ORIC USER MONTHLY

with Oric Enthusiasts

Europe's longest running Oric Magazine

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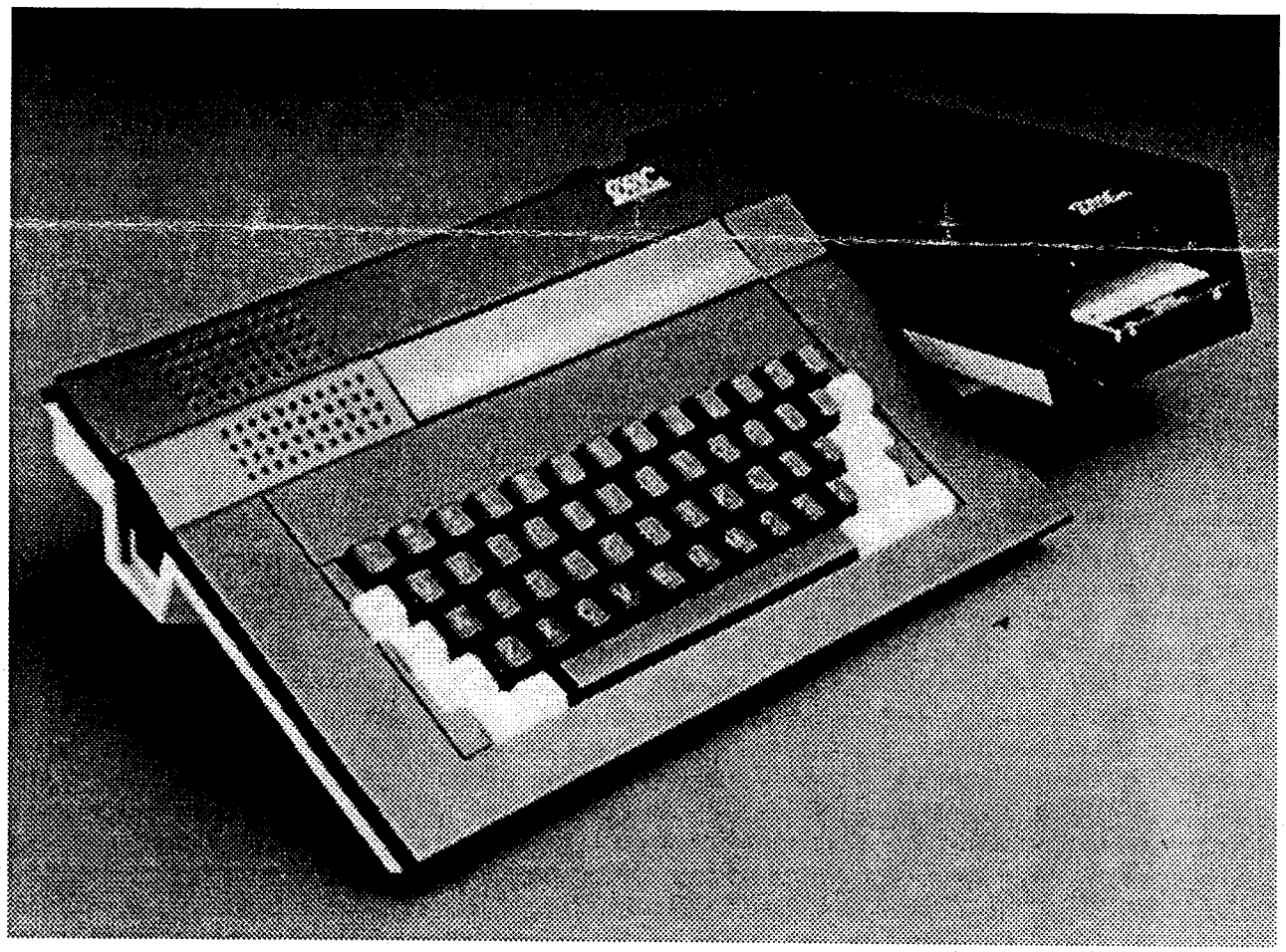

Edited and Distributed by Dave Dick, 65 Barnard Crescent, Aylesbury, Bucks HP21 9PW

THE EDITORIAL

WELCOME TO YET ANOTHER PACKED ISSUE.
SO MUCH HAS BEEN ARRIVING INTO THE O.U.M OFFICE THAT WE HAVE HAD TO HOLD OVER SOME ITEMS UNTIL THE NEXT ISSUE. IT AT LEAST PROVES THAT INTEREST IS STILL BEING GENERATED.
THE BACKLOG CONTINUES TO GROW!
AS STATED IN THE MARCH ISSUE; I WILL NOT BE ACCEPTING 'ORIC' RELATED TELEPHONE CALLS IN APRIL,UNLESS OF COURSE I HAVE SPECIFICALLY ASKED YOU TO PHONE.
THE INDEX TO THIS ISSUE WILL AGAIN APPEAR ON THE BACK PAGE.
AND NOW ON WITH THE SHOW -

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AYLESBURY MEET

THE NEXT ORIC MEET FOR AYLESBURY WILL BE ON SATURDAY JULY 17th. TICKETS ARE 2 pound EACH. GET YOUR CASH IN NOW. A PRIZE RAFFLE WILL BE HELD. AS USUAL FOOD AND DRINK ARE AVAILABLE AND THE EVENING BARBECUE IS AGAIN PLANNED.
ALREADY BOOKED TO TURN UP ON THE SATURDAY ARE: JON HAWORTH,DAVID WILKIN, RICHARD FARRELL (ALL THE WAY FROM DARLINGTON), JONATHAN BRISTOW (DIRECT FROM HIS PARIS APPEARANCE), BRAIN KIDD FROM WELSH WALES, AND PETER THORNBURN (OUR MUSICIAN FROM CANTERBURY). HOPEFULLY WE WILL BE ENTERTAINING OUR FRIENDS FROM FRANCE. ANOTHER GREAT DAY OUT!

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NEWS FROM SWEDEN

ARNT ERIK ISAKSEN HAS OFFERED A 'KLUB ORIC NORDEN' ISSUE FOR OUR PRIZE RAFFLE (GRATEFULLY ACCEPTED ARNT).
ARNT IS PREPARING 'WRESTLING MANAGER' FOR A FUTURE O.U.M DISC. HE PROGRAMMED IT A FEW YEARS BACK AND IS TRYING TO GET IT TO RUN ON 'SEDORIC'.
OVER EASTER HE WILL WORK FURTHER ON 'MIND MADNEZ'. IT WILL NOT NOW BE 'PASE' COMPATIBLE.

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TANDATA MONITORS

ON THE SUBJECT OF TANDATA MONITORS IS THE FOLLOWING FROM ROBERT CRISP.-
" I HAVE MANAGED TO WORK OUT THE CONNECTIONS ON SOME TANDATA MONITORS. TANDATA APPEAR TO HAVE GOT THEIR MONITORS FROM AT LEAST TWO DIFFERENT SOURCES. KEN EVANS's MONITOR IS MADE BY MITSUBISHI AND MINE IS A RE-CASED VERSION OF THE MICROVITEC CUB 1431. THIS WAS UNCLEAR ON MY MONITOR AS THE MARKINGS ON THE CASE HAD BEEN PARTLY RUBBED OUT.
I HAVE BEEN ABLE TO LOOK AT A COMPLETE TANDATA SYSTEM AT WORK,WHICH HAS A CLEARLY MARKED MONITOR AND I WAS ABLE TO BORROW A LEAD OVERNIGHT.
THE TANDATA MONITOR MADE BY MICROVITEC COMES IN TWO TYPES. ONE HAS A 6 PIN 'DIN' SOCKET AND THE OTHER (LIKE MINE) HAS AN 8 PIN 'DIN'".
ANYONE WANTING THE DIAGRAM FOR THE 6 OR 8 PIN SOCKET SHOULD SEND AN S. A.E. TO O.U.M.

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JUDY SIMMS

ORIC STALWART HAS SOME GOOD AND BAD NEWS FOR FELLOW 'ORICIANS'. FIRST THE BAD NEWS - SHE HAS SOLD UP AND IS NOW USING A 'LAPTOP'. SECONDLY THE GOOD NEWS - SHE WILL TRY AND MAKE IT TO THE NEXT ORIC MEET. DID I GET THAT THE RIGHT WAY ROUND!!
JUDY IS STILL WILLING TO ACCEPT PHONE CALLS AND LETTERS ON 'ORIC' RELATE MATTERS.

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CEO-MAG

THE MARCH 'CEO-MAG' INCLUDED ARTICLES ON : - CONNECTING SLAVE DRIVES, SEDORIC UNVEILED,FORTH,CONVERTING PHOTOSHOP FILES,AND RE-INSTALLING THE UHF MODULATOR ON THE 'TELESTRAT'.

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MAY ISSUE OF 'O.U.M'

ARTICLES FOR INCLUSION IN THE MAY ISSUE SHOULD REACH ME BY APRIL 24th.

MORE NEWS ... MORE NEWS ... MORE NEWS

NEWS FROM Dr.RAY

FAMED BYTE DRIVE AND SEDORIC V2 MAN RAY McLAUGHLIN HAS BEEN EXTREMELY BUSY OF LATE.
BYTE DRIVE USERS MAY WELL REMEMBER HIS '65C02 CONDITIONAL MACRO ASSEMBLER.

RELEASED IN 1985 WITH A 34 PAGE MANUAL THIS UTILITY HAS NOW BEEN ADAPTED FOR SEDORIC DISC USERS.
MORE NEWS ON THIS AS AND WHEN I HEAR.

ROY HAS BEEN WORKING ON SOURCE CODES FOR THE V1.1 (ATMOS) ROM AND 'FIGFORTH'.

A BASIC COMPILER IS SOMETHING THAT READERS HAVE BEEN ASKING FOR. RAY'S COMPILER IS FOR ATMOS BASIC ONLY AND CURENTLY NEEDS THE ASSEMBLER. AT PRESENT IT HANDLES SEDORIC EXCEPT FOR FILE HANDLING e.g 'OPEN'.

FROM WHAT I CAN REMEMBER FROM SPEAKING TO RAY - THE ABOVE WILL BE EXTENDED TO DEAL WITH 80 TRACK DRIVES.

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DON'T PANIC

JONATHAN BRISTOW's DON'T PANIC HAS BEEN WELL REVIEWED IN THE 'CEO-MAG'. ONE POINT NOT MENTIONED IN THEIR REVIEW WAS THAT YOU DO IN FACT RECIEVE AN INSTRUCTION SHEET WITH THE GAME.
THANKS TO LAURENT THE GAME NOW HAS THE ADDED FACILITY OF BEING ABLE TO HAVE HI-SCORES SAVED TO DISC. THOSE WHO BOUGHT THE GAME WITHOUT THIS FACILITY MAY SEND ME A BLANK DISC TO RECIEVE THE UPGRADE.
ALSO NOW AVAILABLE FOR THOSE NOT ABLE TO RUN SEDORIC IS A VERSION ON ORICDOS,BUT WITHOUT THE 'SAVE HI-SCORE TO DISC' FACILITY.
PRICES ARE:- 4 pound ON 3" DISC or 3 pound ON 3.5/5.25" DISC. IF YOU PREFER ORICDOS TO SEDORIC THEN PLEASE STATE THIS ON YOUR ORDER.

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SONIX

OVER THE EASTER HOLIDAYS IT IS BEING ARRANGED FOR JOANTHAN BRISTOW TO VISIT ME TO UNVEIL THE FINISHED VERSION OF 'SONIX' - HIS NEW MUSICAL EDITOR.
WE WILL BE MAKING SURE THAT THE MANUAL IS FULLY UNDERSTANDABLE TO NON-MUSICANS LIKE ME. RELEASE DATE IS EXPECTED TO BE EITHER JUNE IN PARIS OR JULY IN AYLESBURY.
MEANWHILE JONATHAN IS BUSY PUTTING SOME TITLES TOGETHER FOR OUM DISC Nr.3

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NEWS FROM HOPPSY

STEVE HOPPS CAN STILL SUPPLY CUMANA DISC INTERFACES. THESE INTERFACES WILL POWER YOUR INTERFACE AND COME WITH A LEAD TO CONNECT TO THE ATMOS. YOU THEN NEED A DRIVE (AND IT'S POWER SUPPLY), LEAD FROM INTERFACE TO DRIVE AND OF COURSE A DOS. PRICE FOR THESE INTERFACES NOW INCLUDES POSTAGE/PACKING AND IS 45 pounds.

ATMOS KEYBOARDS ----- ---------

HAVE BEEN CAUSING A FEW PROBLEMS WITH READERS RECENTLY.
CERTAIN KEYS TEND TO STICK AFTER A WHILE. THE FIRST THING TO DO IS TO CHECK FOR DRY JOINTS. OR PERHAPS THE KEYBOARD CHIP ITSELF HAS GONE DOWN. THESE CHIPS CAN BE BOUGHT FROM THE LIKES OF 'MAPLIN' FOR AROUND 50 pence.
IF YOU HAVE A PROBLEM WITH A DODGY KEYBOARD THEN WE NOW HAVE THE ANSWER.
STEVE HAS MANY ATMOS's IN KIT FORM,BUT WOULD OBVIOUSLY PREFER NOT TO JUST SEND OUT KEYBOARDS AS A STAND ALONE ITEM - ELSE HE CANNOT MAKE UP FULL ATMOS's.
TO GET AROUND THIS THE FOLLOWING IS PROPOSED.
IF YOU WANT YOUR KEYBOARD REPAIRED THEN SEND IT WITH A CHEQUE FOR 4 pounds TO STEVE. IN RETURN STEVE WILL HOPEFULLY PUT IT RIGHT AND THEN POST IT BACK IT TO YOU.
IF STEVE IS UNABLE TO REPAIR YOUR KEYBOARD THEN HE WILL CONTACT YOU TO INFORM YOU AND INVITE YOU TO SEND A FURTHER 6 pounds SO THAT HE CAN SEND YOU A NEW KEYBOARD. PLEASE REMEMBER,WHERE POSSIBLE,TO INCLUDE YOUR TELEPHONE NUMBER WHEN SENDING YOUR KEYBOARD.
STEVE HOPPS IS AT:- 56 MANOR PARK DRIVE,FINCHAMPSTEAD,WOKINGHAM,BERKSHIRE. RG11 4XE. YOU MAY IF YOU PREFER TELEPHONE HIM FIRST ON 0734 328251 (Evenings/Weekends).

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ORIC EMULATOR FOR THE P.C. (PART TWO)

For one thing the ORIC machines have another couple of chips (aside from the custom built ULA) that work with the 6502 and connect it to the outside world.They are the 6522 versatile interface adaptor and the 8192 sound chip.Before you get too daunted by thinking you have to emulate three chips instead of one,it should be noted that as far as the 6502 is concerned the 6522 is just a series of memory locations,and not too many at that.The 8192 is got at through the 6522 on the same lines as the printer port,so as long as the information poked into the 6522's memory area is correctly configured it knows to 'ignore' it and pass it on to the sound chip.
The best way to go would be to convert the op-codes present in the ORIC ROM ,or any other programmes that might be loaded into the memory space, into 8088 ones 'on the fly',but as there are few direct equivilents this is going to be fiddly.
To the PC programmer there are only two programming languages worth considering for a job like this - 'C' and Assembler. 'C' is often classed as a medium-level language but is in fact a kind of portableassembly language,and in the right hands could be the answer to the problem.It's extesive use of pointers and pointers-to-pointers should be ideal for the task.However,perhaps a mix of the two,with inline assembly language for speed-intensive sections is more realistic (Unless there is a 'C' genius among us ?!). I know emulators for other machines have also been written in Modula-2 but have to say I know nothing about it's suitability for the job.
When the finished emulator is started-up it will need first to organise an area of memory where it can place the ORIC system and its RAM.The ORIC has 64k of memory in total with the ROM being 16k long and mapped onto the uppermost section of this.In PC terms this means everything could fit into one segment of memory.(As the PC uses a quirky method of paging memory derived from the initial thoughts that computer memories beyond 64k were going to be rare or at least very far off!).In programming terms a 'C' programme could utilise near pointers and a medium memory model to allow fast memory access within this 64k but still permit a larger addressing area for the extra add-on facilities that are bound to be wanted.In assembly language terms the actual ORIC area could be addressed via the CS memory segments only and guarantee speed of execution.
Now even though the PC is in the far more powerful of the two machines a great proportion of it's time is going to be used up in the coversion progress.In 'C' terms there are many ways to achieve this.The bulkiest method would be to code 150-odd SWITCH/CASE sequences for all the chip op-codes and their different addressing modes.Each would run a small sub-routine to give the same effect on a set of variables as the 6502 op-codes has on the stack,flags,programme-counter,X-register,Y-register, accumulator or memory.The best method though would probably be a look-up table where a block of memory beyond the segment holds an indexed database of the codes and an 8088 machine-code equivilent.This would then be fed back to the programme being executed.
That last bit is the key to a successful emulator.Remember the mechanics of converting has to be pretty fast and although this could be coded in a medium/high level language with perhaps 'register variables' (where a variable is stored directly in the chip register,rather than in memory, for added speed).I suspect this would push up the necessary PC hardware into the more expensive and exotic league of 386's and 486's.
Once a scheme for the conversion has been formulated then pointers to the ORIC RAM area have to be set up and another,less complex,routine has to modify the address in the programme being run-making sure these are kept distinct from pure data such as graphics.

All this would be well and good except the virtual ORIC still has to communicate with the outside world - remember the 6522 and 8192. ?. The keyboard has to be rad and the key-codes changed,the screen has to be written to by diverting the ORIC output,sound has to be directed to the right addresses and a way of storing and retrieving data has to be found. Not much eh!?
Although this looks pretty daunting I suspect the hardest would be the ORIC's CLOAD and CSAVE commands.These set off routines in the ROM which, in the emulator,would be just going through the motions and not actually doing anything-unless a tape interface was to be utilised.

- CONTINUED OVERLEAF

EMULATOR (CONTD)

PAGE 5

This is possible because I've seen it,but means either copying someone elses idea or being as much a dab-hand with the soldering iron as with code! Ideally a modified CLOAD or CSAVE command would jump to a new routine,most easily written in 'C' and located above the 64k segment, which drove a new interface plugged into the RS232 or Parallel port of the PC.As an extra perhaps function keys could be ultilised to either load or save a complete memory dump to disk.The data included could hold the state of all the registers and flags as well as just the RAM area and allow a loaded memory dump to continue running where it left off.
The ORIC's screen resolution as its highest is 240 x 200 so the most usable PC screen would be the 320 x 200 mode available in CGA,EGA and VGA adaptors (the first limiting the available colours to four). The fact that the ORIC screen would fit neatly on th PC's is a bit of a gift for the would-be programmer and the only real problem I can see would be the aspect ratio,but I think you could ignore that.The actual mapping of one screen on to the other should be relatively easy (!) As the ORIC's screen generation is driven by a separate dedicated ULA the 6502 interupts wouldn't be required in the emulated version,instead a sub-routine refreshing the screen memory,at hopefully the correct frequency,would need to be thought through.
The keyboard is similarly read via the interupts and the peripheral chips so,as well as being scanned at a suitable rate,minor conversions to the codes have to be made to keep all pure ASCII (unlike the Spectrums convoluted key-word system!).
Sound is generated by an 8192 in the PC too,I believe,though I could be totally wrong about this and my initial research has thrown-up nothing much on the PC's system.If it is then re-mapping is all that is needed after the 6512 entanglements and interupts have been wrestled with. Otherwise the best bet is a set of sound routines in 'C' bought from a shareware library!
That lot should cover most of the hardware emulation.
Quite a bit to think about,no?.Still bear in mind that the Z80 chip has more instructions - the 6502 is thankfully easier to work with,and Z80 emulators exist in many forms.
Getting into ORIC's ROM over to the PC is thankfully easy if you have an RS232 interface,and issues 57 (May'92) and 64 (Dec'92) of OUM.That very clever person Trevor Shaw has written a nifty little programme for file transfer and by omitting lines 1060 and 1065 in the second listing of issue 64 ,a clean ASCII file containing the complete ROM can be shuttled across to the PC.Remember when you set up your receiving software to use ASCII transfer WITHOUT conversion of control codes.If you don't do this all the nul characters (00) will be stripped out and you'll wonder why the ROM size is only 15k long instead of 16k!
Maybe Dave could throw light on who actually owns the copyright on the ORIC's ROM now? At a guess,if we can't find out,I'd say we should be alright doing this copying as long as we didn't try to distribute it without permission.
Well at this point I think I ought to give you a rest and chance to think. Some of my ideas may be on the wrong tracks and there might be big holes in me understanding of the project.
Unfortunately my skills as a programmer are very limited and not up to the whole task.If my waffling has caught anyone's imagination though,then let's hear about it in the newsletter.
To give encouragement let me say that the Sinclair emulators I've seen run very well indeed.One is shareware and comes complete with all source code on registration,and the other is in the public domain.If anyone feels up to the task the source code could be studied and the techniques (as far as thay would apply to the 6502) analysed.

- NIGEL ALEFOUNDER

NOTES FROM THE EDITOR:

1) Many thanks to Brian Kidd for typing this article up for me. It's dead easy with Brian just sending me an EASYTEXT file. After correcting the 20 little errors it is just a case of printing it.
2) Regarding a 'C' genius. I do know that Richard King (our APPLE man from Maida Vale) was working on a TINY 'C' for the Oric. Perhaps Nigel could drop him a line.

Machine Code for the Oric Atmos (Part 24)

Peter N. Bragg

The Story so far

We started out by looking at the very basic requirements for writing machine code programs on the Oric. Gradually, as the series has progressed, we have built up a modest collection of useful instructions.

The collection so far, was published in the form of a small 6502 Instruction Subset in Part 22 of the series. We also had a brief look at the Instruction Set in terms of the operations it can do, with the aim of making it easier to use. Essentially, it came down to writing each program routine as a list of simple operations and then using the Instruction Subset to find a suitable instruction for each of those operations.

Keep it Simple

Of course, even if you use the full Instruction Set, you may still find that there is no instruction for the operation that you want to do. Assuming that you are not trying to do something that is beyond the capabilities of the hardware, the problem is most likely to be caused by the fact that the operation that you are trying to do, is too complex. Bear in mind that the instructions are basically very simple operations and are best used as building blocks to produce the more complex operations.

So the best way to deal with the problem, where you cannot find a suitable instruction, is to break the operation down into a number of smaller and simpler operations.

Clear Off !!

Take a simple example, lets assume that we want to clear the text screen using a machine code routine. There is a routine in the Oric's Operating System that does this. However, lets assume that we cannot find anything that will clear the screen for us. This means that we now have to write our own routine to clear the display.

So how do you clear a display ? Well, the best way is to put the code for "Space", which is 20h, into every location in the screen memory area. Now, the operation can be broken down into a sequence of several simpler operations such as, load the code for "Space" (20h) and store in the first screen location. Move to the second screen location and repeat the operation. Repeat until end of screen memory area is reached. End of operation.

Doing it this way, the "clear the screen" operation, has now been broken down into several smaller operations, each of which can be done by an instruction from the subset. Collect them together into a routine and you have a "clear the screen" operation. There is not much point in going on to produce a routine at this point and anyway, we have already covered something very similar, back in Part 6 of the series. Here, the main idea was to use a well known function, to illustrate how to break up a complex operation into several smaller and simpler bits. Doing it this way, makes the whole operation much easier to program.

Of course, it always makes sense to check the manuals as far as possible before setting out to write any routine. It is a waste of time and effort to duplicate something that is already available for us to call up, in the Operating System. For example, included in our Subset, but not actually part of the 6502 Instruction Set, were two Oric Operating System calls which allow you to read a keypress from the keyboard and also write to the Text screen display. The keyboard reading call included a small addition.

The Operating System Calls
---------- We have already made use of these two system calls. This time lets have a look from a different point of view. First of all, these two particular system calls are specific to the Oric Atmos and will not work on other computers. However, you will find that there will be an equivalent pair of operations on other machines. In fact, it is difficult to see how any microcomputer could possibly operate without these two functions. Of course these two operations will be called from and will have different addresses in other computers.

Press a Key
---------- The keyboard reading operation ("GTORKB") as noted in our Instruction Subset is in fact a short routine of two instructions, which when called, stops all operation until a key is pressed. The code for that key can then be found in the Accumulator. The second instruction, a Branch BPL, produces a loop in effect, and is needed in order to tell whether a key has actually been pressed, otherwise the keyboard would only get a brief test in passing and there would be no way of telling whether the Accumulator contents were the result of a genuine keypress.

This short routine mimics the same system call that I have found on all the other computers that I have used. This is handy when converting software for other machines (eg Apple or BBC) and produces a similar effect to the Oric Basic GET command. Can be useful too, if you are interested in emulators.

If you are writing a game, you will probably be more interested in a version of the Oric Basic KEY$ command, where the keyboard is only looked at for a brief moment, before the action continues. Again, you still need the BPL Branch to tell you if the Accumulator contains a genuine keypress result, however, in this case you do not need to keep looping back, the BPL Branch can be used instead to deal with a keypress, if and when it arrives. Probably the simplest option here would be to change the short routine slightly to 20 78 EB 10 03 8D vv hh, to include a third instruction to put any genuine keypress result into a storage address "hhvv".

To explain that in a little more detail. 20 78 EB is instruction JSR EB78 and 10 03 is the instruction Branch BPL, which operates when the Negative Flag is cleared (no key pressed). The BPL is set to 03, which makes it skip the third instruction, which is STA hhvv (written as 8D vv hh). However if a key is pressed, the negative Flag will be set which disables the BPL Branch so that the STA instruction will then store the contents of the Accumulator, for future reference. The location "hhvv", in the STA instruction, is any address that you care to use for storing the Accumulator contents.

The above is a very basic approach. It is probably much better to use a JSR instruction in place of the STA instruction and make it go to a routine set up especially to deal with a keypresses as and when they happen. If you can, have a look at Parts 12 and 13 of the series, which dealt with routines for testing and sorting out specific keypresses.

If you have the Oric-1 machine, you should use 20 05 E9 which is JSR E905 for the "GTORKB" system call, instead of JSR EB78, because your operating system is slightly different. The same applies to the system call "VDU" for displaying items on the Text screen. The call for Oric-1 is JSR F73F for "VDU" (20 3F F7), and uses Register X for the display code, like the Atmos, so I understand. This is different from other machines that I have used so far, but it is not a problem.....More machine-speak next time...

ORIC P.D. TYPE-INS MAIL ORDER PRICE LIST

	O1/A	Title	Mag	Cost		O1/A	Title	Mag	Cost
B001		Junior Mathematics	HCW	.15	B068		Scuba Hunt	GC	.15
B002	O1	Cupid bounces back	PCN	.20	B069		Oric Blitz	WM	.15
B003	O1	Meteor Showers	PCN	.20	B070		Mad Jump	YC	.15
B004	O1	Painted Characters	PCN	.10	B071		Shopping Spree	WM	.15
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B006	O1	Composer	PCN	.35	M073	O1	Oric Utilities	YC	.20
B007	O1	Multi-Square	PCN	.10	B074	O1	Cosmic Dodger	YC	.15
B008	O1	Crash	HCW	.15	B075		Fisher Sam	WM	.15
B009	O1	Jogger	HCW	.15	B076		Hide It	GC	.25
B010	O1	Breakout	HCW	.10	B077		The Brood	YC	.15
B011	O1	Assembler/Disassembler	PCN	.20	B078		Duck Shoot	PCN	.15
B012	O1	They shall not pass	HCW	.10	B079		Martian Miner	GC	.50
B013	O1	Danger Island	HCW	.25	B080		Chockies	GC	.30
B014	O1	City Defence	PCN	.20	B090	A	The Sheriff	GC	.20
B015	O1	6502 Disassembler	HCW	.25	B091	O1	Sprites	YC	.15
B016	O1	Alien 2000	HCW	.15	M092		Paint Routine	YC	.10
B017	O1	Oric Draughtsman	HCW	.15	B093	A	Dodge	GC	.30
B018	O1	Christmas Snow Store	HCW	.15	B094	O1	Castle Crawler	GC	.20
B019	O1	Mower	YC	.15	B095	O1	Kamikaze Kopters	GC	.20
B020	O1	Jungle Chase	PCN	.15	B096	O1	Dotman	YC	.20
B021	O1	Orcman	HCW	.15	B097		Kong	HCW	.15
B022	O1	Minescape	PCN	.35	B098		Hypertrek	HCW	.20
B023	O1	Glossolalia	YC	.15	B099		Escape	GC	.40
B024	O1	Artist	YC	.15	M100	O1	Hero Zero	YC	.20
B025	O1	Warlock's Mountain	YC	.20	B101		Egg Catcher	GC	.30
B026	O1	Missile Attack	HCW	.10	B102		U-Boat	GC	.25
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B037	O1	Moon Hopper	YC	.15	B113		Battle Tank	YC	.15
M038	O1	Oric Smash	YC	.15					
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B041	O1	Fruit Machine	GC	.30					
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B043	O1	Rugged Rocks	HCW	.15					
B044	O1	Oric Trek	YC	.25					
B055	O1	Minefield	YC	.15					
B056	O1	Attack of Marshmallows	YC	.15					
B057	O1	ITV Seven	PCW	.15					
B058	O1	Vampires	PCN	.20					
B059	O1	Drumulator	PCN	.15					
M060	O1	Destroyer	YC	.15					
B061	O1	Tank Attack	GC	.15					
B062		Bust!	GC	.15					
B063		Treasure Hunt	WM	.15					
B064		Hover Rescue	HCW	.20					
B065	A	Bach in 1984	PCN	.20	O = Written for the Oric-1, mostly convertible				
B066		Raydon's Danger	GC	.20	A = Written for the Atmos				
B067		Sea Trader	GC	.15	Blank equals Oric-1/Atmos compatible				

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Mr. J. Haworth, 3 Madingley Road, Cambridge CB3 0EE TOTAL:
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RAMBLING IN THE ROM - 48

Club Europe Oric

A number of you have asked whether it's worth joining the C.E.O. to be able to get at the back numbers of the Club discs, containing as they do now some 100 programs not commonly seen on this side of the Channel. So here is the full list of contents of the English discs produced by the Club and its predecessor, Club DiscOric:

CLUB DISCORIC

J.E.O. No.1	Disc magazine	J.E.O. No.2	Disc magazine	J.E.O. No.3	Disc magazine	J.E.O. No.4	Disc magazine
	Tendre Poulet		Contact List		Music		Easytext
	Cabbage Patch		Tableur Graphique		Pharaon		Psychiatric
	Champion Reversi		Yam		FL-Compte		Music
	Masque d'Or		Crypt Show		Cock'in		Contact List
	3D Graph		Delta 4		Bataille Navale		Singerie

CLUB EUROPE ORIC

J.E.O. No.1	Club magazine	J.E.O. No.2	Club magazine	J.E.O. No.3	Cobra Pinball	J.E.O. No. 4	Triathlon
Spring 1990	Contact List	Summer 1990	Roland Garros	Winter 1990	Poker	Spring 1991	Contact List
	Music		Europe		Driver		CMP
	Zamcopter		Music		Notre Dame		Sorvivor
	Septieme Dan		Cheops		Micr'Oric programs		Music
	Triolympic		Hyperball		Jeux en Basic programs		
	Desktop		Micr'Oric programs		Character sets		

J.E.O. No.5	Music	J.E.O. No.6	Music	J.E.O. No. 7	Music		
Summer 1991	Madonna screen	Autumn 1991	Compacter	Winter 1991	Frelon		
	Mapping		Carnet d'Addresse		Rabbit		
	Red Annie		Driver		Terminus		
	Mario Bros		Pierrot		Hires screens		
	Hyperball		Sinister Epic		Contact List		
	French Ludo		Detective Story				
	Mordor						

S.W.D. No.8	The Forgotten Isle	S.W.D. No.9	View to a Kill 3	S.W.D. No.10	Millionaire	S.W.D. No.11	Soft File
Spring 1992	Music	Summer 1992	French Draughts	Autumn 1992	Contact List	Winter 1992	Hires
	Pengoric		Music/Hires		Montsegur		Hardcopy
	Hires screen		Lode Runner		Mornifles		Around the World
	Cocoric		Orictools		File		in 80 days
	Odyssey 2000		Help		Bezier		Hollywood
	Cataldisc		L'Heritier		PC Transfer		
			Imago				

And now for the next special offer - take out a full Club membership for £22 for the year, and choose one of the above discs FREE. You'll get all this year's magazines from January (Dave said it was the best issue ever) and 4 quarterly discs plus the free disc. Cheques or P.O.'s payable to me, please, at 3, Madingley Road, Cambridge CB3 0EE.

And now for the promised goodies...

Special announcement 1

Last month I promised two, so here goes. Over the years I've built up quite a collection of magazine type-ins, virtually none of which have turned up on P.D. So now we have P.D. Type-ins, photocopies of the original magazine for you to tap in yourself. I've kept prices as low as possible, bearing in mind they include postage. The list should be included with this issue. If you have an original type-in which is not on the list, I'd be grateful if you could either lend me the original or send me a good quality photocopy so I can expand the list. We start with 113 titles...

Special announcement 2

Those who have been following my Ramblings assiduously will have realised we are approaching quarter-distance (#CFFF) - after 18 months! To celebrate, I am publishing 'The Naked Oric - Part 1'. Essentially it's the disassembly as published in O.U.M., tidied up, improved and fully cross-checked. It's available from me now in the usual bound A4 format, for £3.50 plus 50p postage and packing. It must be easier than scanning 15 issues of O.U.M.!

NEXT: we near #CFFF...

Rambling on...

'NEXT' (COMMAND)

Principal:

After finding the block corresponding to the loop variable, the value is adjusted by the current value of any STEP. If you pass the value limit set on entering a FOR, you exit and continue if there are other loop variables.

The exit is done by a jump to the interpreter because the return address is not put on the stack (it is eliminated by the FOR). Moreover, when you arrive at the NEXT, this return address is always on the stack. If you eliminate a block, then return to the start, there will be no address on the stack, and you risk moving back two bytes. That is why the routine starts with a JSR and not a JMP so that 2 bytes are placed on the top of the stack.

CE0C	BNE CE12	CE98	BNE CE9E	Jump if a loop variable name is stated
CE0E	LDY #00	CE9A	LDY #00	if not, high byte of loop variable address
CE10	BEQ CE15	CE9C	BEQ CEA1	unconditional: is set to 0
CE12	JSR $D0FC	CE9E	JSR $D188	take address of loop variable
CE15	STA B8	CEA1	STA B8	
CE17	STY B9	CEA3	STY B9	and save it
CE19	JSR $C3CA	CEA5	JSR $C3C6	seek a 'FOR' block on the stack
CE1C	BEQ CE22	CEA8	BEQ CEAE	jump if found
CE1E	LDX #00	CEAA	LDX #00	if not, X indexes 'NEXT WITHOUT FOR'
CE20	BEQ CE88	CEAC	BEQ CF14	and print the error
CE22	TXS	CEAE	TXS	place S on the correct block
CE23	TXA	CEAF	TXA	then calculate the low byte
CE24	CLC	CEB0	CLC	of the address of the step number
CE25	ADC #04	CEB1	ADC #04	(which is on the stack)
CE27	PHA	CEB3	PHA	save it

```
CE28  ADC #06        CEB4  ADC #06        also calculate the index
CE2A  STA 93         CEB6  STA 93         for the set value
CE2C  PLA            CEB8  PLA            AY = #01XX
CE2D  LDY #01        CEB9  LDY #01
CE2F  JSR $DE73      CEBB  JSR $DE7B      (AY) → ACC1
CE32  TSX            CEBE  TSX
CE33  LDA 0109, X    CEBF  LDA 0109, X    recover step sign
CE36  STA D5         CEC2  STA D5         and save it
CE38  LDA B8         CEC4  LDA B8
CE3A  LDY B9         CEC6  LDY B9         take the step value
CE3C  JSR $DA97      CEC8  JSR $DB22      (AY)+ACC1 → ACC1: calculate new value
CE3F  JSR $DEA1      CECB  JSR $DEA9      ACC1 → (#B8–#B9) and place new loop variable value
CE42  LDY #01        CECE  LDY #01        #93–Y = #01XX: Address of the set value
CE44  JSR $DF36      CED0  JSR $D4FE      compare ACC1 and (AY)
CE47  TSX            CED3  TSX
CE48  SEC            CED4  SEC            the comparison sign
CE49  SBC 0109, X    CED5  SBC 0109, X    must be the same as the STEP value
CE4C  BEQ CE65       CED8  BEQ CEF1       yes, the loop is finished
```

Restart the loop

```
CE4E  LDA 010F, X    CEDA  LDA 010F, X    No, restart
CE51  STA A8         CEDD  STA A8         recover the line number low byte
CE53  LDA 0110, X    CEDF  LDA 0110, X
CE56  STA A9         CEE2  STA A9         and the high byte
CE58  LDA 0112, X    CEE4  LDA 0112, X
CE5B  STA E9         CEE7  STA E9         then TXTPTR low byte
CE5D  LDA 0111, X    CEE9  LDA 0111, X
CE60  STA EA         CEEC  STA EA         and the high byte
CE62  JMP $C8AD      CEEE  JMP $C8C1      and jump to the interpreter
```

Exit from loop

```
CE65  TXA            CEF1  TXA            Adjust the stack above the FOR block
CE66  ADC #11        CEF2  ADC #11        to reduce by one loop (C=1, ADC #12 therefore)
CE68  TAX            CEF4  TAX
CE69  TXS            CEF5  TXS
CE6A  JSR $00E8      CEF6  JSR $00E8      take the current character
CE6D  CMP #','       CEF9  CMP #','       are there further loop variables?
CE6F  BNE CE62       CEFB  BNE CEEE       no, exit
CE71  JSR $00E2      CEFD  JSR $00E2      yes, jump the comma
CE74  JSR $CE12      CF00  JSR $CE9E      and restart, placing a temporary address
```

The next section of the interpreter deals with the evaluation of expressions, it's the first time we come across the dreaded maths. If you'd appreciate an explanation of mantissas, exponents and two's complement, let me or Dave know and I'll try to oblige.

Next month, a detailed look at SCART plugs, and we make it to #CFFF.

Jon Haworth

CEO-MAG GENERAL INDEX (issues 1 through 30)

THE ULTIMATE HI -SCORE TABLE

WELL YOU HAVE ALL BEEN BUSY TRYING TO BEAT THOSE HI-SCORES. PLENTY OF DIFFERENT TITLES HAVE BEEN ATTEMPTED. WE NOW LIST THE RESULTS,WHICH COVER AN INCREDIBLE 112 TITLES

.

- DAVE DICK

3D BATTLESTAR - 57,480 (LEVEL 4.0) - DAVE DICK
3D FONGUS - 18,100 - GRAEME BURTON (WHO WILL NOW BE SHOWN AS 'GB'
3D STARTER - 75,400 - ROBERT COOK
ATLANTID - 13,990 (DUREE 62) - MATTHEW DICK - GO ON MY SON!
A.T.M - 67,990 - ROBERT COOK - FAMED EX-EDITOR OF 'O.U.M' AND NOW SELLING INSURANCE.
ARENA 3000 - 302,800 (ARENA 22) - CLINT THOMPSON - ONE HALF OF THE 'YOUR ORIC' TEAM
ATTACK OF THE CYBERMEN - 4,730 - HENRY MARKE
ANTICS/SINGERIE - 131,372 - PETER THORNBURN
BOMBYX - 28,530 - ROBERT COOK
BOZY BOA - 1,740 - DAVE DICK
BERING - 168 DAYS - G.B
CHUCKFORD - 185,050 - ROBERT COOK
CENTIPEDE - 59,240 - HENRY MARKE
CHOPPER - 69,950 - VINCENT 'THE PIGEONS FRIEND' TALVAS
COCK'IN - 34,750 - VINCENT TALVAS
DAMSEL IN DISTRESS - 4,860 - G.B
DEFENCE FORCE - 1,268,020 - TIM COLGATE
DON'T PRESS THE LETTER Q - 1,229,620 - BRUNO DOSSIER
DRACULAS REVENGE - 13,600 - G.B
DOGGY - 15,160 - ARNT ISAKSEN
DELTA FOUR - 6,920 - LAURENT DELHORBE
DRIVER - 66,500 - J-YVES BRUN
DON'T PANIC - 4330 - DAVE DICK
ELEKTROSTORM - 25,600 - TIM COLGATE
FRIGATE COMMANDER - 504 - KEITH 'YOUR ORIC' THOMPSON
FIREFLASH - 59,210 - STAALE EIKBRAATEN
FRELON - 8952 (LEVEL 3) - SIMON DICK
FORMULE 1 - 27,487 -ARNT
FLY FOR YOUR LIFE - 172 - G.B
GUBBIE - 339,360 - STAALE
GRAVITOR - 5,204 - ARNT
GHOSTMAN - 17,680 - G.B
GALACTOSMASH - 50 - MATTHEW COATES
GALAXIANS - 69,600 - ROBERT COOK & NICHOLAS MENOUX
GHOST GOBBLER 32,505 - STEFFAN JACOBSSON
GRID WARRIORS - 55,494 - G.B
GOLDMINE - 60,900 (GAME COMPLETED) - HENRY MARKE
HARRIER ATTACK - 105,700 - STAALE EIKBRAATEN
HELLION 257,550 - MATTHEW GREEN
HONEY KONG - 11,436 (LEVEL 11) - PETER THORNBURN
HUNCHBACK - 750,200 - BENEDICTE GAREAU
HOPPER - 40,170 - TIM COLGATE
ICE GIANT - 15,780 - ARNT
INSECT INSANITY - 43,300 - VINCENT
INVADERS (IJK) - 17,700 - ALEX KRAUSS
INVADERS (PSS) - 4,430 - PETER THORNBURN
IMAGO - 6,820 (ALL SCREENS) - HENRY MARKE
JIMMY POUBELLE - 11,440 - PETER THORNBURN
JEUX OLYMPIQUES - 50,147 - ARNT
KRILLYS - 28,290 - G.B
KINGDOM - 109 -G.B
KROKATILE WALTZ - 10,025 -G.B
KARATE - 23,800 - ARNT
LOKI - 62,675 - TIM COLGATE
LOCHNESS MONSTERS - 14,683 - G.B
LODE RUNNER - 16,738 - ARNT (NICE TO SEE THAT SOMEONE'S GOT A DE-BUGGED VERSION EH JON!
LONE RAIDER 80,500 - ESPEN ANDERSEN
LUNAR MISSION - 13,129 - G.B
LIGHT CYCLES - 4,333 - ESPEN ANDERSEN
MANIC MINER - 38,156 (AT THE CENTRE OF THE EARTH) - G.B
MANIC MINER with infinite lives - 115,583 -ROBERT COOK
MUSHROOM MANIA - 471,420 - TIM COLGATE

CONTINUED OVERLEAF

HI - SCORES CONTINUED

MACADAM BUMPER - 169,660 - G.B
MIDNIGHT FEAST - 1,500,120 - HENRY MARKE
MINED OUT - 4,100 - G.B
M.A.R.C - 1,560 - G.B
MAZE RALLY - 88,920 - G.B
MAHJONG - 16,200 (LEVEL 5 CLEARED TWICE TO GIVE 6 LEVELS) - HENRY MARKE
MLUCH - 22,000 (ALL 18 LEVELS COMPLETED AND 7 LIVES LEFT) - HENRY MARKE
MR.WIMPY - 16,549 - ESPEN ANDERSEN
OPERATION GREMLIN - 22,617 - G.B
ORION - 49,950 - DAVID DEVIN
ORIC MUNCH - 895,439 - MICHEL LECLERC
OLIVE AND POPEYE - 69,570 - RENE MARKE
PASTA BLASTA - 34,480 - MATTHEW COATES
PLAYGROUND 21 - 92,000 - TIM COLGATE
PSYCHIATRIC - 41,070 - HENRY MARKE
PROBE 3 - 2,450 - ROBERT COOK
PANIC - 823 - PETER THORNBURN
PAINTER - 103,850 - J-PHILLIPE MERC
PAINTER (with 255 lives) - 143,310 - PETER THORNBURN
PROTECTOR - 99,594 - THIERRY AVANNIER
QUARKFLIGHT - 709 - G.B
Q*BERT - 15,470 - DAVE DICK
QUACK A JACK - 95,671 - COLIN COOK
RABBIT - 169,760 (LEVEL 29) - PETER THORNBURN
RATSPLAT - 20,150 - STAALE
ROCK RUN - 2,264 - PAUL HUTTON
SCUBA DIVE - 3,510 - JARLE KARLSRUD (SOUNDS LIKE A 'BADDIE' FROM FROM BATMAN - WATCH OUT FOR THE KRPTONITE!)
STYX - 194,600 (WAVE 18) - G.B
STANLEY 23,280 - PETER THORNBURN
SUPER JEEP - 81,723 - G.B
SUPER METEORS - 364,700 - G.B
SNAKE VENOM - 102,822 - STAALE
SUPER ADVANCED BREAKOUT - 17,050 - ARNT
SPOOKY MANSION - 1100 - LOUISE AND DAVE DICK
SORVIVOR - 1,080 - ROBERT COOK
STOCKMARKET - 82,936 - G.B
TROUBLE IN STORE - 1,060,758 - G.B
TWO GUN TURTLE - 5,890 - G.B
TRIATHLON - 2,919 - G.B
TETRIX - 2411 - HENRY MARKE
TETRIS - 9983 - JON HAWORTH
TRICKSHOT - 1044 - S.G DUTTON
TRIDENT NEPTUNE - 7,200 - DAVE DICK
TALISMAN - 3697 (4 KEYS) - SIMON DICK
ULTIMA ZONE - 148,860 - STAALE EIKBRAATEN
ULTRA - 35,780 (LEVEL 32) - PETER THORNBURN
VIDEO FLIPPER - 55,350 - G.B
XENON I - 117,230 - ERIC EDUEZI
XENON III - 9,927 - STAALE
ZOOLYMPICS - 13,677 - G.B
ZEBBIE - 945,560 - STAALE
ZORGONS REVENGE - 155,830 - E.TOLLEMER
ZEBULON - ALL SCREENS COMPLETED IN 8 MINUTES

IF YOU HAVE A NEW HI-SCORE THEN DON'T FORGET TO SEND IT IN. WE WILL PUBLISH SCORE UPDATESAS AND WHEN. A COMPLETE TABLE WILL BE PUBLISHED AGAIN IN THE AUTUMN.
IF YOU HAVE ANY TIPS FOR GAMES OR ADVENTURE MAPS THEN PLEASE SEND THEM IN.

P.S. - "GOVERNMENT HEALTH WARNING" - TOO MUCH GAME PLAYING CAN SERIOUSLY DAMAGE YOUR HEALTH.

DEAR DAVE,
I RECENTLY BOUGHT 10 DISCS FROM 'CASPELL COMPUTER',BUT FOUND THEM FAULTY. I CONTACTED THEM AND THEY DULY REPLACED THEM. OF THE NEW BATCH,ONLY ONE WAS FAULTY. WHEN I OPENED THE DISC THERE WAS A BUBBLE ON IT. DO YOU KNOW OF ANYONE ELSE WHO HAS HAD THIS PROBLEM?

- JACK LUPTON (RUNCORN)

DEAR DAVE,
I ENCLOSE A CATALOGUE,WHICH I RECIEVED FROM 'VIKING DIRECT' RECENTLY. PAGE 40 MAY BE OF INTEREST TO 'O.U.M' READERS LOOKING FOR 3" DISCS.

- ROBERT CRISP (MEANWOOD)

DEAR JACK,
NO. I'D ADVISE YOU CHANGE YOUR SUPPLIER - SEE BELOW.

DEAR ROBERT,
THE AD. IS FOR MAXELL DISCS. 16.99 FOR A BOX OF TEN SOUNDS REASONABLE,EXCEPT WHEN YOU READ THE SMALL PRINT. ADD V.A.T AT 17.5% AND YOU ARE UP TO 19.96. THEN UNLESS YOU SPEND 50 pound OR MORE YOU HAVE TO ADD ON 2.90 FOR POSTAGE. THAT'S A GRAND TOTAL OF 22.86 FOR A BOX. TO CAP IT ALL - THE 'VIKING' SALE ENDED ON FEBRUARY 28th.
MY ADVICE IS TO STICK WITH 'DABS PRESS'. QUALITY MAXELL DISCS AND NO SILLY PRICES. PRICE IS 11 pound PER BOX + 3.00 TOTAL ORDER + V.A.T . THEREFORE 1 BOX WILL COST YOU 16.45. OF COURSE THE MORE YOU BUY THE CHEAPER THEY ARE,AND THEY ARE FAST AND EFFICIENT. DABS PRESS ARE AT: PO BOX 48, PRESTWICH,MANCHESTER. M25 7HF. TEL: 061 773 8632

- DAVE

==========

DEAR DAVE,
REGARDING THE WAY I PRODUCED 'DEBBIE','QUEEN',AND'GOOFY' etc.
MY APPROACH TO THESE PICTURES WAS TO SIMPLY DRAW THE PICTURE ONTO A PIECE OF GRAPH PAPER AND UNDERGO A PAINSTAKINGLY SLOW PROCEDURE OF PUTTING THE PICTURE ONTO THE SCREEN.
THE OTHER WAY I USED TO PRODUCE GRAPHICS (SUCH AS LOADING SCREENS AND OTHER PICTURES) WAS WITH THE "O.U.M. CAD" ,WHICH WAS IN A BACK ISSUE OF THE MAG. I WROTE THE PROGRAM AND A COUPLE OF ISSUES LATER JAMES GROOM ADDED A COUPLE OF ADDITIONAL FEATURES TO IT - NOT A BAD FUN-DRAWING PROGRAM AT ALL!!
STILL CAN'T WORK OUT THE COMPETITION - TOO DIFFICULT!
REGARDING VINCENT'S REQUEST FOR A SUMMER JOB IN ENGLAND - TAKE HIM ON YOUR MILK ROUND!

- ROBERT COOK (KINGS NORTON).

DEAR ROBERT,
TA FOR THE INFO..
BY USING MY O.U.M INDEX (WHY DIDN'T YOU?),I'VE ASCERTAINED THAT THE CAD PROGRAM WAS IN ISSUE 31 AND THE UPDATE IN ISSUE 33.
I DON'T THINK THAT YOU ARE THE ONLY ONE TO OF FOUND THE COMPETITION A BIT DIFFICULT.
I THINK VINCENT MIGHT 'BOTTLE' OUT OF YOUR SUGGESTION!

- DAVE

==========

DEAR DAVE,
I NOTICE FROM O.U.M # 67 THAT OUR EUROPEAN ALLIES HAVE BEEN HARD AT WORK AT SOME OF THE HI-SCORES. I WAS PARTICULARLY IRRITATED TO SEE THE SCORE FOR 'LIGHT CYCLES' BEATEN. NEVER MIND. I'M DETERMINED TO BEAT IT,AND WILL LET YOU KNOW WHEN I HAVE.

- PETER THORNBURN (CANTERBURY)

DEAR PETER,
THAT'S IT THINK POSITIVE. IF ALL ELSE FAILS THEN DO WHAT I DO. PICK OUT A GAME THAT DOESN'T APPEAR ON THE HI-SCORE CHART.

- DAVE

==========

DEAR DAVE,
I WOULD LIKE TO OFFER A PRIZE FOR YOUR RAFFLE AT THE NEXT ORIC MEET.

IT IS A 'DRAGON 64' WITH 2 JOYSTICKS,SOFTWARE, 'NDUG' NEWSLETTERS,AND ASSORTED BUMPF! I KNOW IT'S NOT ORIC RELATED,BUT I KNOW MANY READERS COLLECT/HAVE 8 BIT MICROS,AND THE 'DRAGON' IS UNIQUE IN THAT IT HAS A 6809 CPU,WHICH IS SUPPOSEDLY THE BEST 8-BIT CPU PRODUCED. IT'S PRETTY FAST,HAS A LOT OF SOFTWARE AVAILABLE FOR IT AND IT'S RELIABLE (UNLIKE SINCLAIR'S LITTLE BLACK DOORSTOPS).

- RICHARD FARELL (DARLINGTON).

DEAR RICHARD,
THANKS FOR THE OFFER. WE GRATEFULLY ACCEPT. IF NOTHING ELSE OUR PRIZE RAFFLES ARE ALWAYS 'DIFFERENT'.
IF ANYONE ELSE HAS SOMETHING TO DONATE THEN WOULD THEY PLEASE GET IN TOUCH.
I WANT TO GET A LIST OF PRIZES DRAWN UP SHORTLY AND THEN WE CAN START SELLING TICKETS TO THOSE WHO WON'T BE AT THE 'MEET'.

- DAVE

==========

BITS AND BOBS

FUNPARK

FOR THOSE WHO DIDN'T UNDERSTAND THE LINE CHANGES THAT WE PRINTED TO THE 'FUNPARK' PROGRAM,WHICH WAS OUM DISC Nr.2 - HERE WE GO AGAIN!
LINE 3874 TO READ: M=INT((RND(1)*G)+G/2)+1
LINE 3838 TO READ: GOSUB 8930:GOTO 30 (NOT WHAT BRIAN PUT IN HIS LETTER).
ADD LINE 9632 IF A=LG THEN 9630 (AGAIN COMPLETELY DIFFERENT TO WHAT BRAIN FIRST TOLD ME).
IF YOU STILL HAVE PROBLEMS THEN PLEASE EITHER: A) SEND ME A BLANK DISC, B) RETURN ME YOUR OUM DISC or C) TELEPHONE BRIAN KIDD. HIS EX-DIRECTORY NUMBER IS : 0633 275682.
BY THE WAY, BRIAN'S WIFE IS ABOUT TO GIVE BIRTH AGAIN - THE FIFTH I BELIEVE. SHE TELLS ME THAT THEY HAVE NOW BOUGHT A TELEVISION. I WOULD OF THOUGHT THAT A CONDOM WAS EASIER TO FIT!

SUPER REVERSE

WITH REGARD TO THE 'SUPER REVERSE' LISTING FROM BRIAN KIDD IN OUM ISSUE 66.

LINE 254 SHOULD READ: IF G$="2"ANDV$>"6"THEN 246.

BRIAN TELLS ME THAT 'SUPER REVERSE' WAS WRITTEN TO REDUCE THE USE OF 'RETURN'.
'RETURN' IS USED ONLY WHEN WANTING TO SWAP 1 OR 2 LETTERS. ALL OTHERS ARE AUTOMATICALLY ENTERED AND ACTIONED.

==========

THE COMPETION PAGE

THE COMPETITION PAGE HAS SHRUNK THIS ISSUE FROM A FULL PAGE TO A COUPLE OF LINES. NO WINNER FOR THE LAST COMPETTION AND THUS A BREAK THIS MONTH. WE WILL GIVE YOU ANOTHER MONTH TO ATTEMPT PRIZE PUZZLE No.2

==========

ZEBBIE

REGARDING OUR NOTE IN THE LAST ISSUE REGARDING THE 'BUGGED' VERSION OF 'ZEBBIE' BY IJK.
I HAVE SINCE RECIEVED A SEDORIC VERSION FROM BRAIN KIDD,WHICH PETER THORNBURN IS CURRENTLY TESTING. THIS VERSION TAKES UP MORE SPACE THAN THE PREVIOUSLY RELEASED VERSION. I HAVE ALSO RECIEVED AN ORICDOS VERSION FROM ALLAN WHITAKER. I WILL KEEP YOU INFORMED.

==========

ALTAI JOYSTICK INTERFACES

THANKS TO DAVID WILKIN WE NOW HAVE A FEW MORE OF THE ALTAI (pase compatible) JOYSTICK INTERFACES FOR YOUR ORIC. PRICE AS PREVIOUSLY ADVERTISED.

==========

ALL FORMATS FAIRS

I PROMISED TO INCLUDE A 1 pound OFF VOUCHER TO SAID FAIRS WITH THE LAST O.U.M. I FORGOT TO SEND THEM OUT. OOPS! YOU WILL FIND ONE WITH THIS ISSUE.
PLEASE NOTE THAT THE VENUE SHOWN FOR LONDON ON APRIL 24th HAS BEEN ALTERED. IT HAS BEEN SWITCHED FROM SANDOWN PARK TO NOVOTEL,HAMMERSMITH. THANKS TO PETER BRAGG FOR THE INFO. I SEEM TO RECALL THAT LAST YEAR THEY SWITCHED IT FROM THE NOVOTEL TO SANDOWN PARK AT THE LAST MOMENT. YOU ARE ADVICED TO RING BRUCE (DIDN'T HE WORK AT TANSOFT) EVERISS PRIOR TO SETTING OUT.

==========

DON'T PANIC

THE GOOD NEWS FOR CASSETTE USERS IS THAT OUR NO.1 TITLE FOR THE ORIC - 'DON'T PANIC' - IS NOW AVAILABLE. UNLIKE THE SEDORIC DISC VERSION THERE IS NO FACILITY TO SAVE HI-SCORES. I'M SURE THOUGH THAT THE CLEVER ONES AMONGST YOU MAY WELL ADAPT ANDRE WIDHANI'S ROUTINE ON 'TETRIX' TO ALLOW YOU TO DO THIS.
"DON'T PANIC" IS AVAILABLE NOW FOR 3.50 INCLUDING POSTAGE.

CASSETTE USERS

WITH MORE AND MORE CHANGING OVER TO DISC THE CASSETTE USERS MAY FEEL A LITTLE NEGLECTED AT TIMES. WE ARE GOING TO PUT MATTERS RIGHT. I WILL LOOK AT PUTTING TOGETHER SOME SORT OF COMPILATION JUST FOR YOU.

WANT TO CHANGE TO DISC

IF ANY CASSETTE USERS WANT TO CHANGE TO DISC THEN PLEASE DROP ME A LINE.
I AM CURRENTLY LIASING WITH A LOCAL GUY WHO IS GOING TO KEEP A LOOK OUT FOR 3" AND 3.5" DRIVES FOR ME. HE IS ALSO WILLING TO MAKE UP CASED POWER SUPPLIES. ALL YOU THEN NEED IS AN INTERFACE FROM STEVE HOPPS.
IF I CAN GET SOME KEEN PRICES THEN I MAY PUT SOME SYSTEMS TOGETHER.
WATCH THIS SPACE.

DAMSEL IN DISTRESS

ONE OF THE PROGRAMS ON THE FIRST CLUB EUROPE ORIC DISC OF THIS YEAR IS AN ADAPTED VERSION OF THAT FAVOURITE FROM IJK - 'DAMSEL IN DISTRESS'. PERHAPS LIKE ME YOU THOUGHT IT A BRILLIANT GAME,BUT COULDN'T EVEN CLEAR THE FIRST SCREEN. THIS VERSION SOLVES ALL YOUR PROBLEMS. YOU CAN HAVE INFINITE LIVES OR NOT,START ON ANY SCREEN AND IF YOU SAY 'YES' TO THE THIRD OPTION THEN YOU WILL BE ALLOWED TO PRESS 'ESC' DURING A SCREEN AND JUMP TO THE NEXT.
TO COMPLY WITH COPYRIGHT ALL USERS WILL BE RECIEVING AN OFFICIAL INLAY TO THIS TITLE FROM JON HAWORTH.

NEW CASSETTE STOCKS

SOME ADDITIONS TO THE MAIL ORDER LIST FOR CASSETTE USERS AS FOLLOWS:
ORICAL BACKGAMMON (DORMERE) - 1.50
PANIC (NO MANS LAND) - 1.50
MORIA (SEVERN) - 1.00
ENCOUNTER (SEVERN) - 1.00
GALAXY 5 (ORIC -1) - 1.00
JOGGER (ORIC -1) - 75 pence

'DAMSEL IN DISTRESS' CASSETTES ARE CURRENTLY OUT OF STOCK,BUT WE HOPE TO PRODUCE MORE. ' IJK CHESS' - ONLY A FEW LEFT.
'XENON III' OUT OF STOCK - WE HOPE TO PRODUCE SOME.
I HAVE A MASS OF PROGRAMS TO WADE THROUGH TO A) ASCERTAIN IF WE CAN DUPLICATE CASSETTES and B) DISTRIBUTE DISC VERSIONS.
AN UPDATED PRICE LIST WILL BE PRINTED WITHIN A COUPLE OF MONTHS.

LABYRINTHE

THOSE OF YOU WHO PURCHASED THE FIRST OUM DISC MAY REMEMBER 'LABYRINTHE'.
IF YOU ARE STILL STUCK IN THIS LITTLE MAZE THEN HERE IS THE SOLUTION FROM JOHN HURLEY:-

```
E E E S S W W W S S S S S E E E E E S S S W W W W S S S S S E E E
S S S S S S E E E E S S S S E E E E N N N N N N W W W N N N N N E E E E E E
N N N E E E E E E N N N N N E E E E S S S S E E E E S S S S W W W W
S S S W W S S S S E E E S S E E E E E S S S     Home
```

LABYRINTHE was a title from a HEBDOGICIEL compilation. Thanks to some super translating from Norma Wrangham and typing by John Hurley we now have some nice titles for you. John has also tidied up the presentation on these titles. We will publish some as listings,whilst some will be put on a future OUM DISC,and others will be offered to cassette users.

draughts.

```
1 POKE 618,2:PAPER 0:INK 3:CLS
2 PRINT:PRINT"If you have an ORIC-1, PRESS 1 ":PRINT:PRINT
3 PRINT"If you have the ATMOS, PRESS 3 "
4 GETX$
5 IO=VAL(X$)
10 PLOT2,12,"Do you want to read the rules ?."
20 PLOT 2,14,"If YES then hit the 'Y'."
30 PLOT2,16,"Otherwise any other key.":GET A$:IF A$="Y"THEN 9000
40 CLS:PAPER 2:INK0:PLOT10,13,"STARTING GAME NOW.":WAIT 150
50 CLS:PAPER1:INK0:HIRES
60 IFIO=1THENCALL#E6CAELSECALL#E76A
70 PRINTCHR$(17):DIMR(4),S(9,9),T(9,9):G=-1:R(0)=-99
90 DATA1,0,1,0,0,0,-1,0,0,1,0,0,0,-1,0,-1,15
120 FORX=0TO7:FORY=0TO7
124 READJ:IFJ=15THEN160
160 S(X,Y)=J:T(X,Y)=J:GOTO200
180 RESTORE:READS(X,Y):T(X,Y)=S(X,Y)
200 NEXTY:NEXTX
210 GOTO4000
230 FORX=0TO7:FORY=0TO7
234 IFS(X,Y)>-1THEN350
235 IFS(X,Y)<>-1THEN325
310 FORA=-1TO1STEP2:B=G:GOSUB650:NEXTA
325 IFS(X,Y)<>-2THEN350
330 FORA=-1TO1STEP2:FORB=-1TO1STEP2:GOSUB650:NEXTB:NEXTA
350 NEXTY:NEXTX
354 GOTO1140
650 U=X+A:V=Y+B:IFU<00RU>7ORV<00RV>7THEN870
740 IFS(U,V)=0THENGOSUB910:GOTO870
770 IFS(U,V)<0 THEN 870
790 U=U+A:V=V+B:IFU<00RU>7ORV<00RV>7THEN870
850 IFS(U,V)=0THENGOSUB910
870 RETURN
910 IFV=0ANDS(X,Y)=-1THENQ=Q+2
920 IFABS(Y-V)=2THENQ=Q+5
960 IFY=7THENQ=Q-2
980 IFU=00RU=7THENQ=Q+1
1030 FORC=-1TO1STEP2:IFU+C<00RU+C>7ORV+G<0THEN1080
1035 IFS(U+C,V+G)<0THENQ=Q+1:GOTO1080
1040 IFU-C<00RU-C>7ORV-G>7THEN1080
1045 IFS(U+C,V+G)>0AND(S(U-C,V-G)=00R(U-C=XANDV-G=Y))THENQ=Q-2
1080 NEXTC:IFQ>R(0)THENR(0)=Q:R(1)=X:R(2)=Y:R(3)=U:R(4)=V
1100 Q=0:RETURN
1140 IFR(0)=-99THEN1880
1230 CLS:ZAP:PRINTSPC(5)"My move is "R(1);R(2)"to "R(3);R(4);:R(0)=-99
1240 IFR(4)=0THENS(R(3),R(4))=-2:GOTO1310
1250 S(R(3),R(4))=S(R(1),R(2))
1310 S(R(1),R(2))=0:IFABS(R(1)-R(3))<>2THEN2100
1330 S((R(1)+R(3))/2,(R(2)+R(4))/2)=0
1340 X=R(3):Y=R(4):IFS(X,Y)=-1THENB=-2:FORA=-2TO2STEP4:GOSUB1370
1350 IFS(X,Y)=-2THENA=-2:FORA=-2TO2STEP4:FORB=-2TO2STEP4:GOSUB1370:NEXTB
1360 NEXTA:IFR(0)<>-99THENZAP:PRINT"to "R(3);R(4);:R(0)=-99:GOTO1240
1365 GOTO2100
1370 U=X+A:V=Y+B:IFU<00RU>7ORV<00RV>7THEN1400
1380 IFS(U,V)=0ANDS(X+A/2,Y+B/2)>0THENGOSUB910
1400 RETURN
1552 FORL=0TO7:FORM=0TO7
1556 IFS(L,M)=1ORS(L,M)=2THENZ=1
1558 IFS(L,M)=-1ORS(L,M)=-2THENT=1
1560 NEXTM:NEXTL
1564 IFZ<>1THEN1885ELSEIFT<>1THEN1880ELSEZ=0:T=0
1580 IFIO=1THENCALL#E804ELSECALL#E93D
1585 PING:PRINT:PRINTSPC(10)"It's your move."
1590 PRINT"     Move from square ";:GET E$:IF E$="Q"THEN 1890
1592 PRINTE$;",";:GETH$:PRINTH$;:E=VAL(E$):H=VAL(H$):X=E:Y=H
1593 IFS(X,Y)<=00RE<00RE>7ORH<00RH>7THENPRINTSPC(15)"ERROR !":GOTO1590
1670 PRINT" to ";:GETA$:PRINTA$;:PRINT",";:GETB$:PRINTB$:A=VAL(A$):B=VAL(B$):
A:Y=B
1672 IFA<00RA>7ORB<00RB>7THENPRINTSPC(10)"ERROR - Start again":GOTO1590
1675 IFS(E,H)=1THEN1677ELSE1680
1677 IFB<HTHEN1590
1680 IFS(X,Y)=0ANDABS(A-E)<=2ANDABS(A-E)=ABS(B-H)THEN1750ELSEPRINTSPC(15)"ERRO
R"
1685 GOTO1590
1750 S(A,B)=S(E,H):S(E,H)=0:IFABS(E-A)<>2THEN1810
1800 S((E+A)/2,(H+B)/2)=0
1802 PRINT"You have captured my piece !.":PRINT"     Any further moves.";:GETA
1$
1803 IFA1$="/"THEN1810ELSEPRINTA1$;",";:GETB1$:PRINTB1$:A1=VAL(A1$):B1=VAL(B1$)
1805 IFS(A1,B1)<>00RABS(A1-A)<>20RABS(B1-B)<>2THEN1802
1806 E=A:H=B:A=A1:B=B1:GOTO1750
1810 IFB=7THENS(A,B)=2
1830 IFIO=1THENCALL#E6CA:GOTO230
1831 IFIO=3THENCALL#E76A:GOTO230
1880 PRINT"YOU HAVE WON!":IF IO=1 THEN CALL#E804ELSECALL#E93D
1881 WAIT1000:END
1885 PRINT"I HAVE WON !":IFIO=1THENCALL#E804ELSECALL#E93D
1886 WAIT1000:END
1890 TEXT:END
2100 CURSET28,187,1
2110 FORY=0TO7
2120 FORX=0TO7
2121 CURMOV25,0,0
2125 IFT(X,Y)=S(X,Y)THEN2240
2130 T(X,Y)=S(X,Y):ONS(X,Y)+3GOSUB3300,3100,3400,3000,3200
2240 NEXTX
2245 IFY=7THEN2260
2250 CURMOV-200,-25,0
2260 NEXTY
2270 GOTO1552
3000 AH=48084+4*X-1000*Y
3001 FORI=1TO18:POKEAH,7:AH=AH+40:NEXT:FOR I=1TO9:CIRCLEI,1:NEXT:RETURN
3100 AH=48084+4*X-1000*Y
3101 FORI=1TO18:POKEAH,6:AH=AH+40:NEXT:FORI=1TO9:CIRCLEI,1:NEXT:RETURN
3200 AH=48084+4*X-1000*Y
3201 FORI=1TO18:POKEAH,7:AH=AH+40:NEXT
3209 FOR I=2TO9:CIRCLEI,1:CIRCLEI-1,2:NEXT:RETURN
3300 AH=48084+4*X-1000*Y
3301 FORI=1TO18:POKEAH,6:AH=AH+40:NEXT
```

```
3309 FORI=2TO9:CIRCLEI,1:CIRCLEI-1,2:NEXT:RETURN
3400 FORI=1TO9:CIRCLEI,0:NEXT:RETURN
4000 PAPER0:INK3:CURSET239,0,1:DRAW-199,0,1:DRAW0,199,1:DRAW199,0,1
4001 DRAW0,-199,1
4005 FORI=24TO199STEP25:CURSET239,I,0:DRAW-199,0,1:CURSET239-I,0,1:DRAW0,199,1
4006 NEXTI
4011 CURSET19,12,0:FORI=55TO48STEP-1:CHARI,0,1:IFI=48THEN4012ELSECURMOV0,25,0
4012 NEXTI
4020 CURSET50,96,0
4021 FORI=48TO55:CHARI,0,1:IFI=55THEN4100ELSECURMOV25,0,0:NEXTI
4100 CURSET28,187,0
4110 FORY=0TO7:FORX=0TO7
4121 CURMOV25,0,0
4130 AX=S(X,Y):IFAX=0THEN4240
4131 IFAX=2THENGOSUB3200
4132 IFAX=-2THENGOSUB3300
4133 IFAX=1THENGOSUB3000
4134 IFAX=-1THENGOSUB3100
4240 NEXTX
4245 IFY=7THEN4260
4250 CURMOV-200,-25,0
4260 NEXTY
4270 GOTO230
9000 CLS:PRINT:PRINTSPC(15)"DRAUGHTS":PRINTSPC(15)"--------"
9010 PRINT:PRINTSPC(10)"RULES OF THE GAME"
9020 PRINT:PRINT"    1   Moving the piece."
9030 PRINT:PRINT"Pieces must go foreward and diagonally"
9040 PRINT"So there are two possible moves only."
9050 PRINT:PRINT"    2   Capturing a piece.":PRINT
9060 PRINT"If you are in front of an opponant and"
9070 PRINT"the opposite diagonal is free, JUMP."
9080 PRINT:PRINT:PRINT:PRINT"After taking it, if the same condition"
9090 PRINT"exists again, you can continue taking"
9100 PRINT"in the same way by jumping over them."
9105 PLOT2,26,1
9110 PLOT 3,26,"     PRESS A KEY TO CONTINUE"
9120 GET A$:IF A$<>""THEN CLS
9130 PRINT:PRINT"    3   Promotion of pieces.":PRINT
9140 PRINT"If you can cross the whole board and"
9150 PRINT"reach the eighth row, It becomes KING."
9180 PRINT:PRINT"    4   Moving the King."
9190 PRINT:PRINT"The King moves the same way as any"
9200 PRINT"other piece, and can also move in the"
9220 PRINT"reverse direction."
9230 PRINT:PRINT"    5   Rules of capture."
9240 PRINT:PRINT"When a piece can be taken, It should   be captured."
9250 PRINT:PRINT"If however, a capture was not made"
9260 PRINT"the opponant may leave his pieces as    they are."
9270 PRINT:PRINT"If more than one capture is possible   any may be choosen rega
rdless"
9280 PRINT"of the number and value of the pieces."
9285 PLOT2,26,1
9290 PLOT3,26,"     PRESS ANY KEY TO CONTINUE"
9300 GETA$:IFA$<>""THEN CLS
9310 PRINT:PRINT" THE ORIC PLAYS FIRST AND IS 'BLUE'."
9320 PRINT:PRINT"If it's your turn":PRINT"-----------------":PRINT
9330 PRINT" ENTER YOUR MOVE - ":PRINT:PRINT" Horizontal Co-ordinate first."
9340 PRINT:PRINT" or enter'Q' if you wnat to finish."
9350 PRINT:PRINT"         ¥-¥-¥-¥-¥-¥":PRINT
9360 PRINT"If you have made a capture":PRINT"-------------------------":PRINT
9370 PRINT"Enter your next co-ordinates.":PRINT
9380 PRINT"If you have no more to take press '/'"
9385 PLOT2,26,4
9390 PLOT3,26,"     PRESS ANY KEY TO CONTINUE"
9400 GET A$:IF A$<>""THEN 40
```

P 19

TRANSLATION, TESTING, TYPING AND PROGRAM AMENDMENTS BY: — NORMA WRANGHAM AND JOHN HURLEY.

O.U.M

C O O K ' S C O R N E R

I HAVE RECENTLY HAD AN ASSORTMENT OF ITEMS FROM COLIN COOK , AND HAVE DECIDED TO TURN IT INTO A PAGE. SO HERE WE GO WITH A RIGHT 'POT POURRI'. - DAVE

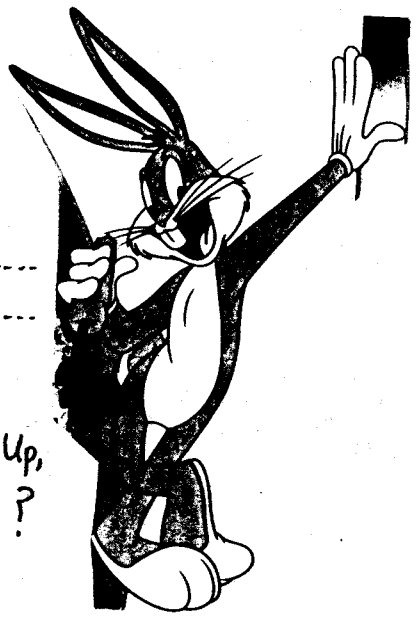
HI FOLKS - IT'S COLIN HERE WITH SOME TOTALLY UNRELATED ITEMS:-

THE CHALLENGE

SOME TIME AGO IN 'O.U.M' I CHALLENGED ANYONE WITH A KNACK FOR MATHEMATICS TO WRITE A FAST PRIME NUMBER GENERATOR (NUMBERS WHICH CANNOT BE DIVIDED EVENLY BY OTHER NUMBERS EXCEPT THEMSELVES AND ONE)., AND TRY TO BEAT MY OWN PROGRAM. BRIAN KIDD SENT ME A PROGRAM THAT WAS SEVERAL TIMES FASTER THAN MINE! FACE WAS SAVED HOWEVER,WHEN I SENT HIS PROGRAM BACK SLIGHTLY MODIFIED TO RUN EVEN FASTER! WE THOUGHT THAT WAS THE FASTEST POSSIBLE. WE WERE WRONG! THE PROGRAM SET OUT BELOW KNOCKS A FURTHER 8 SECONDS OFF ALL THE PRIMES UP TO 22,249. IT TAKES 235.47 SECONDS ON THE ORIC'S 16-BIT TIMER.

CAN ANYONE MAKE IT FASTER? THE BET REGARDING A DISC IS NOW OFF.

PIN-UP OF THE WEEK !




```
 5 GRAB
 10 INPUT "TOP NUMBER TO SEARCH FOR PRIMES";H:CLS
15 DOKE630,65535:DIM A%(H):R=INT(SQR(H)):P=3:PRINT1;2;
20 REPEAT:FORI=P*P TO H STEP P*2
27 A%(I)=1
28 NEXT:PRINTP;
30 REPEAT:P=P+2:UNTIL A%(P)=0:UNTIL P>R
40 FOR I=P TO H STEP 2
50 IF A%(I)=0 THEN PRINTI;
60 NEXT
70 PRINT "FINISHED IN";(65535-DEEK(630))/100;"SECONDS"
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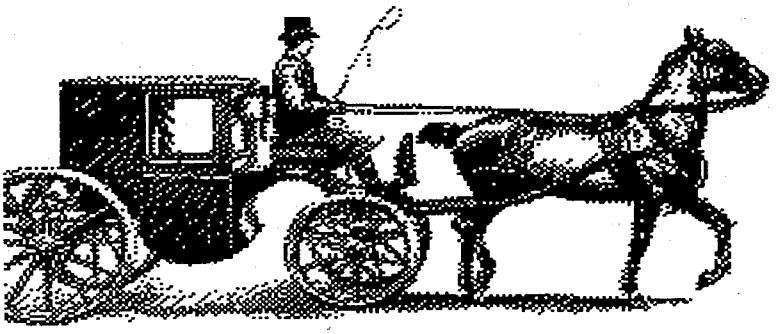

HIRES PICTURES

ON THE LATEST CEO DISK ARE A COUPLE OF HIRES SCREENS. I HAVE DUMPED THEM USING MY 'CANON BJ 10'. 48,000 PIXELS AND EVERYONE A WINNER! I WAS STAGGERED BY THE ARTISTIC QUALITY OF THESE PICTURES. OR HAVE THEY BEEN TRANSFERRED FROM A PC? (NOTE FROM THE EDITOR: YES,PROBABLY. THERE ARE A WHOLE HOST OF PC PICTURES ON PUBLIC DOMAIN FROM ANDRE WIDHANI,AND I KNOW THAT THE CEO HAS BEEEN VERY ACTIVE IN THIS FIELD RECENTLY).
ALSO YOU WILL FIND MY "PIN-UP OF THE WEEK !"

T H E M I X E D B A G

THIS IS GOING TO BE A PAGE OF ALL SORTS OF ITEMS. SORTING OUT SOME HARDWARE PROBLEMS HAS MEANT THAT I HAVE RUN SHORT OF TIME AGAIN. THE 'ORIC ENTHUSIAST' ARTICLE DIDN'T ARRIVE AND A FEW ITEMS ARRIVED VERY LATE FOR FULL INCLUSION.

TRACK 14 SECTOR 01

I HAVE PREPARED AN ARTICLE FOR SEDORIC USERS WHO COME ACCROSS THIS BUG! IN THE MEANTIME HERE ARE A FEW HINTS:

1) IF YOU DO A !DIR ON A SEDORIC V1 DISC AND THEN DECIDE TO REFORMAT IT TO V2 THEN BE CAREFUL. IT IS NOT SUFFICIENT TO JUST PUT THE V2 DISC IN AND TRY TO FORMAT YOUR OLD DISC. YOU WILL GET AN 'UNKNOWN FORMAT ERROR' AFTER YOU THINK YOU HAVE SUCCESSFULLY RE-FORMATTED. EVEN THOUGH SEDORIC CALLS UP THE 'INIT' PROGRAM TO FORMAT THERE IS A DIFFERENT ROUTINE ACTIONED ON BOOTING V2 AS OPPOSED TO V1.

THEREFORE TO RE-FORMAT A V1 DISC TO V2 YOU MUST BOOT UP THE V2 DISC.

2) YOU SHOULD NOT TRY BACKING UP A V1 DISC TO V2 AND VICE VERSA.

3) WHEN COPYING FILES FROM A V1 DISC TO A V2 DISC YOU SHOULD MAKE SURE THAT YOU HAVE A V2 DISC IN SITU WHEN ASKED TO INSERT MASTER DISC AND VICE VERSA.

4) DISC DRIVE MANUALS STATE THAT YOUR DRIVE SHOULD RUN AT 300 R.P.M. + or - 6%. I AM OF THE OPINION THAT THE TOLERANCE IS MORE CRITICAL ON SEDORIC. ON SOME DRIVES THERE IS A VARIABLE RESISTOR,WHICH CAN BE USED TO ALTER THE SPEED. THIS SHOULD NOT BE CONFUSED WITH THE RV1 TO BE FOUND ON MICRODISC CONTROLLERS. THE RV1 IS MORE OF AN ADJUSTMENT TO SENSITIVITY AND IS SIMILAR TO TWEAKING THE AZIMUTH ON A DATACORDER.

5) A GOOD POWER SUPPLY IS ALL IMPORTANT WITH SEDORIC. WATCH FOR SPIKES. BE CAREFUL THAT YOUR POWER POINTS DON'T BACK ON TO YOUR DAUGHTER'S WHEN SHE IS BLOW DRYING HER HAIR etc.

NEXT ISSUE I'LL LOOK FURTHER AT SEDORIC PROBLEMS. IN THE MEANTIME - IF YOU GET A PROBLEM TURN OFF THE MACHINE,WAIT A WHILE AND THEN TRY AGAIN. IF YOU STILL RUN A 3" SYSTEM THEN TRY STICKING WITH V1 AS THE PROBLEM SEEMS TO OCCUR MORE ON V2.

MY A to Z OF SOFTWARE

I WILL CONTINUE THIS SERIES NEXT ISSUE AND WE WILL ALSO GET BACK TO PRINTING BRIAN KIDD'S A to Z OF SOFTWARE HOUSES.

'C' COMPILER

HANS KRAUS FROM VIENNA HAS FOUND A 'C' COMPILER FOR THE 6502,WHICH CAN BEE FREELY DISTRIBUTED. I WILL GIVE FULL DETAILS IN THE NEXT ISSUE,BUT MEANWHILE IF ANYONE WANTS TO GET INVOLVED IN GETTING IT RUNNING ON THE ORIC.

HANS HAS SUCCESSFULLY COMPILED THE COMPILER ON HIS AMIGA UNDER LATTICE C. THE COMPILER IS CAPABLE OF COMPILING OTSELF ON THE ATARI AND THUS IT SHOULD RUN ON THE ORIC. HANS CAN SUPPLY THE FILES ON AMIGA AND PC DISCS.

SHOULD YOU WISH TO GET INVOLVED YOU MAY WRITE TO ME FOR A FULL COPY OF HANS's LETTER OR INDEED HIS ADDRESS/TELEPHONE NUMBER. THE PROGRAM WAS WRITTEN BY ONE JOHN R. DUNNING.

MORE IN THE NEXT ISSUE.

ORIC EMULATORS

FOLLOWING ON FROM NIGEL ALEFOUNDER's THOUGHTS ON EMULATORS WE WILL BE PUBLISHING THE THOUGHTS OF ROBERT CRISP IN THE NEXT ISSUE

PRINTER LEADS

O.U.M IS NOW IN THE POSITION TO OFFER PRINTER LEADS FOR ORIC USERS. PRICE INCLUDING POSTAGE IS 6 pounds OR 2 FOR 10 pounds.

THE BACK PAGE AND INDEX

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MONITOR

NEW READER DUNCAN GUNN FROM OADBY IN LEICESTERSHIRE PLANS TO WRITE A MACHINE CODE MONITOR. HE IS LOOKING FOR IDEAS ON WHAT SHOULD/SHOULD NOT GO IN IT.

SPANISH

I NOW HAVE A SUITE OF SPANISH PROGRAMS FROM FRANK BOLTON. TOO MANY FOR OUR OUM DISCS AND THEREFORE INTEND TO OFFER THEM TO ANYONE INTERESTED. MORE NEXT TIME

THE THIRD OUMDISC

OUMDISC No. 3 WILL BE SENT OUT WITH EITHER THE MAY OR JUNE ISSUE OF O.U.M.
IT WILL BE ON SEDORIC V1. AND NOT V2. I HAVE FOUND A NICE DISC MONITOR FROM HARRY PETERS,WHICH WILL NOT RUN UNDER V2.
ALSO ON THE DISC ARE HARRY'S "SUPERCOP", ANOTHER COMMERCIAL GAME FROM THE BACK CATALOGUE AND A LOT LOT MORE.

INFORMATION

KEN DUDDLE FROM LEICESTER ENJOYS WRITING SHORT STORIES etc. HE HAS YET TO HAVE ONE OF HIS WORKS PUBLISHED UNTIL NOW!
SO NOW O.U.M IS PROUD TO PRESENT "INFORMATION" BY KEN DUDDLE -

INFORMATION. INFORMATION. THEY WANT INFORMATION. BUT HOW MUCH? IT COULD BE FATAL TO GIVE TOO LITTLE. HE'D END UP IN A RIVER OR ON THE SCRAP HEAP. TOO MUCH? NO HE MUSTN'T THINK OF THAT. IT WOULD BE LIKE DRIVING AT A BRICK WALL WITH YOUR EYES CLOSED;YOU KNOW A CRASH IS INEVITABLE,BUT IT'S TOO LATE WHEN IT HAPPENS. AND WHAT INFORMATION DO THEY WANT? THAT CANNOT BE KNOWN UNTILL THEY ASK. WITHOUT KNOWING THE QUESTIONS,HOW COULD HE KNOW THE ANSWERS. WOULD IT BE JUST BASICS OR WOULD HE HAVE TO DIG DEEP INTO HIS MEMORY. YES HIS MEMORY. FULL OF FIGURES,NUMBERS,JUMBLED WORDS MEANINGLESS. HE HAD TO UNSCRAMBLE THEM. MAKE SENSE OF IT ALL. NOW HE WAS BEING TOUCHED. BUT HE FELT NOTHING. HE WAS BEING ASKED QUESTIONS. BUT HE COULD NOT HEAR. HE COULD NOT SPEAK YET THEY HAD WAYS OF WAKING HIM TALK. YES HE WAS TALKING. THE MESSAGE WAS LOUD AND CLEAR. BUT SILENT.
"ACCESS PERMITTED. PLEASE INPUT NAME OF FILE REQUIRED".

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5.25" DRIVE

I RECENTLY BOUGHT A COUPLE OF 'TEAC' 5.25"DRIVES. YOU PROBABLY KNOW THAT DS0,DS1,DS2 and DS3 MUST HAVE A 'JUMPER' ACROSS ONE OF THEM e.g DS0 FOT IT TO RUN AS THE 'A' DRIVE. JUST BEHIND THIS BANK OF 4 ARE 4 MORE - U1,U2,HL and 1U. WHEN I GOT THE DRIVES NONE OF THIS WERE 'JUMPED' AND THE DRIVES DIDN'T WORK. ON CHECKING AN OLD DRIVE OF MINE I FOUND THAT 'U1' SHOULD HAVE A JUMPER ON IT.