ØRIC USER MONTHLY

with Alternative Micros

Number 128

April 1998

Keeping the Oric alive

Euphoric rules !!

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

The Editorial

Hello and welcome,

To the April issue.

I wanted to get this one out on time, and therefore there is a fair bit missing. There is another reason for making this a smaller issue than of late - finances! Copying costs have increased, and when there are more pages, then the weight increases and thus the postage costs. There have been a few lately who promised to re-subscribe, took an extra issue, and then nothing. It pees me off when people haven't got the decency to tell me that they are not re-subscribing - one stamp, or 1 phone call, or 1 e-mail - that is all it takes. Recently Brian and I have paid for the odd back cover, and Brian is paying for the third of his pages this month (I told him he could only have two). Jon H supplies all the front covers. I don't want to raise subscription rates, but may be forced to. The good news is that the Royal Mail has guaranteed no price increases for a year. THE ANSWER: Our photocopier has kindly dropped the price, the back cover will be missing until I decide otherwise, non Oric items will be kept to a minimum. Come the MEET we will hopefully make some money on the door and from the raffle. If you have any ideas, then please let me know.....Meanwhile to the index.

THE INDEX

MAY OUM

Articles for inclusion in the May issue should reach me by April 20th at latest please.
Already planned are: more on adventuring from Robert Cook (but only if he buys a new ribbon for his printer), a preview of SOUNDTRACKER, a page from Brian (yes you are down to one next month), more from Peter Bragg, Jon Haworth does the ton, the long awaited Science Museum article and pics, and what ever else turns up.

DAVID GOODRUM

The news initially came from David himself (aged just 26 years), and later from his friend Stephen via e-mails. After a week in Bristol Royal Infirmary, David Goodrum is now out. The diagnosis is complete. It is aggressive 'B-cell' non-Hodgkins Lymphoma - cancer of the lymphatic system. David has a tumor "the size of a rugby ball" between his lungs.
David is now undergoing chemotherapy. He is now back in touch and though very ill, he is much perkier and still retains his great sense of humour. He says: " Watch out for the book entitled: OUCH, mind where you stick that needle". Many of you will remember David personally from his attendance at some of the ORIC MEETs. You will also know him via his articles/work on Bulletin boards, and his programming with the adventure ENCHANTED, and the utilities SOFTINDEX and MUSICINDEX. Messages of goodwill can be sent to him at: 92 Leighton Avenue, Leigh-on-sea,Essex. SS9 1QA, and will be forwarded on. Alternately you can e-mail him:

d.goodrum@virgin.net

GET WELL SOON DAVID - I sorely miss those funny e-mails.
If you wish to help research into this disease, then PLEASE Send (unsolicited) monies to....

The Lymphoma Association,PO Box 275,Haddenham,Aylesbury.HP17 8JJ

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

AYLESBURY ORIC MEET

The annual Aylesbury **ORIC MEET** will take place on Saturday July 11th.
The venue is the same as last year - Mandeville Residents Community Association premises on The Green, Simpson Place, off Harvey Road.
Tickets are on sale now: Adults: £2..... Students/Unemployed/Senior Citizens - £1.
More details next month.

JIM & BAM's WEB SITE

Jim Groom and ladyfriend Bam now have their own Oric web site, which includes a review of **Slime.** The site can be found at:

http://freespace.virgin.net/james.groom/homepage.htm

Bob on-line

Friend and local Orician Bob Terry is the proud owner of a new PC, and has joined the Internet fraternity. His e-mail address is: bob@mirage.softnet.co.uk
Also back Oric-ing via the emulator is John Mckay -hope to see him and OUM reader Pat McNeill at THE MEET!!!!!

Sinclair and electronics / radio hams show.

Date: Saturday 18th April 1998.....Time: 10am-4pm

Location: Bingley Hall, Staffordshire Showground, Stafford.

Off the A518 Stafford-Uttoxeter Road. Signposted from J14 of the M6 motorway.
There is also a bus shuttle from Stafford railway station.
Entrance price: Adult- £3, children- £0.50, concessions (students, OAP,unemployed)- £2, advance tickets £2 + SAE
More details:
SHARWARD PROMOTIONS,Knightsdale Business Centre, 30 Knightsdale Road,IPSWICH IP1 4JJ
Tel: 01473 741533....Fax: 01473 741361 Net: http:www/sharward.co.uk/sproms.html

PARIS ORIC MEET

The next Paris Oric Meet will take place on Saturday 6th June from 2 p.m. onward at 17 rue des Petits Hotels (1st floor) Paris 10 (a 5-minute walk from Eurostar terminal)
Hopefully featuring, as guest star, Fabrice Frances himself, with many demos!!!

OUM WEB SITE

Nothing new added to the OUM web site in the last month - plenty planned!!!!!!

Meanwhile the site at " http://www.soft.net.uk/oum" has had 273 visits in th 5 weeks that the counter has been operative - an average of 55 visits per week.

Poland, Denmark, Malaysia, and Indonesia have all been responsible recently for visitors.

THE BACKLOG

Hopefully I am virtually up-to-date now - let me know , if not. Ditto for Jon Haworth.

The John Marshall Story (Part 2) - Orpheus & beyond

Once at Orpheus, I started work on a C64 game called **'Elidon'**. I had never designed anything for the C64, and while playing around I was struck with how soft and pastel looking some of the colours were. Oric and Spectrum had only hard, primary colours, but the C64 had pale blue, and pink and brown. This seemed like the ideal machine on which to develop a game aimed at girls, something that had not been done very much until then. The game was a graphical adventure in which a fairy had to fly around an enchanted forest gathering flowers to make a garland, and avoiding wood spirits. I kid you not. I designed the game play and most of the graphics, and the coding was done by Brian Brunswick, an old friend from school who was studying maths at Cambridge. The cover artwork and sketches for the inlay card were painted in watercolours by my father, and really gave an authentic fairy-like quality to the whole thing. Finally, the graphics for the wood spirits were drawn by my friend Phil Harrison. This was his first piece of work in the video games business. He's since gone on to much greater things, and is a VP at Sony in Silicon Valley, and was voted one of the most influential people in the games industry. I'm responsible for his success, I'm sure !

Orpheus wanted to secure a licensing deal for the TV show **'The Young Ones'** so Paul Kaufman and myself pitched the idea to Rik Mayall, Lise Meyer and Aude Powell, their agent. Things went pretty well and the deal was secured. We wanted to create a really different type of game with all kinds of AI techniques since we needed 4 characters who could interact, with only one controlled by the player. I designed the graphics and some of the gameplay, and the coding was done by Steven Streeter, another Cambridge undergrad. We developed it for C64, Amstrad and Speccie, I think. Can't recall if Oric was in there also. In the end the AI idea was too ambitious, and the player wandered around aimlessly trying to figure out what to do. The project also was hopelessly late and never lived up to the hype. I have to share some responsibility for this, since it was my baby.

I was getting tired of the games business by this point, and seeing an ad for designer / programmers with C64 experience, I applied. The company was **Computerad**, and they had an electronic advertising system based on a modified C64. The machine would display animated ads for records, and were installed in record shops all over the UK. The shop owner got the box for free, and the record companies paid Computerad for showing the ads. The ads themselves were downloaded to the computer via modem once per week. The whole system was rather clever, but the primitive graphics of the C64 made the ads look clunky and the animation was limited.

While at Computerad I designed animated record ads, and also wrote an animation system with authoring tool from scratch. This had a kind of primitive GUI including a mouse and icons, all written in assembler. In my spare time I also wrote my only Spectrum game : **Shadow Skimmer**. I had been playing around with a Spectrum and I liked the fact that a colour attribute could be displayed as bright or normal. I felt this could applied to create a sense of depth, with higher objects being closer to the light source and displayed brighter. I decided to use this idea and designed a game around it. I needed a scenario where bright light would shine on the game, creating the high contrast between brighter and darker areas, and I needed a background with right angles and sharp corners to help hide the edges of the attributes. I eventually decided on a space game taking place on a large spaceship orbiting a star, hence the bright light. The ship surface is covered by raised pipes and gantrys, and these are brighter than the deck. The idea eventually turned into a pretty but unplayable game. I used the same BBC-based development system, this time with a Z80 cross-assembler and serial interface to the Spectrum.

To my surprise, the game sold quite well, though never saw a bean in royalties from the publisher. One day several years later I saw the head of that company and we exchanged icy stares. During 1985-6 I also noticed a new trend in games development of much larger teams, with graphics and sound specialists. It was becoming clear that the days of the lone game creator working on the entire project were coming to a close. I wasn't sure I wanted to be part of this transition. I had been taken advantage of financially and this finally put me off the games business.

Computerad eventually went out of business, and I joined a software company in Ascot called PISA. They sold presentation graphics systems for creating slides, built around an Apple II. My initial project was to write software to drive a colour printer, which were just becoming affordable for businesses. Following this we started to convert the graphics system from Apple II, first to Apple IIGS and then switching to Macintosh II. One day I saw Dr. Paul Johnson driving down Ascot High Street, though I'm not sure that he recognised me.

While working at PISA I had maintained a friendship with Chris Wood, whom I had met at Computerad. Chris and I wanted to start our own software company, and were working on some Atari ST stuff at home in the evenings. Without really knowing what we would do, we quit our day jobs and rented a very cheap office in Ashford Middx., calling our company **MetaFore Software**. Our first product was a printer driver for Atari ST and Amiga. We developed this using some ideas I came up with at PISA, and sold it direct to end-users. The problem was the printers cost 500 to 4000 pounds and few people were using them connected to an Amiga or Atari ST, but to a proprietary graphics system based on an Intel box instead. There was no way for us to develop software for those closed systems. Our drivers struggled along selling a few hundred copies.

We managed to keep the business going by doing consulting work. We developed the ST client software for a BBS called Compunet, and some Amiga related stuff also. We also did some really bizarre things, including some consulting at the MoD in Whitehall and developing all the back-end software for the **Home Shopping Network**. We finally got our break when the guys from PISA, with whom I was still friendly, asked us to develop a colour printer driver for Macintosh. They were in the business of selling computers and graphics hardware, and there were some great colour printers available but they could not be connected to a Mac, and yet this was a huge target market. Unfortunately, we found developing Mac printer drivers was technically extremely difficult, but we could see the potential for such a product. Macs had a revolutionary graphics system for the time. All applications would be able to print through a single driver, vastly expanding the market for our software (compare to Intel boxes at the same time, where each app required it's own printer drivers, in those pre-Windows days). The technical difficulty of developing Mac printer drivers was due to Apple wanting to protect their own printer sales from competition, and so not documenting the OS APIs.

We spent nearly one year writing our first driver, creating a library of code that could be easily adapted to any printer. We created the initial driver for PISA and then started signing up other printer manufacturers, who were really starting to ramp up production with new models. Most of these manufacturers thought the bulk of their sales would come from Intel systems, but there were two reasons this was not true. First, the Intel systems required a different driver for each application, creating a huge barrier to the printer company. Secondly, most of the graphic artists used a Mac. We were in the right place at the right time by sheer luck. The printer companies generally lacked Macintosh development expertise, and those that had some did not have the ability to solve the huge engineering challenges of Mac printer driver development.

It was generally preferable to pay us to create the driver than to lose sales while waiting for their own engineers to come up with something.

We extended this model to other printer software by creating PostScript RIPs and other MacOS printing and scanning software, and supplied drivers to Canon, Kodak, Seiko and a host of others. We dabbled with Windows coding but fear of competition and snobbery kept me from persuing this with any vigour. Our MacOS products kept us very busy and profitable but in view of what's happening at Apple now, we should have developed for Windows also.

In 1992 **MetaFore** needed to open a local office in Silicon Valley to support some large accounts and help close new business. I moved over and opened the office, and have made the San Francisco area my home ever since. I was very fortunate to have met a wonderful American woman who already knew how to make a good cup of tea. We were married on October 27th 1995 at the Mission in Carmel. Phil Harrison was my best man, and by coincidence he moved to San Francisco in November of 1996.

In 1996 I felt that our printer driver sales had peaked and we needed a new product or direction to pursue, but I was unable to find the right idea. Rather than let the company peter out, the logical solution would be to sell the company, or my share in it, and look around for something else that I might do. I completed the sale in May of 96 and found a great opportunity in OEM business development at **Netscape**, joining in October of 96. This was very ironic since in April of 95 I had loudly claimed that the Internet was all hype and would never catch on. At Netscape I work with the sales guys to convince Netscape OEMs like HP, Sun, Compaq etc. to buy and bundle Netscape server software. Although the company is much larger, the work is similar to what I did at MetaFore.

And that's about it. One day I went to a search engine and typed in 'Oric', stumbling upon your web site, the excellent Euphoric emulator and those old games. I then spent a few hours finding emulators and binaries for the other games I'd written, happened upon an email address for Anthony Clarke, who I'd lost contact with for 10 years. All told it was a highly amusing and nostalgic experience. It's really great to see all this interest in the old 8-bit machines, especially the Oric, which I felt was never fully appreciated even in it's heyday.

My thanks go out to all those who have spent hours upon hours creating the emulators and web sites, and developing new software.

I have noticed a curious tendency in my career so far to avoid the mass consensus. I played around with my Superboard when others had ZX81s, developed Oric software when others were frantically competing for Spectrum sales, developed obscure printer software for Macs when all were focused on Wintel, and I'm now at Netscape when a monopoly power is intent on crushing us. In all cases I have been driven by the idea that making a profit is the most important thing. Just because a given platform has huge market share, it doesn't mean you can make more money in that space. Increased competition and higher cost of doing business may conspire to create less profit you would generate from a seemingly smaller business. And it's profit that allows you to eat next week.

Mike Pointier's Demo Party

Yes, the Volcanic4 is finished. Yes, I was there. And Yes, an Oric demo has been presented officialy in a Demo Party !

Before I talk about the Oric itself, let me sumarize:

- We left Lyon (A friend of mine called Bruno, my girlfriend Melisa, and me) on a Saturday at 11:00am. Direction, Saint Etienne, and then Clermond Ferrand. 200+ km In a Twingo. Not cool.
- In the car, my PC (high tower withe Cyrix P166+, ZIP drive), OricAtmos,Oric Telestrat, Monitor, TV,microdisk, all Oric books, CEO mag, and Theoric... It's pretty heavy and takes room in a little car. Bruno was with his 386sx portable, and QuickCam...
- First step, we go to Aulnat (near Clermont Ferrand), here I get an Atmos and a Book. Optimisation, no ?
- 10 km later, arrival at the demo party, fill registration card, find a place for all equipment...

Pretty impressive !

A network with more than 200 connected computers, 2 BARCO projection system, with a 4x3metre screen. Stereoscopic system with light polarisation (we receive special glasses at the entry).

I find a room on a table, because the HUB was full. So no one wants to put his compy here ! Cool, I do not want to be connected :)

Ok, first try, send the pictures I've drawn to the Oric, by playing the WAV file to the line-out...

Arg... The Atmos is still on "Searching..." It was working yesterday evening The reason ? Too much electricity. To many computers, too many monitors parasiting.

My friend Bruno has plenty of stuff in his bag, and found his "Electromagnetic Detector". Plugged to the 386 that displayed the magnetic field in graphical histogram... Terrific !

Ok, so I cannot use the Oric. So I just let it display boxes on the screen during the party.

That was a good idea, since plenty of people have the following reaction:

1) Walking
2) Notice the ugly colors on the TV
3) Look down, and see the Oric.
4) Stopped, and said "Whaaooo, an Oric Atmos, I don't see that for 10 years !" (Or "It was my first computer", or "what is it ???")
5) Start the discussion
6) Shows the telestrat ----> Whaoo, it exists really !!! I heard about, but never saw one...
7) Man take the telestrat, and examine closely -> Cartridges ??? Telephonic plug ? ??? RS232 ??? Joystick port ????? Accessible reset button ???? Whaooo.
8) I show the microdisk (out of order :( ), and again -> They were disk drive on oric ???? Cool.
9) And after that, I show my demo, and the Soundtracker demo... Even someone ask me if I have Xenon 1 !

Nice thing, no ????

Plenty of people talk with me about Oric, my demo.... etc.

About the demo now.

While I was coding, I often launched Euphoric to test my code, and often people stopped behind me, trying to comment what was on screen.

Some of them notice it was Oric code...

Some of them ask me how it is possible to do that.

Few of them ask me WHY I do that... (I don't like to explain my motivations: Why coding demoes in general ??????)

When I see them the code, they notice it's "C" & 6502

And the question "It is possible to code in C language on Oric ???"
So I explain the cross compilation, I talk a lot about Euphoric, and so on...
Really great, in fact...
I finished my demo around 6:00 am Sunday (it was the deadline for "WildCompo"). And have to wait until 6:00 pm before wild compo starts.
Since I manage to make the demo being presented on the emulator (explaining that my disk controller was out), I ask them to launch the demo myself... It hard for a PC coder to launch euphoric, to press F3 for ASCII keyboard, and type CLOAD"LOADER.COD"..... :)
And then, he gave me the keyboard, I launch EUphoric, and the Oric boot screen appears on the 4x3 metres screen.
While typing on the keyboard, I notice there is no sound.
I ask them to put the volume on, And I try by ZAPing few times.
ZAP ???
Plenty of people notice there was an Oric on the Screen. Interesting to ZAP for getting attention of people !

ZAP
ZAP
CLOAD"......"
Black screen.
Win95 boot picture appears.
Some people applause.
I press space.
SHOOT,..... SHOOT, SHOOT,SHOOT
Some blood start to drip from the screen...
Everybody applause (It's easy to make demo coder applause: just kill Bill Gates in a demo :)
EXPLODE, while screens being deleted...
Dbug scrappy logo appears
Applause, again (cool, I start to be REALLY HAPPY)
Rasters
Little applause, because I do not have time to finish this part
Scroller
Big applause when the scrolling starts. Cool, again
Polygons
Mega big applause ..... niark niark.....
Plasma
Ovation !
This time, someone give me the microphone to explain why it was supposed to be impressive.
I explain that an Oric is a little bit like a C64, but without specialized graphics harware...
I explain that it there is black lines in the plasma, it's not to make it nice (it could have been a reason), but only because I draw all lines, it would be too much damn slow !!!
Credits. (code)
Credits (Gfx)
Credits (sound)
At this time, I explain that the final part is a kind of dedicacation to one of the best computer musician ever, that all C64 owner knows. That this is one of the two musics he made on Atari ST, converted on the ORIC.
Final part, the big "ORIC megademo" bouncing, with the THRUST music from Rob Hubbard.
Final ovation,
I'm pretty excited.
Even if I do not win (not yet have the results for the WIld Compo), I will never regret this party !

I will put something on my page, with photos, but give me some time !!

See ya,

Mike.
aka Dbug !

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Dbug's HomePage

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Mike (mpointie@hol.fr) says:
"Go on my page at:

http://wwwperso.hol.fr/~mpointie
And sign my guestbook...
Thanks !!!

==========

I'm back again with another PC demo effect. :)
Ok, it's not really nice to see, but I've done it:
The 3D tunel.
It's color(aw)full. But it's very low-definition. I do not have any ideas for optimizing that. If anyone is interested by the challenge, contact me !
You can take it on my Oric page.
See ya,
Mike :)
PS: If you do not try to code something before I finished to do every effects, it will be hard for you to make something new :)

~~~~~~~~~~~~~~~~~~ Dbug's HomePage ~~~~~~~~~~~~~~~~~~
Mike (mpointie@hol.fr) says:
"Go on my page at:

http://wwwperso.hol.fr/~mpointie
==========

Hi Dave,

Just received the March OUM.
Thoroughly enjoyed most pages: hope we could have such nice reading in CEO-MAG every month!
I confirm that the Oric emulator for Macintosh is for Power Macs only, at least for now.
Regards,
Laurent Chiaccierini
==========

Ok, all you coders out there, here are some challenges for you
- alternating between a semi-hires mode (128 hires lines + 12 text lines at the bottom) and a normal text mode, will you draw a hires image with more than 8 colors and no proximity constraints ? (sure, it will flicker a little, not so much at 60 Hz)
- using the same alternating video mode, will you draw stereographic images to be viewed with red/blue (or green/blue) glasses ?

E-mails to the Editor

And then animate those 3D stereo images ?
And the final touch : will you easily connect shutter glasses to the SYNC output of the Oric ? (as every product has to mentioned it nowadays:
30 Hz in each eye might not be good for every people...)
The contest is open !-)
- Fabrice Frances
==========

I have an original Oric 1, as given to me by my ex brother in law, Paul Johnson of Oric. With the Oric I have the original manuals and a variety of software. Is there anybody out there who would care to acquire a very early Oric?

Offers Please.
- Michael Wilde.
==========

Dear Dave

A Big THANKYOU for the copy of Sedoric 3 it truly is a Masterpiece of Development .
The manual is by far one of the best references to the Oric Dos I have read.
Hats off to every one involved ....
Yours Orically, Dale Blyth

Eladeus@aol.com
==========

Hi Dave,
Sorry, but I shall not be renewing my sub this time. I am having increasing difficulty in finding time to devote to Oric matters, even to reading all the mags' articles.
Sadly, I really am too busy at the moment to experiment with and understand the various Atmos technical points dealt with at length, so the mags do not have continued appeal for me.
Best wishes for the continued success of OUM and Oricians.
- John Stubbins

GUEST BOOK

The following are messages posted to th guest book of the OUM site:

Date:
03/18/98 21:16:57

Name: Paul Hunt-Terry

E-mail:paul.huntterry@btinternet.com

Comments:
As an ex-subscriber to OUM (sorry I let my sub lapse, but a costly separation and house sale led to financial difficulties) I am pleased to see you still supporting the ORIC. I do feel that emulation is the way to keep these machines alive, and should (hopefully) be back in contact sometime soon.

==========

Date:
03/21/98 18:08:55

Name: Trevor Price

E-mail:TP5045@AOL.COM

Comments:
I HAVE OWNED AN ORIC 1 48K SINCE 1973 AND THOUGHT IT WAS DEAD AND BURIED UNTIL I STUMBLED ON THIS WEB SITE.
ITS GOOD TOO SEE THAT THEY ARE STILL IN USE AND I STILL USE MINE QUITE OFTEN FOR FUN.
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e-mails to the EDITOR:

dave@oum.softnet.co.uk
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Letters to the Editor

DEAR DAVE,

The ORIC ATMOS is a very rare computer here in Germany, and I'm VERY interested in getting more information about it. The most interesting question is: where can I buy one.....
And I would be happy, if you could send me a test magazine of your ORIC USER MONTHLY.
Furthermore I want to inform you about the latest ZX81 activities, it could be some kind of interest to you. We use the ZX81 now with LCD display and hard disk and any other parts. I think it will be possible to adopt them for the ORIC too; please let me know if you want further details.
Or have a look at our web pages at: http://home.t-online.de/home/p.liebert/zx-team.htm
http://www.freiepresse.de/home/befis/zxteam_e.htm
Thank you very much in advance,

Kai Fischer (Beutha, Germany)

DEAR KAI,

Good to hear from you.
There were quite a few Orics sold in Germany, and we have an OUM reader in Andre Widhani.
A copy of the March OUM is enclosed - have a good read. Steve Hopps supplies Atmos's - price to Germany, including postage and insurance, would be £50.
Would be interested on ZX81 details, and will check out your web sites when I find time.

- Dave

DEAR DAVE,

Thank you for printing details of my company's Bulletin Board and the 200 Oric games in the latest issue of OUM. Since I wrote to you about the games, my boss has down-loaded a copy of all of the Oric stuff on to floppy disks for me. There are 4 disks and I enclose a set so you can see what is available. I have checked the disks from Windows 95 using SCANDISK and found that there were a few bad sectors on disk 1, but SCANDISK appears to have fixed them. I have not used the disks yet, so I don't know if the bad sectors have affected any of the games. There is also a copy of EUPHORIC on the last disk.

I realise that there may be some OUM readers who might want a copy of the games, but haven't got a modem, so I would like to make the following offer. If anybody wants to send me 4 blank HD disks (1,44mb) and a stamped addressed envelope, I will do them a copy of the disks and return them.

My favourite article in issue 127 of OUM was the John Marshall story. I was especially interested in the comments about the cable which connected the parallel ports of the Oric and the BBC. Personally, I would find such a cable very useful, as I am about to start writing a number of programs in 6502 assembler which I would like to see running on both the Oric and the BBC. Would it be possible for OUM to do an article (or short series) on the cable and its control programs? An article in the style of Peter Bragg's articles about a mouse for the Oric would be really useful. If it is not possible to do an article about connecting an Oric and the BBC, is it possible to buy a cable and the control programs?

---------- Robert Crisp, 44 Bentley Grove, Meanwood, Leeds. LS6 4AT

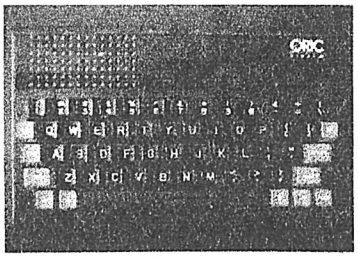
DEAR ROBERT,

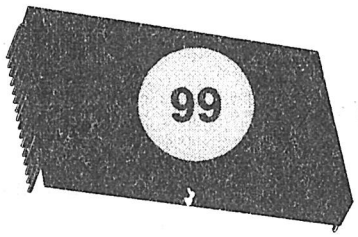
Thank you for the disks. It will certainly save me hours, as I will not now have to go onto Oric game sites to download them. They are all tape images. I copied one into my Oric directory and it works fine. There is certainly a good variety - much of it French. I will have a look at the Oric games sites to see if it is a straight copy from those sites, or if there is anything different. The version of Euphoric is 0.99k - the latest.
Regarding the cable to connect between an ORIC and a BBC; I have e-mailed John Marshall, and his reply is set out below..
Meanwhile : enjoy part two of John's story.

- DAVE

Dave,

I'd be glad to help. I think I can remember how to create the cable, but I need to look at the source code for the control program. That's on those BBC discs, so I'm dependant on asking your help with that. - John Marshall.





RAMBLING IN THE ROM

Rambling on....

This time it's HIMEM, RELEASE, and GRAB.....

VERIFY AY

Entry: AY contains the desired HIMEM value
Exit: C=1 if AY is incorrect compared with the mode of the program in memory.
C=0 if all is Ok.

E916	CPY 9D	EB89	CPY 9D	test if above program
E918	BCS E91C	EB8B	BCS EB8F	
E91A	SEC	EB8D	SEC	non, on sort, C=1
E91B	RTS	EB8E	RTS	
E91C	BNE E924	EB0F	BNE EB97	
E91E	CMP 9C	EB91	CMP 9C	not sure, test low byte
E920	BCC E91B	EB93	BCC EB8E	
E922	BEQ E91B	EB95	BEQ EB8E	
E924	JSR $E942	EB97	JSR $EBB5	test address high for RELEASE mode
E927	BCC E91B	EB9A	BCC EB8E	above, it's good, C=0
E929	TAX	EB9C	TAX	save low byte
E92A	LDA 02C0	EB9D	LDA 02C0	take mode indicator
E92D	AND #02	EBA0	AND #02	and test if GRAB mode
E92F	PHP	EBA2	PHP	save the mode in Z
E930	TXA	EBA3	TXA	recover the low byte
E931	PLP	EBA4	PLP	and the mode
E932	BNE E91A	EBA5	BNE EB8D	if RELEASE mode, exit, C=1
E934	TYA	EBA7	TYA	if not, go and check if not too high
E935	PHA	EBA8	PHA	save high byte
E936	SEC	EBA9	SEC	subtract #1C00
E937	SBC #lC	EBAA	SBC #1C	
E939	TAY	EBAC	TAY	in Y
E93A	TXA	EBAD	TXA	recover low byte
E93B	JSR $E942	EBAE	JSR $EBB5	and test if above max RELEASE
E93E	PLA	EBB1	PLA	(the result is in C)
E9BF	TAY	EBB2	TAY	recover true high byte
E940	TXA	EBB3	TXA	useless!
E94l	RTS	EBB4	RTS	

Verify AY is above the maximum of RELEASE (#9800 or #1800 for a 16 K)

E942	CPY 02C2	EBB5	CPY 02C2	test high byte

```
E945  BCC E949      EBB8  BCC EBBC    if above, exit, C=0
E947  BEQ E94A      EBBA  BEQ EBBD    if equal, test low byte as well
E949  RTS           EBBC  RTS         if not, C=1
E94A  CMP 02C1      EBBD  CMP 02C1    test low byte
E94D  RTS           EBC0  RTS
```

Take maxi RELEASE -1 in AY

```
E94E  LDY 82C2      EBC1  LDY 02C2    take high byte
E951  LDA 02C1      EBC4  LDA 02C1    and low byte
E954  BNE E957      EBC7  BNE EBCA    if not nul, ignore high byte
E956  DEY           ElC9  DEY         decrease high byte
E957  SEC           EBCA  SEC         and add 1 in any case to low byte
E958  SBC #01       EBCB  SBC #01
E95A  RTS           EBCD  RTS
```

'HIMEM' (COMMAND)

Use: entry in #E965/#EED8 with the desired value in AY.

```
E958  JSR $CE77     EBCE  JSR $CF03
E95E  JSR $D867     EBD1  JSR $D922   take an integer in YA and #33-#34
E961  LDA 33        EBD4  LDA 33
E963  LDY 34        EBD6  LDY 34
E965  JSR $E916     EBD8  JSR $EB89   verify validity of the address given
E968  BCC E96D      EBDB  BCC EBE0
E96A  JMP $C483     EBDD  JMP $C47C   'OUT OF MEMORY ERROR'
E96D  STA A6        EBE0  STA A6
E96F  STY A7        EBE2  STY A7      save value of HIMEM
E971  JMP $C73A     EBE4  JMP $C70F   and do a CLEAR
```

'GRAB' (COMMAND)

```
.....  .....        EBE7  LDA 0269
.....  .....        EBEA  BNE EBDD
E974  LDA 02C0      EBEC  LDA 02C0    take mode indicator
E977  PHA           EBEF  PHA         save
E978  AND #01       EBF0  AND #01     test for HIRES
E97A  BEQ E981      EBF2  BEQ EBF9
E97C  LDX #A3       EBF4  LDX #A3     yes, 'DISP TYPE MISMIATCH' (3rd time!)
E97E  JMP $C485     EBF6  JMP $C47E
E981  PLA           EBF9  PLA         recover mode
E982  AND #FD       EBFA  AND #FD     indicate GRAB mode (b1=0)
E984  STA 02C0      EBFC  STA 02C0    and resave
E987  JSR $E94E     EBFF  JSR $EBC1   take top of memory (#2C1-#2C2)
E98A  PHA           EC02  PHA         save low byte
E93E  TYA           EC03  TYA
E98C  CLC           EC04  CLC         low byte in A
E98D  ADC #1C       EC05  ADC #1C     add #1C00 (#B400-#9800)
E98F  TAY           EC07  TAY         in Y high byte
E99D  PLA           EC08  PLA         and A low byte
E991  JMP $E96D     EC09  JMP $EBE0   and finish as HIMEM
```

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Machine Code for the Oric Atmos (Part 73)

Peter N. Bragg

The Story so far

We have been looking at how to install a computer mouse on the Oric and the last few articles have looked at construction of a suitable interface using a VIA 6522 chip. We then went on to see how to make a simple test to check that the interface links up with the Oric correctly.

Does it work ?

If you carried out the test, outlined in the last issue you will now know whether or not the interface does operate together with the Oric. So what if it doesn't ? As mentioned before, the first move is to switch off and and recheck the construction thoroughly, particularly looking for poor solder joints, or for excess solder bridging something it shouldn't.

A multi-meter with a continuity tester, if you have one, can be used to help check the circuit, but don't forget to switch off and unplug every thing first. That includes the two IC chips from the Expansion unit, because a continuity tester works by passing a small current through the part of the circuit being tested. The resistors and capacitors would be unaffected by such a small test current, but the IC chips are more sensitive and should be taken out of the circuit, before testing in this way.

The VIA 6522 chip is a CMOS device and it can also be damaged by static electricity as generated by some clothing or furnishings such as carpets, particularly on dry or frosty days. If an IC chip does get damaged the only real solution is replacement. They should be safe from static, if they have been kept in their packing of foil or conductive material until needed. They are also protected by the circuit when they are plugged into the Expansion unit and should be fairly safe from static when installed.

Don't let these brief trouble-shooting notes put you off. Most of the solder connections on the Expansion unit, are simply to plugs and sockets, the real electronic circuitry is safely installed for you, inside the hard cases of the two IC chips.

However, as mentioned before, there is one small booby trap. It is best to test the Expansion unit for the first time, without the disk interface. If all is well, repeat the test with the disk interface. Normally, the disk interface is plugged directly into the Oric, using a short (6" aprox) 34 way ribbon cable and the Expansion unit should then plug into the expansion socket on the disk interface. I did that and found that although the Expansion unit worked correctly with the Oric Atmos on its own, it would not work through the disk interface. I made up the 34 way ribbon cable to connect up the Atmos to the two interfaces, as shown in Fig 1, which solved the problem. In effect this allows both interfaces to be connected directly to the Oric, while allowing the Expansion unit to bypass the disk interface internal bus, which was the apparent cause of the problem.

As far I can see, that covers most of the problems that might crop up in the construction of the VIA 6522 Expansion Board/interface. Now let's have a look at how it operates.

Fig 1

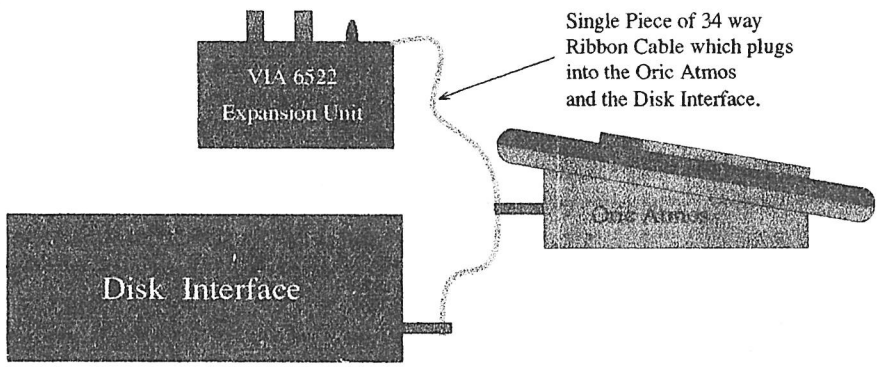


Fig 2

Simple Binary Table

0 = 0000	8 = 1000
1 = 0001	9 = 1001
2 = 0010	A = 1010
3 = 0011	B = 1011
4 = 0100	C = 1100
5 = 0101	D = 1101
6 = 0110	E = 1110
7 = 0111	F = 1111

The Input/Output Sockets

If you have built the Expansion unit as recommended, you will have two of these sockets, one for Port A and the other for Port B.They are both set up and controlled by the contents of sixteen locations, called "Registers". Each of these registers hold one byte (8 Bits) and are given labels to indentify what they do. They are located in a single block in the data memory, in a sequence of 0, 1, 2 etc going up to E and F. In our case the sixteen registers are located in a block, in Oric's Input/Output Page03, starting at #03E0 and going up to #03EF.

There are a few subtle differences between Port A and Port B, but they don't matter at this stage, so we can ignore them for the moment and concentrate on the Port B socket, because that is what we will be using for the computer mouse.

Essentially, the 20 pin Port B socket consists of eight data pins and two control lines. The other ten pins on the socket are simply wired to the two power lines as shown in the previous construction articles and can provide very small amounts electrical power. The BBC Micro type computer mouse uses five of the eight data pins and both of the control lines, CB1 and CB2. It also takes a small amount of power, from power supply provided by the socket.

That leaves three unused data pins, plus the unused Port A socket, which are available for use with any other equipment or projects that you may wish to run simultaneously with the mouse.

The Data Pins

Let's look at these first. The eight data pins on the Port B socket are labelled PB0 to PB7 and they are controlled by two "registers". One register allows you to set any of the eight data pins to input or output. The second register allows you to read data from a pin that has been set to input and also allows you to put data on to any pin that has been set to output.

The register that controls which pins are input and which are output is located at #03E2 and is called "Data Direction Register for Port B", known to its friends who can't be bothered with long words, by the label "DDRB" for short.

The second register allows you to write data to any data pins preset to output, or read incoming data on any data pins preset to input. It is located at #03E0 and is called "Input Register B/Output Register B" or "IRB/ORB" for short.

Obviously, you need to preset data pins PB0 - PB7 to input or output, before they are used to pass data either way, so the first operation is to set up register "DDRB" at #03E2. Each pin is controlled by one bit, in logical order, in the register DDRB. So Bit 0 controls data pin PB0, Bit 1 controls PB1 and so on up to Bit 7 which controls PB7. It works this way, If a bit in the DDRB register is cleared to "0", its data pin will become an input. However, if the bit is set to "1" its data pin will then become an output instead. It's rather like having a row of eight toggle switches, click any of them, one way to set a data pin to input and the other way, to set it to an output. Yes, it is a binary operation, but there are no calculations involved, a simple table like that in Fig 2 is all that you need to set the register. Think of one byte in a register, as a simple pattern of two sets of four bits. Fig 2 shows all the possible combinations and the hex number needed to put each combination in. For example, hex code "F0" in DDRB at location #03E2 will set the first four pins PB0 to PB3 to be inputs ("0") and other four pins PB4 to PB7 to outputs ("1"), because hex code "F0" breaks down into "1111" for the "F" and "0000" for the "0", as per Fig 2.

Once the data pins have been set for input or output, we can then use the register "IRB/ORB" at #03E0 to read incoming data from data pins set to input, or write data on to data pins set for output. In the case of data input on to the pins, this is done by putting an electonic signal on to the selected pins. With most hardware, this is done automatically, but you can also do it yourself, using little more than a 1K ohm resistor and a switch, which will change the revelant bit in IRB/ORB from "1" to "0". Likewise, if a data pin is set to output, it will produce a small electric current on the data pin, if the revalent bit in IRB/ORB is set to "1", but there will be no current output on the data pin if the revalent bit in IRB/ORB is set to "0". I should mention that the electric currents involved are very small and should never be used to drive anything without a buffer circuit, because an overload would damage the VIA 6522 chip. Needless to say, a computer mouse has the necessary hardware built in. Of course , I should mention that that the data pins on the Port A socket have a similar pair of registers to control them, labelled "DDRA" and "IRA/ORA" respectively and they are operated in the same way as their Port B equivalents. More on how to set up Expansion unit for hardware such as the BBC Micro computer mouse next time.

BRIAN'S PAGES

ISSUE # 128

Welcome once again . Three more pages of irrelevance , that can tax your mind , should you wish to try the posers set . Of course there are also the prizes that you can win , BUT you've got to send those answers to me . No entrants to the prize puzzle set - (see later for a winner though) last month .

In a bid to entice entries , from this month I have set up a Prize Pool . If you enter (or for that matter correspond with me) , simply tell me what prize you would like to receive , should you be the winner .

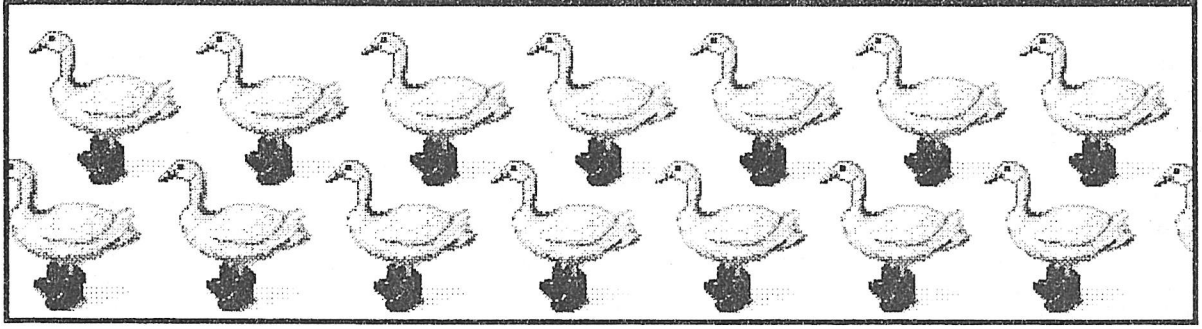
If no winners are forthcoming , then the available prize total increases with publication of the next issue . As a general rule , I can receive entries up to five days after Dave's deadline

The prize pool at present has available :

1) 'Perudo' - an ancient Peruvian game released by Parker Games .
2) 'Jolly Box' - in fluorescent green - useful for storing odd things .
3) 'Startrek TNG' mini stereo speakers - for Walkmans or such .
4) A pack of three Cadbury's Creme Eggs .

More prizes will of course be added , and the Pool updated monthly , and published on these pages .

The prize poser for this month is poser # 2 .



SOLUTIONS

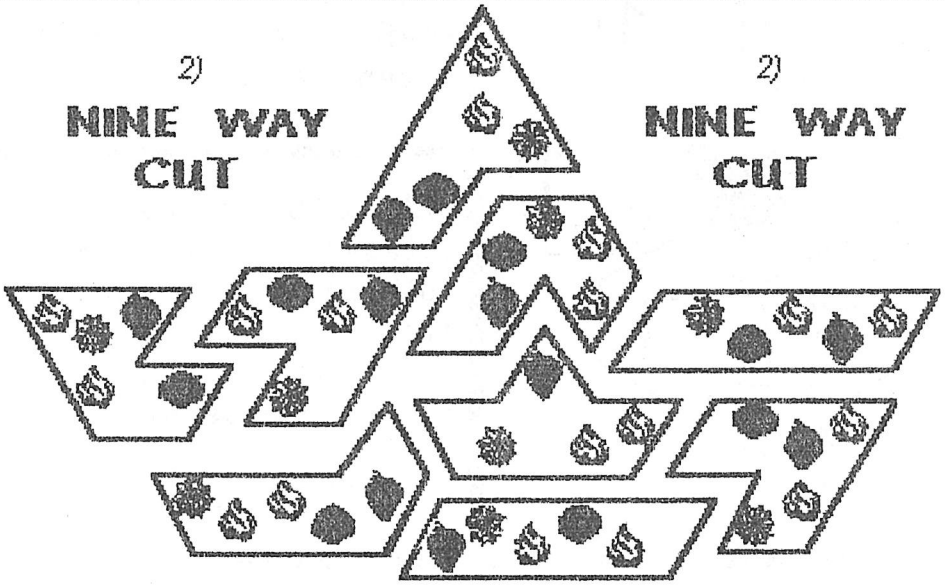
1) Number Cluster .

For this poser I positioned my *X's* at points E1 , G1 & E5 . This gave a cluster value of 288 , which when divided by the total amount of numbers in the cluster = 13 , gave a final total of 22.153846 .

I was disappointed that no one entered for the prizes last month . I did have a reply from Stan Holden , dated 13/3/98 . However his entry was from the month before , and not that of the prize puzzle . For perseverance though , he gets the prizes anyway . Let us know what you think of them .

2)

NINE WAY CUT



2)

NINE WAY CUT

3) Sheep shearers !

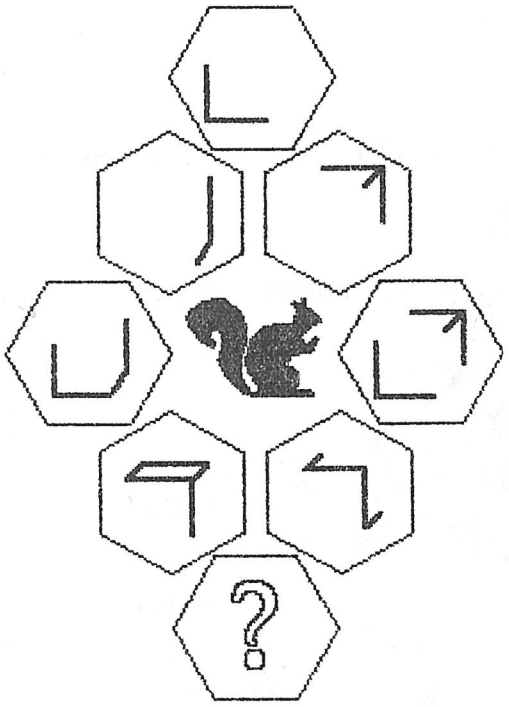
Clever deduction should have led you to the following conclusions;

C S was the lookout ; N S held the torch ; K B roped the sheep ; Dora sheared the sheep ; Edna stole the lorry : Fiona loaded the lorry ; K B & Dora are married and both told the truth ; N S & Fiona are married and both told a truth and lie each ; C S & Edna are married and both lied all the time .

PUZZLING

1) The digits 0 , 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 can be arranged into any addition sum to add up to almost any total , (within logic of course) . What total cannot be made by this method , yet by using just nine of the digits , be made ?

2) What symbol relaces the question mark - don't forget this is the prize poser .

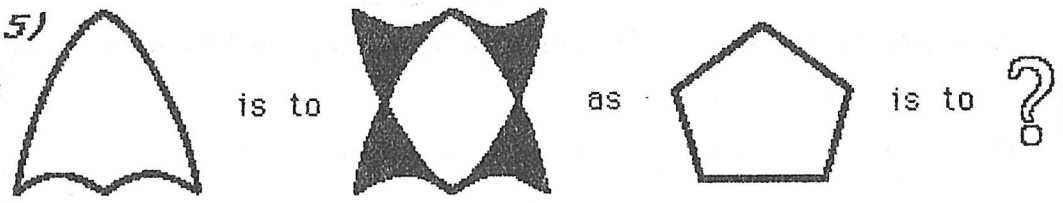


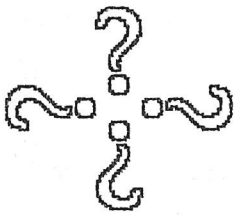
3) In ten years time , the combined age of two brothers and two sisters will be 100 . What will their combined age be in seven years time ?

4) ABCD represents four integers such that the following arrangements are square numbers . What integer does each letter represent ?

CABA **DCBA**
DACB

5)





TIME