAP.COM, re-enter it as line 201, renumber if required and SAVEO "SECTMAP.COM",AUTO.)
NOTE TO READERS FROM THE EDITOR: Renumber applies to the renumber routine and does not imply that you renumber line 201 to line 320.

Now for SEDORIC V2.0 to V2.1 upgrade details for those OUM readers who can use NIBBLE, or an equivalent, with confidence.
First of all, I will deal with original bugs. All sector numbers, addresses and machine code are in hexadecimal.

	SECTOR	ADDRESS	EXISTING CODE	CORRECTED CODE
(1)	12	D16F	A9 A3	A2 A3
(2)	58	C69A	20 DB C6	20 A0 C7
(3)	59	C7A0	garbage	2C 16 C0
		C7A3	garbage	10 13
		C7A5	garbage	A2 12
		C7A7	garbage	20 64 D3
		C7AA	garbage	20 48 D6
		C7AD	garbage	58
		C7AE	garbage	90 08
		C7B0	garbage	68
		C7B1	garbage	68
		C7B2	garbage	68
		C7B3	garbage	68
		C7B4	garbage	68
		C7B5	garbage	4C 06 D2
		C7B8	garbage	60

Now for the bugs generated by my V2.0 upgrade.

	SECTOR	ADDRESS	EXISTING CODE	CORRECTED CODE
(4)	56	C4A3	F0 2E	F0 2C
(5)	56	C4A9	90 2A	90 28
(6)	56	C4AD	B0 26	B0 24
(7)	57	C51D	F0 B5	F0 B3

In all cases, SECTOR is the absolute sector number on the disk, starting at track 00, sector 01 as absolute sector 1. So, taking 17 (decimal) sectors per track as an example, absolute sector 57 (hexadecimal 57 and so decimal 87) is sector 02 on track 05.

Bug number (1) is in the "DISP TYPE MISMATCH" error message which should (and now will) be reported if you attempt BOX or LINE in TEXT mode.
All of the other bugs are in "BANK" number 5, one of those blocks of code which are loaded by SEDORICC from disk into the overlay addresses C400 to C7FF when necessary.
Bugs (2) and (3) are associated with DNAME and INIST. Originally when prompted (2nd prompt) to insert the disk in the relevant drive (for DNAME'ing or INIST'ing), if the user presses ESC then the computer hangs due to the stack being unprepared for the designed action.
Bugs (4) to (6) are in the TRACK/DTRACK code whilst bug (7) is in the INIST code and were due to some movement of code in V2.0

CONTINUED ON THE NEXT PAGE

Very recently, I have received a request for help from John Hughes of Worces[illegible] and my advice may be of use to some OUM readers. John wishes to use the MO[illegible] command in a program without the usual prompts appearing in the first instan[illegible] My solution is to run the following short machine code program before the MOVE command is used.

```
ADDRESS~CODE

A000    ~A9 42
A002    ~20 77 04
A005    ~AC 0B C0
A008    ~8C 00 C0
A00B    ~20 14 A0
A00E    ~4E 16 C0
A011    ~4C 77 04
A014    ~48
A015    ~4C 8F F1
```

This is obviously designed to run from address A000. A00C/A00D holds a value of 14 (hexadecimal) greater than the start address and this is the only change necessary for any other required start address. A simple Basic poker routine follows.

```
100 S=#A000 ' start address
110 A=S
120 REPEAT
130 READ X$
140 X=VAL("#"+X$)
150 POKE A,X
160 A=A+1
170 UNTIL X$="Z"
180 A=S+#C:X=S+#14:DOKE A,X
190 '
200 DATA A9,42,20,77,04,AC,0B,C0,8C,00,C0
210 DATA 20,14,A0,4E,16,C0,4C,77,04
220 DATA 48,4C,8F,F1,Z
```

The code A9 42 , ie LDA #$42, loads the accumulator with the start sector number for the bank holding the MOVE code. Other 'banked' instructions can have prompts witheld in exactly the same way, only the start sector number needs changing. There is no need to modify the use of the MOVE command in a Basic program. If you use another command which loads in another bank then the above machine code program must be run again before another MOVE command is issued or else the usual SEDORIC prompts will appear. However, if no other bank is loaded then the above machine code needs to be run once only.
Have included the WORDSPEED file for this letter on the disk so that you can print out what you need for OUM in your own format. I'll keep trying to get you to use WORDSPEED and then when you really see how good it is you won't look at another wordprocessor.

Well, I think that's all for now.

Best wishes,

Ray McLaughlin

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NOTE FROM THE EDITOR:

Well Ray, I certainly had FUN editing your letter. It took me quite a while to sort out some of the codes that you had used. In the end I think I was quite successful,except for that 'squiggle'. I was impressed with the speed of deleting characters when compared to EASYTEXT and with block movement and the various disc handling techniques.

With EASYTEXT I can get a Directory from the 'B' drive, but with WORDSPEED I can utilise the 'B' (and indeed 'C' and 'D' drives) for storing and retrieving.

You are slowly convincing me. It is a case of finding the time to find my around it fully,so that I can use it to it's full extent.

- Dave

LASER 2000

Duncan Gunn from Oadby in Leicestershire has recently picked up a LASER 200 computer complete with 16K Rampack,but knows very little about it.
Duncan wonders if any readers out there can help please.

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ATARI LYNX

Paul Schofield of Bradford has recently been given an Atari Lynx - hand held games machine. Amongst the games was 'BILL and TED's EXCELLENT ADVENTURE' and so Paul wondered if young Matthew had resolved his problem with that title as mentioned in the last OUM. Afraid not Paul. We will let you know if we do.
The Lynx is now selling for around 35 pounds at Dixons. Software is now about a tenner. Everyone I've spoken to admits that Atari have the best machines,but the wrong marketing ploys.
Sounds a bit like Oric Vs Spectrum all those years ago!

==========

OTHER USER GROUPS

Steve Marshall writes with the following: " I would like to see a list of User Groups for other micros (You keep printing letters/messages thanking people for info, but not printing the info for the rest of us - very frustrating!)"

THE EDITOR REPLIES:-

I have no intention of listing every other user group via the pages of OUM. If you want that then buy the relevant Computer magazine from your newsagent. When asked to supply info on a particular group or perhaps on an occasional basis then I will include some.
As for "thanking people for info."etc - I do where I think important , include the info with the message. I don't and will not include everything. After all,if I thanked Bill for sending me a 2 page sheet on how to get to my Auntie Gladys in Outer Scarborough,then you would be really peeved if I printed it all. As Editor I have to control what goes into print. Of course mistakes are made and I DO take note (and sometimes act on) points raised by readers.

==========

SILICA SYSTEMS

A company that I have used and mentioned in the past are SILICA SYSTEMS. They have shops in the London,Southend,and Sidcup areas. They also have a mail order outlet. They are always good value for printers and I have recently noticed keen prices on Amiga computers. As an example: Amiga 600 "Wild,Weird and Wicked" pack + free goodies. You get: 1Mb Amiga 600 with built-in 1Mb drive and TV modulator,Deluxe Paint III,Micropose Grand Prix,Silly Putty,Push Over + Free from Silica - The Zool pack (contains: Zool, Transwrite,Pinball Dreams,Striker,GFA Basic v3.5, and Photon Paint II. You get 1 years 'At Home' warranty. Price includes V.A.T and free overnight delivery. 229 pounds sounds good value. Add another 30 pound for 2Mb Ram. The Hot Line is 081 309 1111

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MESSAGE FROM JOHN HUGHES

Could you please, through OUM, pass my thanks to all those, yourself included, who responded to my queries a couple of magazines ago. I have thanked each one personally, but I feel a public mention of my appreciation for their efforts is deserved. This is particularly true in the case of Dr Ray whose short "Move" fix, (see' SPLITCLS' routine on next OUM disc), certainly saved my bacon. I could not have proceeded with my own commercial application without it!

==========

COMPETITION WINNER

Again not much response to Brian's oh so easy competition. The first out of the hat was Ron Key who, to the delight of Brian, sent his letter in Welsh. I think Brian struggled a bit. If Ron drops me a line as to which Mrage title he wants,then I'll send it off to him.

==========

A TEASER

Here's a liitle teaser for programmers.
How many diffrent programs can you invent to give: 1 and -1 randomly?
No other values. Just 1 and -1.
Can you come up with more than 6 ways,because we can?

==========

MUSIC/SOUND

Coming soon to OUM will be an article from Stev Marshall on Music/Sound i.e the properties of sound and acoustics in general. It won't be about programming,but will contain all the necessary background info. for people to be able to understand music enough so that they can tackle the Oric's sound facilities. Steve is currently studying musical instrument repair at college. He tells me that acoustics is a relatively new Science and that it is only recently that scientists have been studying why one violin sounds better than another. WATCH THIS SPACE!!!!

==========

FLASHING REMS

Paul Schofield writes to say that he is looking forward to a Listings Issue and makes a plea for all contributors to include as many REMs and other explanations as space allows. This would obviously help those who are still trying to improve their skills.

It's Good and Bad news for Paul!

I'm afraid that lack of time has meant ni Listings Issue this month. The other reason for it's non-appearance was the late arrival of some listings. As these had detailed explanations to be typed up, I felt it best to hang. The good news is that the Listings Issue will certainly appear next month.

There are some excellent little programs from Dr.Ray,John Hughes and the Welsh Wizard ets., that will be in print or on the OUMDISC.

I did note that whilst FLASHING REMS are very nice,they make the printer hang up. Therefore if you send listings,then please - just standard REMs to save me the task of editing so that I can LLIST them.

==========

BLOKGAME: Multi-screen game.

The player controls a non-stop line,trying to avoid obstacles until he/she reaches the 'safety' exit on the r.h.s. Pass through as many screens as possible until you 'die'! The game has only one control which is the right-shift key. The line is always growing (of "caterpillar"?!) and normally extends upwards. To make it extend downward,hold down the right-shift key. As soon as you let go the line will extend upwards again. The screens get harder as you progress because the number of obstacles increases. My current hi-score is a mere 21!

Notes:

1) This game is based on an old BBC micro idea,where the entire program fitted onto one line in BBC Basic! Oric Basic is slower than BBC so the line has to grow 8 pixels at a time rather than 1 pixel at a time. This means that the "check ahead" section of the program cannot work on single pixels and so it is by no means infallible. In practice,if you're lucky,you can pass right through obsticals,especially the corners, which is a very useful program feature` if you're in a tight spot!

2) Line 170 uses the well-known "ELSE" bug,twice! Statements that follow the ":" after ELSE are obeyed for both the IF and the ELSE clauses. (eg. if J=1 THEN PING ELSE ZAP:CLS The screen will always be cleared whether or not J=1!) This is in fact a very useful bug.

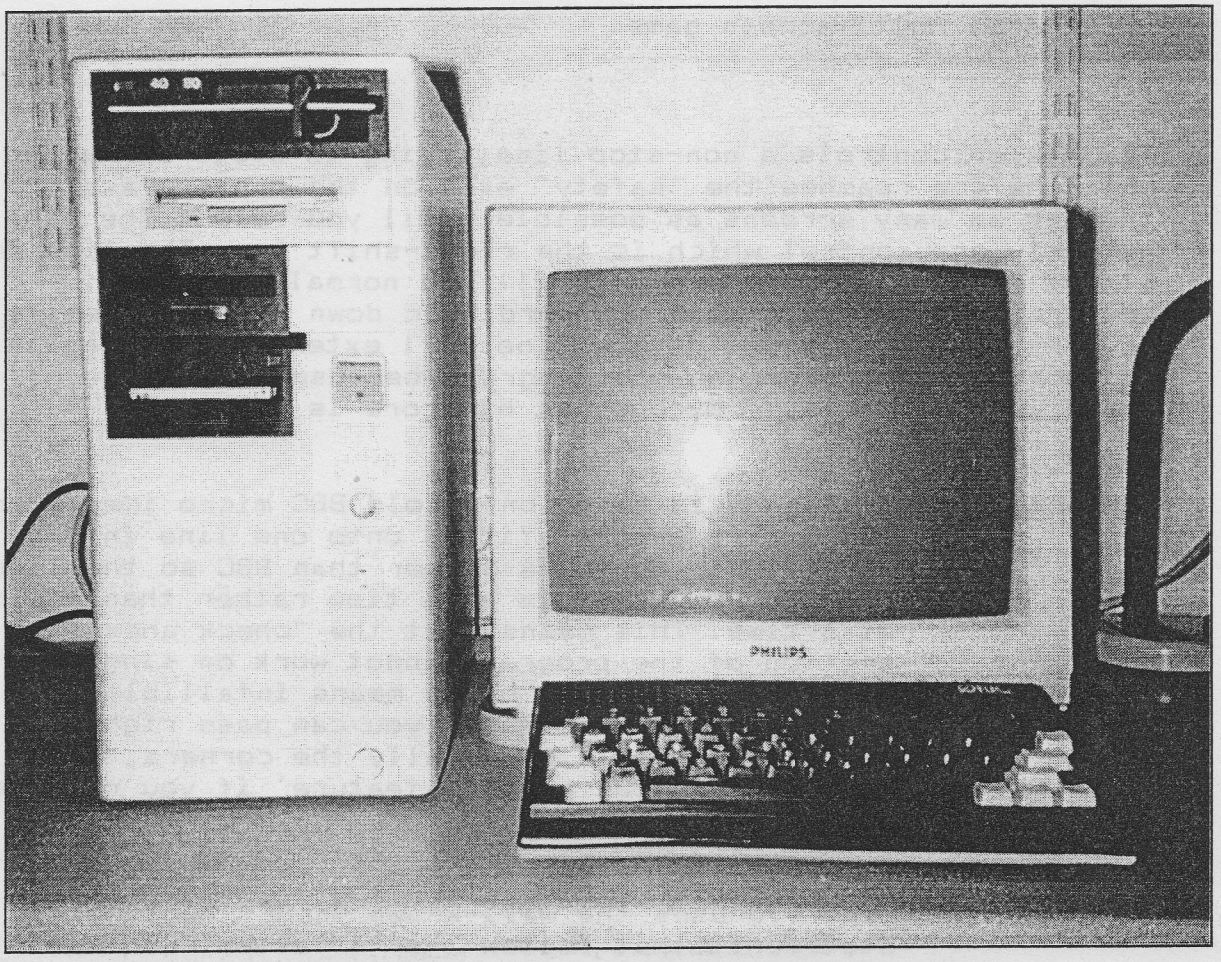
CHALLENGE:

1) Write more games which realistically only need one control key to play.

2) Write other programs (games/utilities/etc) that fit one screen when listed,ie a maximum of 22 lines on screen.

```
100 H=5:GOSUB2000:  Use <r-shift> to
105 PAPER0:INK7  :Control the line
110 REPEAT:REPEAT:HIRES:PRINTCHR$(17);TAB(7);"Score=";G;
120 CURSET8,7,1:AN=0:BOX230,192,1:CURSET237,70,0:AN=-90:LINE50,0:GOSUB1000
130 X=9:Y=95:REPEAT:CURSETX,Y,1
140 PATTERN170
150 KEYIF#A7THEN:AN=-45ELSEAN=45
160 LINE8,1:HCUR:X=CX:Y=CY:Z=POINT(X+03,Y-03*SGN(AN)):B=(X>230)
170 UNTILZORB:IFNOTZTHENPING:G=G+1ELSEZAP:IFG>HTHENH=GELSE:UNTILZ:GOSUB2500
190 UNTILFIN:TEXT:END
210 '
1000 FORR=1TO10+3*G:CURSETFNR(200)+30,FNR(180)+10,0:CHAR127,0,2:NEXT:RETURN
1020 '
2000 DEF FNR(R)=INT(RND(1)*R):RETURN
2010 '
2500 PRINTTAB(18);"Hi-Score=";H:PRINTTAB(7);"Again (Y/N)? ";CHR$(17);:G=0
2510 REPEAT:GETC$:INSTR"YyNn",C$,1:UNTILIN:FIN=(IN>2):RETURN
```

T H E B A C K P A G E



THE INDEX

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Well that's it for another month.
Sorry to say that the OUMDISC and part two of the Contact List have had to be held over to next month.

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NOVEMBER O.U.M

I intend to produce the next issue of O.U.M for despatch on the first of November. Therfore I MUST ask that all articles etc. for inclusion, should reach me by October 25th at the very latest. Your co-operation in this matter would be greatly appreciated.

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