ØRIC

USER

MONTHLY

with Alternative Micros

Keeping the

Oric alive

NOW I'M A

TELESTRAT

!!! !!! !!!

ØRIC
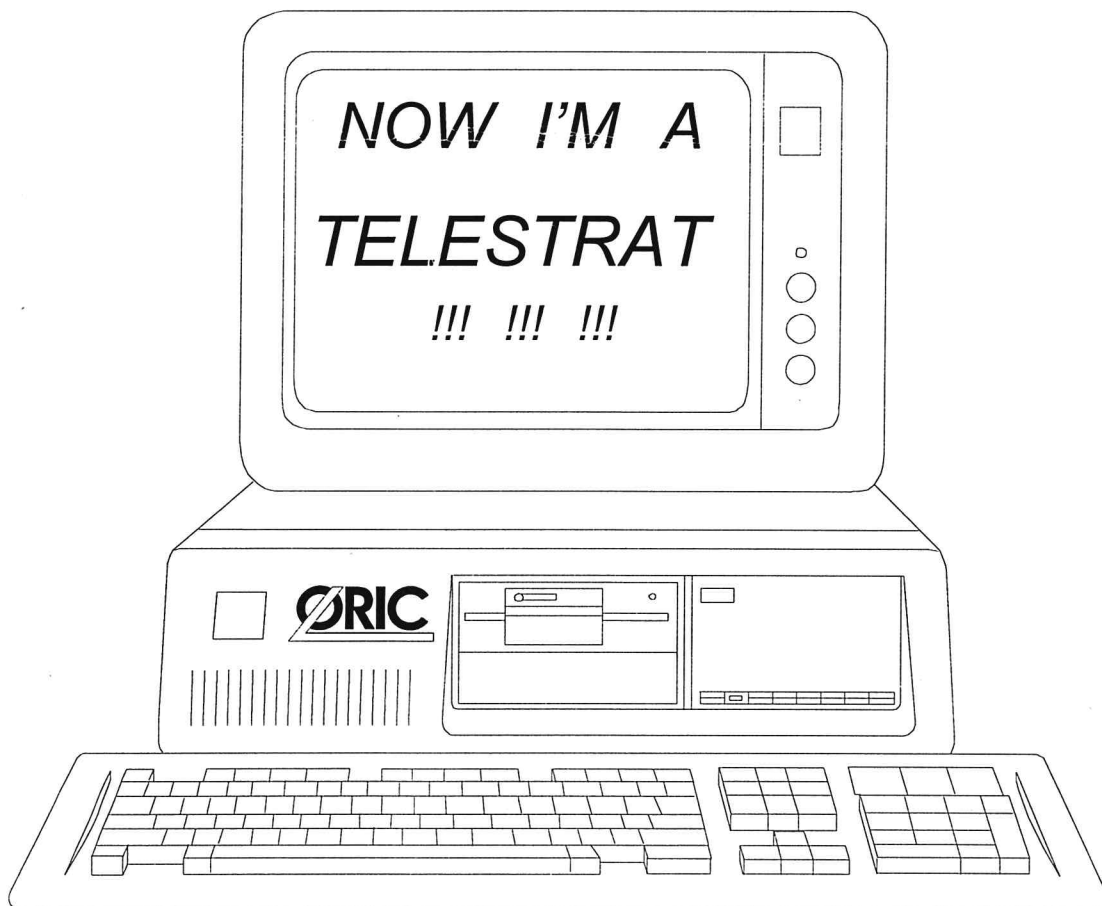
THE EDITORIAL
=== =========

HELLO AND WELCOME,
                    TO THIS BUMPER DOUBLE ISSUE.
   IN TRUE WORZEL GUMMAGE TRAIT, I AM BACK WITH MY TYPING HEAD ON.
   AND I NEED TO BE. ARTICLES AND LETTERS AND PROGRAMS HAVE BEEN
FLOODING IN TO THE OUM OFFICE.
   REFRESHED BY TWO WEEKS OF HOT SUNSHINE IN ALICANTE, I AM NOW READY TO
KNUCKLE DOWN FOR THE BUSY WINTER MONTHS AHEAD.
   I CERTAINLY RELAXED FOR 14 DAYS IN SPAIN - THANKS TO FRANK FOR BEING
HOST, FOR LEND OF CAMCORDER, FOR BRANDY DRINKING SESSIONS AND
GENERALLY FOR JUST BEING FRANK!
   ALICANTE IS A SUPER PLACE, AND ONE THAT I WOULD RECOMMEND TO ANYONE.
IF FRANK DECIDES TO BUY A PLACE THERE, AND SPEND THE WINTER IN
ALICANTE AND THE SUMMER IN LEICESTER, THEN I AM SURE IT WILL BE THE
RIGHT DECISION FOR HIM AND LUIS. IF ALL GOES TO PLAN, THEN OUM READERS
WILL BE OFFERED THE CHANCE TO RENT AN ALICANTE (OR NEAR TO) APARTMENT
IN THE SUMMER.
   NOW BACK TO THE NITTY GRITTY, AND SO THE INDEX FOR THIS ISSUE....

INDEX

MAGNETIX
————————

AT LAST 'MAGNETIX' IS BEING SENT OUT. PROBLEMS AROSE WITH THE 'OUTRO'
SECTION OF THE PROGRAM. JONATHAN BRISTOW WANTED TO USE SOMETHING FROM
AN MSDOS FILE AS THE 'OUTRO'. AS HE DOESN'T POSSESS A P.C,HE WAS
UNABLE TO TRANSFER THE FILE TO THR ATMOS. IN STEPPED JIM GROOM,WHO
OFFERED TO TRANSFER IT,BY USING THE PC TRANSFER FILE AS DISTRIBUTED ON
A CEO DISK. JIM HAD PROBLEMS,AND THERFORE SENT ME THE MDSOS FILE TO
SEE IF I COULD SORT IT OUT. I ALSO FOUND PROBLEMS - I WAS ABLE TO READ
THE FILES,BUT THE ATMOS HUNG UP ON THE TRANSFER PROCEDURE. I RUNG JON
HAWORTH WHO INFORMED ME THAT AN UPDATE HAD BEEN DONE IN FRANCE,BUT
THAT HE HAD NOT YET RECIEVED IT. MEANWHILE JON H SUGGESTED THAT
LAURENT COULD SEND SOMETRING TO JON B. BY THE END OF SEPTEMBER NOTHING
HAD TRANSPIRED,AND THEREFORE WE RELEASE A VERSION WITHOUT THE 'OUTRO'
THAT WAS REQUIRED, BUT STILL AN IMPROVED VERSION THAN THAT SEEN AT THE
'MEET'.
MATTHEW COATES TOOK ON BOARD THE TASK OF COMING UP WITH THE
INSTRUCTION PAGES FOR THE GAME (MANY THANKS), AND ALSO ACTED AS A
TESTER. IN RESPONSE JON B CLEARED P A FEW GLITCHES AND MADE SOME MINOR
CHANGES.
MATTHEW COATES TELLS ME THAT HE HAS REACHED THE LAST LEVEL WITHOUT
ANY HELP FROM J.B.

TO ORDER THIS GAME: - 3" DISK USERS SHOULD SEND 3.50 AND SUPPLY
THEIR OWN DISK. IF YOU HAVE A PROBLEM SUPPLYING A DISK,THEN PLEASE
CONTACT ME.
3.5"/5.25" USERS SHOULD SEND 4.20, AND WILL BE SUPPLIED WITH A DISK.

JONATHAN BRISTOW IS CURRENTLY WORKING ON A DEMO VERSION OF THE GAME
FOR THE INTERNET.
NEXT MONTH WE HOPE TO HAVE A FULL REVIEW OF THE GAME FROM STEVE
MARSHALL.
MEANWHILE LET'S HEAR SOME HI-SCORES ON THE GAME FROM THE LIKES OF
HENRY MARKE.
==
=============

AN INTERESTING CONTACT.
—— ——————————— ————————

I recently recieved a letter from an ALAN BOSWORTH,who lives in a
little village a few miles from Aylesbury. He had been given my
address by TONY CLARK (EX-PC/ORIC man & general factotum,now working
in Dorset as a Miller).
Alan retired early from work,due to health,and got into computers for
an interest. He helps other users out in the transfer of files from
one machine to another. For example: he has recently transferred some
disc files of business records from a GEMINI GALAXY to an I.B.M.
he once owned an ATMOS,and indeed still owns a whole host of
computers.
Through the pages of OUM I will pass on details of help that Alan is
looking for,and he will respond to any queries that you may have.
Let's get straight onto this month's business.

An EINSTEIN,less drives,but with software & manuals. A 3.5" or 5.25"
drive can easily be added. Alan does not want anything for it. If you
want it collect it - or I can arrange post at cost. - GO TO PAGE 33.

SILICON VILLAGE

I recently logged on with Oric Prestel and registered for 2 hours free on-line usage on the SILICON VILLAGE Bulletin Board.

The ID and password followed in the past & after a number of problems logging on (wrong telephone number quoted for 1200/75 access on the letter) I finally got to the all to familiar "Press# or return message...".

Access details   (viewdata software set to 7E1)
0181 759 2348 (1200/75 speed)
0181 759 6996 (above 1200/75)
01734 819000 (all speeds to 19.2)

The village is orientated around a street map giving access to :-
I) THE VILLAGE GREEN   VI) ART GALLERY
II) THE HIGH STREET   VII) MAIL
III) NEWSAGENT   VIII) LEISURE CENTRE
IV) THE CLUBS   IX) THE CHURCH
V) VILLAGE COMPUTING   X) THE HALL

There is a wide range of subjects available through these areas including-
I)   WAVEGUIDE: BROADCASTING NEWS
II)   COMPBYTES: COMPUTING NEWS & BCC SECTION
III) CLUBLINE: CHATLINE
IV)   AVATAR: MULTI USER ROLEPLAY
V)   MBX:MAILBOX
VI)   TRAVEL BASE: HOLIDAY & TRAVEL
VII) ASTRA MAG: COUNTRY MUSIC NEWS
VIII) CHESS,LOTTERY CHECK, GAMES
IX)   FEATURES: TODAY IN HISTORY, BORN THIS DAY ETC
X)   THE DEN: FOR CHILDREN
XI)   GAY & ADULT CLOSED USER GROUPS

I have to say that the half hour spent logged on brought back many good memories of viewdata bulletin boards and prestel/micronet 800 use! The demo database varied in terms of how new the information was :some were updated daily, other hadn't been touched for a year! The chat area & debating area seemed very quiet... obviously something for the winter months!

COSTS: a demo account is available offering two hours free access plus a chance to win a years' subscription free. Main account cost: (payment by Cheque, Credit Card or standing order)
 I)REGISTRATION FEE 10.00 (11.75 INC VAT)
II)MONTHLY SUBSCRIPTION 6.00 (7.05 INC VAT)
III)TIME CHARGE 2.5p PER MIN (2.945p INC VAT) WITH THE FIRST TWO HOURS FREE OF BASIC (2.5p)CHARGE WITH THE MONTHLY SUBSCRIPTION
IV)PHONE COSTS... THE VILLAGE CLAIMS LOCAL ACCESS FOR MOST OF THE UK (OVER 100 TOWNS)
V)ACCESS CHARGES TO CLOSED USER GROUPS.

WAS IT WORTH IT? WELL, NOT SURE. I HAVEN'T DECIDED WHETHER IT'S WORTH SUBSCRIBING TO ONCE MY TWO HOURS FREE ACCOUNT HAS BEEN USED UP.

I GUESS A LOT WILL DEPEND ON HOW MUCH ONE COULD SEE TO USING IT OVER A MONTH... AND THAT WOULD ALSO DEPEND ON WHETHER THE MAIN DATABASE HAD AN ACTIVE MEMBERSHIP OR NOT.

I was going to send Dave a disk as demonstration, but Oric Prestel only save to tape in a format that I couldn't transfer to disk. I did think about a print-out,but ORIC PRESTEL didn't seem to work with an MCP40.

                    - DAVID GOODRUM.

Firstly I would you to thank you for the positive response to this article. It really does make a difference to know that your efforts are appreciated ! I think I should also apologise for those computers I have missed. I can only let you know about the machines I am aware of though. I have decided NOT to include all the 8-bit business machines, of which there were a huge amount, because they arn't offered for sale very often. Personally I never liked these machines which I thought were over-priced, and often didn't offer the facilities available on a Speccy. This is therefore a run-down of 8-bit HOME computers.

If you have any information on the rarer computers please send it to me or Dave. I will try and include these machines at the end, and maybe have a look at consoles and pocket computers.

* COMMODORE PET The PET computers were big and came with a monitor stuck on top. The first one came with square calculator type keys. This 16K model had no HIRES screen, but it did have a number of graphics symbols which featured on the keys. You could draw all sorts of things with a bit of patience. The computers were used widely in education and business, as well as in the home. Our school won one in a quiz competition on Radio 4 ! (I had a gud edukation !!) This is where my computer interest began - our maths teacher occasionally showed us flow charts to show us how you could program a computer. I went and asked him how you actually programmed the thing, was allowed into the computer room and have been hooked ever since.

Anyway, that was the first PET. No colour, no graphics screen built in cassette deck and not a bad machine. Commodore redesigned it with a proper WP keyboard and it became the ....

* CBM 4016 The spec seems similar to the previous model - so lets have a look !
SPEC. 6502 CPU 16K RAM .40 X 25 screen integrated 12" green screen. 1200 BAUD cassette OS (This model didn't have a built in cassette deck). This model also had a DOS, so Disk drives could be used. PORTS: IEEE 488, parallel, cassette, 3 expansion ports and provision for extra memory . SOUND: "BEEP" only. 74 WP keys . Optional add-ons included a High res. card, Z80 additional processor to run CP/M and a sound card.

Quite nice machines, though the BASIC is a little strange in that the graphic symbols were used as part of the BASIC. eg To clear the screen you had to type PRINT and then an inverted heart shape in quotes. Then there were all sorts of symbols to move the cursor around which made programming games a traumatic experience.

Commodore went on to produce a number of business machines like the 500 & 700 and the 8025 & 8096 which were basically up-market versions of the PET and didn't really have the same success as their later home computers - the Vic 20 and the hugely popular Commodore 64.

* VIC 20 This machine is very like the PET with a bit chopped off and a few new bits thrown in. The memory and screen size has shrunk but colour graphics and 3 channel sound have been added. The case is a fraction of the size of the PET and the machine relied an a television for display. The thing that stops the VIC from being a decent machine is the memory - 5K of which you can only use about 3.5K. The screen is also a bit small, having a border. The border can be any one of 8 colours, the background any one of 16 and the foreground any one of 8 colours. Not quite what you would expect from a 16 colour computer.

SPEC. 6502 CPU, 5K RAM (The BASIC ROM is allegedly the same as one of the PET BASIC ROMs) SCREENS 22 x 23 text 176 x 158 graphics. '16' colours. PORTS memory expansion (Up to 32K) cartridge port, (cassette - of course) joystick. 3 independent sound synthesizers each of (only) 3 octaves .

The machine was quite popular in it's time, with a large amount of software available. An RS232 interface could be added as could a disk drive, but I don't see much point in adding a drive to such a machine. Most, if not all colour computers had at least 16K RAM, so why Commodore decided to release this machine with such a puny amount of memory is a bit of an oddity. Perhaps they were waiting to impress people with their next machine which really did give the people what they wanted - the all singing, all dancing Commodore 64.

* COMMODORE 64 If this machine had been released instead of the VIC 20 back in 1981, then Oric and Sinclair might to have had a re-think. Actually it was only released a year later and originally cost so much that it took several years, (and price cuts), to gain large support. It must have been ignored by a lot of people to begin with,

because of the price. It was, however, such a good machine that it survived right up to the recent demise of Commodore, being the last 8-bit home computer available in the stores, (and often in family mail-order catalogues, such as Kays).

You may know that the Amiga came in several different forms. There was the CDi version the CD 32 the small Amiga 600 and others. The C64 also came in various forms over its lifetime. The original was in almost exactly the same case as the VIC 20. The machine was later housed in a more fashionable white case, (with white keys), similar to the later Amiga. But there was also a portable version and the ill-fated C128 which we will meet later.

The machine was no doubt designed as an all-round performer and certainly has features which make it capable of handling most needs. Where the machine was to really impress though, was as a games machine. It had sprites. It had 16 colours, (a lot for an early machine). It was fast and it had a better sound chip then any previous machine. The graphics and the music capabilities must surely be why this machine survived for so long.

Despite all this, the machine has loads of bad points. The BASIC used is an extended version of the PET BASIC and it really makes handling graphics a chore which is ludicrous on a machine with such advanced graphics capabilities. Commodores own peripheral need to be used as, like Atari, they seem to insist on non-standard connections. As Oric pointed out, the machine only has about 37K available to the user, and this is further reduced when using graphics. (However, if BASIC is not used then there is a maximum of 54K available).

All said and done this is a nifty machine which would make a nice companion to your Oric. You can use the Oric's BASIC, the C64's wonderful music features, and transfer some machine code information between the two as the C64 runs on a chip based on the 6502.

SPEC. 6510 CPU. 64K ROM 20K RAM. SCREEN: 40 x 25 text, 320 x 200 graphics. 16 colours with 8 border colours. PORTS Cass., TV, Monitor,joystick/light pen,cartridge RS232, user port. SOUND 3 channel, 9 octaves, 4 waveforms. 66 keys, 4 function keys of good quality WP type.

What more can I say ? Well there's loads of software available - try and avoid the early stuff which is not very good. There were also all the usual peripherals available including the incredibly slow disk drive. There were not so many books on the 64 as you might think, but enough to sort out any problems you may have with the machine. Commodore Format the over-priced mag for the 64 is still available, and there are still people supporting the machine commercially. Worth buying !!

* COMMODORE 128 This was to be the machine that was supposed to keep everyone happy. It contained a C64 emulator so that you could use all the old C64 software, (and peripherals). There was a second processor - a Z80 - which allowed CP/M + to be used, (as a 80 column screen has also been added, which CP/M + requires). To top it off, the machine had 128K and a new BASIC. The original C64's BASIC was V1.0. The C128's BASIC is V7.0 which just shows how much of an advancement it was over the old Commodore BASIC. This version has done away with all those silly graphics codes and uses proper keywords. Keywords such as CIRCLE, which had been omitted from the previous BASIC, were now included, and the whole thing is much more user friendly.

What they didn't tell you was that the 80 column screen required a different monitor to the 40 column. (A TV could be used for 40 column display, but not 80). This meant that CP/M+ was unusable without a monitor, (and you also needed to buy a disk drive). To use both screens you really needed to buy Commodores own duel display monitor, which must have put a lot of people off.

This machine could have been the best micro you could hope to own, but it is let down by the stupid display design and a complete lack of interest from the software houses. I've got one and I just use it as a C64. What a shame.

Spec. is pretty much the same except for those additions mentioned above. The case is about the size of an Amiga, with a numeric keypad and extra keys including separate cursor keys - 92 keys in all. Extra ports are for the different displays. All C64 peripherals work.   Nowt else for you this time.   *Muso*

```
3D BATTLESTAR    - 68,540 (level 6.0) - Steve Marshall
3D FONGUS        - 150,850 - Stephane Rezette
3D STARTER       - 75,400 - Robert Cook (Founder of OUM)
ANTICS/SINGERIE - 131,372 - Peter Thornburn
ATLANTID   - 13,990 (Duree 62) - Matthew Dick
A.T.M      - 67,990 - Robert Cook
ATTACK ON KIXI   - 12,500 - Steve Marshall
ARENA 3000 - 2,953,750 (level 200 - 13 lives) - James Groom
ATTACK OF THE CYBERMEN - 4,730 - Henry Marke
BERING       - 168 DAYS - Graeme Burton. Still the Arcade King
BOMBYX     - 28,530 -    Robert Cook
THE BOTTLE - 81 -        Steve Marshall
BOZY BOA   - 4,270 -     Steve Marshall
BREAKOUT(IJK)- 4,720 -   Steve Marshall
BRICKY     - 356 -       Steve Marshall
CATEGORIC  - 23,057 -    James Groom
CENTIPEDE  - 59,240 -    Henry Marke
CHUCKFORD  - 185,050 -   Robert Cook
CHOPPER    - 69,950 -    Vincent Talvas
COBRA      - 2,699,993 -  Rene Marke The highest score on the chart !
COCK'IN - 133,057 - Steve Marshall
COCORIC - 3,620 -       Stephane Rezette
Columns - see separate entry at the end!
COSMORIC - 908 -        Steve Marshall
CROCKY   - 142,735 - Steve Marshall
DAMSEL IN DISTRESS - 4,860 - Graeme Burton
DEFENCE FORCE - 1,268,020 - Tim Colgate
DELTA FOUR    - 9,810 -     Steve Marshall
DOGGY         - 16,250 -    Stephane Rezette
DON'T PANIC   - 25,490 -    Henry Marke
DON'T PRESS THE LETTER Q - 1,229,620 - Bruno Dossier
DRACULAS REVENGE - 13,600 - Graeme Burton
DRIVER        - 66,500 - J-Yves Brun
ELEKTROSTORM  - 25,600 - Tim Colgate
ESQUIRE       - 5,650 - Steve Marshall
FIREFLASH     - 69,010 - Romain Dasse
FLY FOR YOUR LIFE - 172 -   Graeme Burton
FORMULE 1 - 27,487 -        Arnt Isaksen
FRELON    - 17,095 -        Stephane Rezette
FRIGATE COMMANDER - 504 - Keith Thompson
GALACTOSMASH  - 50 -        Matthew Coates
GALAXIANS     - 69,600 -    Robert Cook & Nicholas Menoux
GASTRONON     - 11,050 -    Dave Dick. The Editor has a go.
GHOST GOBBLER - 32,505 -    Steffan Jacobsson
GHOSTMAN      - 70,000 -    Elise Dasse
GOLDMINE      - 60,900 (GAME COMPLETED) - Henry Marke
GRAVITATOR    - 5,204 -     Arnt Isaksen
GRID WARRIORS - 55,494 -    Graeme burton
GUBBIE        - 339,360 -   Staale Eikbraaten
HARRIER ATTACK- 105,700 -   Staale Eikbraaten
HELLION    - 257,550 -      Matthew Green
HONEY KONG - 11,436 (level 11) - Peter Thornburn
HOPPER     - 40,170 -   Tim Colgate
HU*BERT    - 3,120 -    Steve Marshall
HUNCHBACK  - 750,200 -  Benedicte Gareau
HYPERBALL  - 15,330 -   Stephane Rezette
ICE GIANT  - 16,170 -   James Groom
INSECT INSANITY    - 149,250 - Dennis Bonfield
INTERTRON          - 10,800 (level 15) - Brian Kidd
INVADERS (ARCADIA) - 3,390 -   Steve Marshall
INVADERS (IJK)     - 23,650 -  Peter Thornburn
INVADERS (PSS)     - 5,530 -   James Groom
IMAGO - 8,010 - Stephane Rezette
JEUX OLYMPIQUES - 50,147 - Arnt Isaksen
JIMMY POUBELLE  - 11,440 - Peter Thornburn
KARATE   - 23,800 - Arnt Isaksen
KINGDOM - 109 -     Graeme Burton
KRILLYS - 28,290 - Graeme Burton
KROKATILE WALTZ   - 10,025 - Graeme Burton. G.B SCORES A HAT-TRICK
LIGHT CYCLES      - 4,530 -  Steve Marshall
LOCHNESS MONSTERS - 14,683 - Graeme Burton
LODE RUNNER       - 16,738 - Arnt Isaksen
LOKI              - 62,675 - Tim Colgate
LONE RAIDER       - 80,500 - Espen Andersen
LUNAR MISSION     - 13,129 - Graeme Burton
```

```
MACADAM BUMBPER - 178,700 - Stephane Rezette
MANIC MINER - 38,156 (AT THE CENTRE OF THE EARTH) - Graeme Burton
MANIC MINER with infinite lives - 115,583 - Robert Cook
MAHJONG - 16,200 (Cleared level 5 twice to give 6 levels) - Henry Marke
M.A.R.C        - 1,560 -     Graeme Burton
MARIO BROS     - 396 -       Steve Marshall
MAZE RALLY     - 88,920 -    Graeme Burton
MIDNIGHT FEAST - 1,500,120 - Henry Marke
MINED OUT      - 4,100 -     Graeme Burton
MLUCH          - 22,000 (All 18 levels completed and 7 lives left) - Henry Marke
MR.WIMPY       - 16,549 -    Espen Andersen
MUSHROOM MANIA - 471,420 -   Tim Colgate
OLIVE AND POPEYE  - 69,570 - Rene Marke
OPERATION GREMLIN - 22,617 - Graeme Burton
ORION             - 61,200 - Stephane Rezette
ORIC MUNCH        - 895,439 - Michel Leclerc
ORICAL INVADERS   - 1,790 -  Steve Marshall
PAINTER           - 103,850 - J-Phillipe Merc
PAINTER (with 255 lives) - 143,310 - Peter Thornburn
PANIC          - 823 -       Peter Thornburn
PASTA BLASTA   - 34,480 - Matthew Coates
PIERROT        - 6,270  - Steve Marshall
PLAYGROUND 21  - 92,000 - Tim Colgate
PSYCHIATRIC    - 41,070 - Henry Marke
PROBE 3        - 2,450  - Robert Cook
PROTECTOR      - 99,594 - Thierry Avannier
Q*BERT         - 15,470 - Dave Dick
QUACK A JACK   - 95,671 - Colin Cook
QUARKFLIGHT    - 709 -      Graeme Burton
RABBIT - 169,760 (level 29) - Peter Thornburn
RATSPLAT       - 20,150 -   Staale Eikbraaten
ROCK RUN       - 2,264 -    Paul Hutton
SCUBA DIVE     - 9,000 -    James Groom
SNAKE VENOM    - 102,822 -  Staale Eikraaten
SORVIVOR       - 1,155 -    Romain Dasse
SPACE WALL     - 3,248 -    Brian Kidd
SPOOKY MANSION - 2,100 - Steve Marshall
STANLEY        - 43,480 -   Romain Dasse
STRESS         - 1,688 -    Peter Thornburn
STOCKMARKET    - 82,936 -   Graeme Burton
STYX           - 194,600 (wave 18) - Graeme Burton
SUPER JEEP     - 138,250 -  Stephane Rezette
SUPER METEORS  - 364,700 - Graeme Burton
SUPER ADVANCED BREAKOUT - 17,050 - Arnt Isaksen
TALISMAN       - 8,068 - Elise Dasse
TETRIS         - 2,418 - Denis Bonfield
TETRIS GB      - 15,835- Henry Marke
TETRIX         - 9,983 - Jon Haworth
THEM           - 2,400 - Steve Marshall
TRIATHLON      - 5,270 - Stephane Rezette
TRICKSHOT      - 4,128 (screen 14) - James Groom
TRIDENT NEPTUNE  - 7,200 -   Dave Dick
TROUBLE IN STORE - 1,060,758 - Graeme Burton
TWO GUN TURTLE   - 9,980 -   Steve Marshall
ULTIMA ZONE      - 148,860 -  Staale Eikbraaten
ULTRA            - 35,780 (level 32) - Peter Thornburn
VIDEO FLIPPER    - 55,350 -   Graeme Burton
VISION           - 285 -      Brian Kidd
WILLY          - 624 -       P.Hutton
XENON I        - 117,230 - Eric Eduezi
XENON III      - 9,927 -  Staale Eikbraaten
YAHTZEE        - 306 -    Dave Dick
ZEBBIE         - 945,560 - Staale Eikbraaten
ZEBULON        - All screene completed in 8 minutes - Henry Marke strikes again.
ZOOLYMPICS       - 13,677 -  Graeme Burton
ZORGONS REVENGE - 155,830 - E.Tollemer
```

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

RAMBLING IN THE ROM
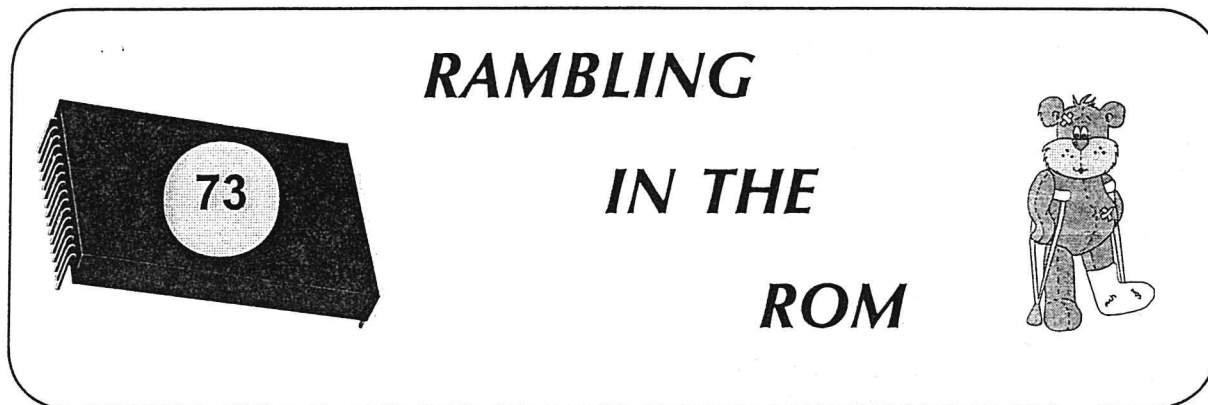
Euphoric... now with the Telestrat!

I can hardly keep up with Fabrice Frances. In late July I had a series of mails from him, asking firstly for details of the Telestrat memory addresses, and then for copies of the Banks loaded from the various cartridges (the Telestrat has 7 banks of memory). When he asked for a Stratsed and a Stratoric disk image I knew things were getting close, and there a few days later was a new version of Euphoric, complete with Telestrat emulator!

So, in the one PC program, you can now run a cassette Atmos or Oric-1, a Sedoric system, or a Telestrat. You choose which each time you run the program. With the cassette system you can CLOAD cassette files from the PC disk; with Sedoric you can load up to 4 disks, and with the Telestrat up to 7 memory banks and 4 disks. And to cap it all, a week later Fabrice had added the real-time clock card to the Telestrat!

The emulator disk is £1.50. To update your current disk, send it to me with an S.A.E. for a free update. The latest version as I write is V0.7f, though don't expect it to remian that way for long!

For 386 owners there is now a 'stripped-down' cassette only version of the emulator which runs at full speed - also £1.50. Fabrice hopes shortly to incoroporate a full 386 version within the main Euphoric emulator. More news next month, no doubt.

Rambling on in the maths...

$$ACC3 + ACC2*A \rightarrow ACC3$$

Programming:

A neat trick is used to avoid a counter which counts down the eight shifts. The multiplicand has its b7 forced to 1, so that it cannot be nul until after eight shifts to the right.

DCE8	BNE DCED	DD1E BNE DD23	if A=0, shift one byte to the right
DCEA	JMP $DBE5	DD20 JJMP $DC3E	i.e. do eight shifts
DCED	LSR A	DD23 LSR A	exit first bit (b0)
DCEE	ORA #80	DD24 ORA #80	and force b7 to 1 (to count 8 shifts)
DCF0	TAY	DD26 TAY	save the multiplicand in Y
DCF1	BCC DD0C	DD27 BCC DD42	if 0 exit, simply shift

Add provisional result and multiplicand

DCF3 CLC	DD29 CLC	
DCF4 LDA 98	DD2A LDA 98	add byte 4
DCF6 ADC DC	DD2C ADC DC	
DCF8 SSTA 98	DD2E STA 98	
DCFA LDA 97	DD30 LDA 97	
DCFC ADC DB	DD32 ADC DB	byte 3
DCFE STA 97	DD34 STA 97	
DD00 LDA 96	DD36 LDA 96	
DD02 ADC DA	DD38 ADC DA	byte 2
DD04 STA 96	DD3A STA 96	
DD06 LDA 95	DD3C LDA 95	
DD08 ADC D9	DD3E ADC D9	byte 1
DD0A SSTA 95	DD40 STA 95	

Shift the provisional result

DD0C LDA #00	....	
DD0E BCC DD12	....	
DD10 LDA #80	....	
DD12 LSR 95	....	
DD14 ORA 95	....	
DD16 STA 95	....	
DD18 LDA #00	....	
DD1A BCC DD1E	....	
DD1C LDA #80	....	
DD1E LSR 96	....	
DD20 ORA 96	....	
DD22 STA 96	....	
DD24 LSR 97	....	Why not do this more simply?
DD26 BCC DD2A	....	
DD28 LDA #80	....	
DD2A LSR 97	....	
DD2C ORA 97	....	
DD2E STA 97	....	
DD30 LDA #00	....	
DD32 BCC DD36	....	
DD34 LDA #80	....	
DD36 LSR 98	....	
DD38 ORA 98	....	
DD3A STA 98	....	
DD3C LDA #00	....	
DD3E BCC DD42	....	
DD40 LDA #80	....	
DD42 LSR DF	....	
DD44 ORA DF	....	
DD46 STA DF	....	
....	DD42 ROR 95	byte 1
....	DD44 ROR 96	byte 2
....	DD46 ROR 97	byte 3
....	DD48 ROR 98	byte 4
....	DD4A ROR DF	extension byte
DD48 TYA	DD4C TYA	recover multiplicand
DD49 LSR A	DD4D LSR A	and take out the bit
DD4A BNE DCF0	DD4E BNE DD26	and continue if not 8 shifts
DD4C RTS	DD50 RTS	

(AY) --> ACC2

Entry: AY contains the address of the value (sign incorporated in byte 1)

DD4D	STA 91		DD51	STA 91	
DD4F	STY 92		DD53	STY 92	save address of value
DD51	LDY #04		DD55	LDY #04	index byte 4
DD53	LDA (91), Y		DD57	LDA (91), Y	
DD55	STA DC		DD59	STA DC	byte 4
DD57	DEY		DD5B	DEY	
DD58	LDA (91), Y		DD5C	LDA (91), Y	
DD5A	STA DB		DD5E	STA DB	byte 3
DD5C	DEY		DD60	DEY	
DD5D	LDA (91), Y		DD61	LDA (91), Y	
DD5F	STA DA		DD63	STA DA	byte 2
DD61	DEY		DD65	DEY	
DD62	LDA (91), Y		DD66	LDA (91), Y	
DD64	STA DD		DD68	STA DD	byte 1
DD66	EOR D5		DD6A	EOR D5	
DD68	STA DE		DD6C	STA DE	and adjust product of the signs
DD6A	LDA DD		DD6E	LDA DD	
DD6C	ORA #80		DD70	ORA #80	force b7 byte 1
DD6E	STA D9		DD72	STA D9	
DD70	DEY		DD74	DEY	
DD71	LDA (91), Y		DD75	LDA (91), Y	
DD73	STA D8		DD77	STA D8	exponent
DD75	LDA D0		DD79	LDA D0	and set Z according to ACC1
DD77	RTS		DD7B	RTS	

CALCULATE SUM OF EXPONENTS

Remark:
   This routine is called by both the multiplication and division routines.

Principle:
   The joys of addition in signed arithmetic, inverted at that. Remember, #81=0, #80=-1.

DD78	LDA D8		DD7C	LDA D8	take exponent ACC2
DD7A	BEQ DD9B		DD7E	BEQ DD9F	if nul, ACC1=0
DD7C	CLC		DD80	CLC	
DD7D	ADC D0		DD81	ADC D0	add exponent ACC1
DD7F	BCC DD85		DD83	BCC DD89	if step passing required number, jump
DD81	BMI DDA0		DD85	BMI DDA4	passed and negative: Overflow
DD83	CLC		DD87	CLC	adjust C
DD84	BYT #2C		DD88	BYT #2C	
DD85	BPL DD9B		DD89	BPL DD9F	step passing required number and positive: Underflow
DD87	ADC #80		DD8B	ADC #80	
DD89	STA D0		DD8D	STA D0	recover the correct result
DD8B	BNE DD90		DD8F	BNE DD94	if result is nul,
DD8D	JMP $DB2B		DD91	JMP $DBB6	indicate sign positive
DD90	LDA DE		DD94	LDA DE	otherwise, the sign of the result
DD92	STA D5		DD96	STA D5	is that of the product of the signs
DD94	RTS		DD98	RTS	
DD95	LDA D5		DD99	LDA D5	
DD97	EOR #FF		DD9B	EOR #FF	
DD99	BMI DDA0		DD9D	BMI DDA4	
DD9B	PLA		DD9F	PLA	recover return address
DD9C	PLA		DDA0	PLA	to return directly to the * call
DD9D	JMP $DB27		DDA1	JMP $DBB2	and ACC1=0

10*ACC1 --> ACC1

Principle:

Instead of using the multiplication routine, the same result is more quickly achieved with a simple action on the exponent and a single addition. This important, since this is the key routine for converting decimal to floating point.

DDA3 JSR $DEDD	DDA7 JSR $DEE5	AACC1-->ACC2
DDA6 TAX	DDAA TAX	set Z according to the exponent
DDA7 BEQ DDB9	DDAB BEQ DDBD	if number is nul, it's also the result
DDA9 CLC	DDAD CLC	
DDAA ADC #02	DDAE ADC #02	*4: exponent+2
DDAC BCS DDA0	DDB0 BCS DDA4	exit if overflow
DDAE LDX #00	DDB2 LDX #00	product of signs=0
DDB0 STX DE	DDB4 STX DE	
DDB2 JSR $DAA7	DDB6 JSR $DB32	*5: ACC2+ACC1-->ACC1
DDB5 INC D0	DDB9 INC D0	*10: exponent+1 (i.e. multiply by two)
DDB7 BEQ DDA0	DDBB BEQ DDA4	exit if overflow
DDB9 RTS	DDBD RTS	
DDBA DDBE	BYT #84, #20, #00, #00, #00 is 10	

ACC1/10 --> ACC1

DDBF JSR $DEDD	DDC3 JSR $DEE5	AACC1-->ACC2
DDC2 LDA #BA	DDC6 LDA #BE	
DDC4 LDY #DD	DDC8 LDY #DD	index value of 10
DDC6 LDX #00	DDCA LDX #00	
DDC8 STX DE	DDCC STX DE	indicate product of signs=0
DDCA JSR $DE73	DDCE JSR $DE7B	(AY)-->ACC1
DDCD JMP $DDE3	DDD1 JMP $DDE7	and calculate ACC2/ACC1

'LOG' (FUNCTION)

Principle:

The classic formula is used.

DDD0 JSR $DC79	DDD4 JSR $DCAF	calculate an LN
DDD3 JSR $DEDD	DDD7 JSR $DEE5	AACC1 --> ACC2
DDD6 LDA #46	DDDA LDA #77	
DDD8 LDY #DC	DDDC LDY #DC	index LN(10)
DDDA JSR $DE73	DDDE JSR $DE7B	(AY)-->ACC1
DDDD JMP $DDE3	DDE1 JMP $DDE7	and execute ACC2/ACC1
DDE0 JSR $DD4D	DDE4 JSR $DD51	

Tailender

Don't forget the new Sedoric manual, £5.00 and help OUM funds,

Email: jon@cam.dungeon.com

Oric Mailing List: oric@cam.dungeon.com

Jon Haworth
3 Madingley Road
Cambridge
CB3 0EE

Machine Code for the Oric Atmos (Part 49)   Peter N. Bragg

It is now the end of the Summer and a lot has happened since the last issue.
The Oric Meet took place in sizzling temperatures. If you didn't go, you
missed a good day. "Magnetix" by Jon Bristow, the Internet by Jon Haworth
and a lesson on how to print gibberish from Peter Thornburn. Hope you
managed to sort out one of those printers, Peter ? There was also an amusing
demonstration on how to store cigarette ash in the Oric keyboard, by our
expert gamester.

The Internet demo by Jon Haworth was very interesting. It is now a very
tempting proposition, particularly with the real prospect of being able to
contact fellow enthusiasts, anywhere in the world. A phone on its own is a
very limiting form of communication. The enormous coverage and freedom of
the Internet opens up all sorts of possibilities. Recent articles in the OUM
and CEO mags have provided an illustration of what can be achieved, in their
reports on the Oric sites. I never thought that I would consider the old
steam driven PC as a future computer. Of course, the PC now comes with real
"Windows", just like my old Acorn Archimedes. The only problem is the cost
of the kit, required to get started. I really need to win the Lottery.

The Story so far
--------------- It is two months since the last issue, which is a long time.
Hopefully, you will remember that we were continuing with our look at the
Zero Page instructions.

The Zero Page instructions use a combination of indirect and indexed
addressing and previous issues covered these operations before going on to
look at their use in Zero Page. The last issue then looked at one of the two
main types of Zero Page instruction. First off, was the Pre-Indexed
addressed type which was illustrated by using a LDA (Load Accumulator)
instruction as a working example.

The Pre-Indexed instructions use Register X to index addresses. We can store
a number of two byte addresses in Zero Page (0000 - 00FF) area and select
any one we require for use by simply setting Register X to the appropiate
value. The two byte addresses that are stored in Zero Page do not have to be
in any sequence or connected in any way. They can be locations, literally
scattered at random anywhere in memory.

This allows you to select isolated locations in memory for Zero Page
operations. In all there is a choice of eight operations covered by Zero
Page instructions. Have another look at the last issue for more detail.

Post Indexed Addressed Instruction
---------------------------------- As I said then, there are two types of
Zero Page instruction. We have looked at the Pre-Indexed type. Now, lets
have a look at the Post-Indexed instruction. This has always seemed to me to
be the more useful of the two types.

There is a significant difference between "Pre-" and "Post-Indexed"
instructions. The Pre-Indexed type always uses Register X whereas the
Post-Indexed type always uses Register Y for it's operations.

Once again the indirect address for Post-Indexed instructions is stored as
two bytes in Zero Page. However in this case there is just the one indirect
address, so it's location in Zero Page, is all that is needed to select it
and the index can be used for other purposes.

So now we find that the index is applied after indirect address has been found, which is why this type of instruction is called a "Post-Indexed" instruction. The contents of the index (Register Y) are added to the address in Zero Page to produce the final address, which is where the instruction operation is carried out. Lets have a look at another example, once again using a LDA (Load Accumulator) instruction. If you look at the example in the last issue and compare it with this one, you should be able to see the difference in the two types of instruction.

The Example
----------- below loads the Accumulator with an item from data memory, using a "Post-Indexed LDA" instruction. Again, we need initially to set it up by putting a data item into the data memory and an address into Zero Page as per the example below.

```
[-------------------------[ Any old routine/anywhere ]-------------------]

                          ---Fetch Data item into Accumulator---
nnn0:A0 06      : LDY #06      : Set Index/Register Y to 06 and
nnn1:B1 80      : LDA (80),Y : then fetch data item from indirect address.

[-------------------------[ Address and Data Storage ]-------------------]
                          ---Parameter Block in Zero Page---
0080: 02        :              : Two byte storage for the
0081: 10        : "1002"       :    Indirect Address.
        ---end---
                          ---Parameter Block 1002---
1008: 58        :    "X"       : Item of data (ie. ASCII code for letter "X")
        ---end---
```

The instruction at nnn0 sets Register Y to 06. This is followed by the "Post-Indexed" LDA instruction at nnn1. If you look at the previous example in the last issue you will see that there is a slight change in the format of the instruction label, the index Register appears outside the brackets to show that this time, it has no effect on the Zero Page location inside the brackets, unlike the first example.

Now what happens, is that the instruction at nnn1 uses it's operand (80) to find the locations 0080 and 0081 in Zero Page. Those two locations hold the indirect address (1002). The instruction adds the contents of Register Y to a copy of that indirect address (1002 + 06) to produce the final address, (1008) which is where it carries out the instruction operation (LDA).
The end result once again, is that instruction nnn1 loads the Accumulator with a copy of the data item "X" (code 58h) from address 1008.

Now that we have seen one example of each of the two types of instruction, it might be a good time to look at a short demo routine that shows them in action.

The Demo Routine
---------------- The listing below is a simple demo of both types of Zero Page instructions. Instruction 1019 is a Pre-Indexed LDA instruction, which fetches an ASCII display code item from Parameter Block 1002 and instruction 101B is a Post-Indexed STA which puts that item into Oric's display screen. The routine is intended to demonstrate the effect of Registers X and Y on the two Zero Page instructions and has deliberately been made a little flexible so that you can see what effect, changing the contents of the Registers X and Y, has on the two instructions 1019 and 101B.

[CALL#1010]--------------[Display Lines]--------------------------[/]

```
          ---start---        ---Parameter Block 0074 in Zero Page---

0074:03         :    1003    : Address in Param Block 1002 for ASCII "X"
0075:10         :            :

0076:05         :    1005    : Address in Param Block 1002 for ASCII "Z"
0077:10         :            :

0078:04         :    1004    : Address in Param Block 1002 for ASCII "Y"
0079:10         :            :

007A:02         :    1002    : Address in Param Block 1002 for ASCII "W"
007B:10         :            :

007C:A8         :    BBA8    : Line 1 Address on Screen Display
007D:BB         :            :
          ---end---

          ---start---        ---Parameter Block 1002---
1002:57         :    "W"     :  "ASCII"
1003:58         :    "X"     :     Display
1004:59         :    "Y"     :        codes
1005:5A         :    "Z"     :
          ---end---
```

[JSR 1010]--------------[Zero Page Instruction Demo]-------------[2/2]

```
          ---start---
1010:48         : PHA         :
1011:8A 48      : TXA PHA     : Preserve Accumulator and Regs X & Y contents.
1013:98 48      : TYA PHA     :

1015:A2 02      : LDX #02     : Set Index/Register X to 02 and
1017:A0 10      : LDX #10     :   then set Index/Register X to 10.

1019:A1 74      : LDA (74,X)  : Fetch "ASCII" display code into Accumulator
101B:91 7C      : STA (7C),Y  :   and put it into Display Screen address.

                ---Continue or Finish ?---
101D:C8         : INY         : Count item displayed (add 01 to Register Y)
101E:C0 20      : CPY 20      : Test - have 16 chars been put into Display ?
1020:D0 F7      : BNE"1019"   :    No - so back to fetch another display code.
                              : Yes - so........

                ---Finish---
1022:68 A8      : PLA TAY     :
1024:68 AA      : PLA TAX     : Retrieve Regs Y & X and Accumulator contents.
1026:68         : PLA         :
1027:60         : RTS         : Exit back to Basic.
          ---end---
```

Enter the parameters and routine, using your favourite assembler or hex code
writing utility. I entered the hex code only, as listed in the first two
columms. CALL#1010 to run. As listed, the routine produces a short line of
16 characters on the top line. Like those Basic "Print Hello" routines, not
very exciting, but useful if you want to find out how things work.

If you are not too clear on the subject of Zero Page instructions, you can call the routine and use the result to see how the instructions work.

First of all, lets look at the routine as a whole. The first five instructions 1010-1014 inclusive, preserve the contents of the Accumulator and the two Registers. Likewise, instructions 1022-1026 at the Finish reverse the process and restore the Accumulator and two Registers to their original state. This is not essential for the operation, but it is a good habit to get into and avoids complicated foul-ups due to corrupted registers between routines. The last instruction RTS, at 1027 simply returns you to Basic. Having said that, we can now ignore all that lot and concentrate on the main part of the routine.

The main part of the routine are the instructions 1015-1020. Instructions 1015 and 1017 are used to set the two Registers. Instructions 1019 and 101B are our sample Zero Page instructions and the following three instructions 101D-1020 provide a short loop that controls the number of characters put on the screen.

Taking instruction 1019 first. This is the Pre-Indexed LDA, which is used to fetch an item of code into the Accumulator. It's operand is 74, which means that it starts with a base location of 0074 in Zero Page, to which it adds the contents of Register X. Register X has been set to 02 by instruction 1015 so the result is that the Pre-Indexed LDA looks for an address in 0076 and 0077, which contain the final address (1005). So the Pre-Indexed LDA fetches the item from 1005 (ASCII code "Z") and puts it into the Accumulator.

Now if you were to change instruction 1015 so that it set Register X to 04, the Pre-Indexed LDA at 1019 would add that to 0074, thereby using the address in 0078 and 0079, which in this case is 1004 and the final result is that the Accumulator would be loaded with ASCII code "Y".

You could also make similar changes by setting Register X to either 00 or 06. However, for this demo, you are restricted to those four values. What happens if you do use a value outside the range 00, 02, 04 and 06 ? Well the Pre-Indexed LDA will simply try to make an address somehow and fetch from that. For example if you set Register X to 07 it will look for an address in locations 007B and 007C, which in this case will result in the cobbled up address A810, which is not much use. The same applies to any other unlisted value, so dont bother for this demo.

Now for the Post-Indexed STA instruction at 101B. The addressing on this works in a slightly different way. Instruction 101B operand is 7C and as a result the instruction goes straight to locations 007C and 007D for it's final address (BBA8). Having found that, it adds the contents of Register Y to that address and as Register Y is initially set by instruction 1017 to 10, it adds 10 to that final address, so the first code is put into address BBB8. The simple loop created by instructions 101D-1020 adds 01 to Register Y and returns to put another item into the next address. As these are screen addresses, you get a line of display characters on the screen.

The instruction 101E controls the end value of Register Y, which controls the length of the line displayed on the screen. If you increase it's value from 20h upwards (to a maximum of FF), you will increase the length of the line displayed. You can also change the line start using instruction 1017.

These addressing modes apply to all eight of types of Zero Page instruction. That just about covers it for now........................See you next month.

NOTICEABL - a Notice Creation program for use with LORIGRAPH

```
  3 POKE#26A,7
  5 DIM A%(39,26):AA=#9C00+96*8 'alt.chr in Hires mode
  7 PAPER6:INK0:GOSUB 400 'create text
 10 FOR Y=0 TO 24
 20 FOR X=2 TO 39
 30 A%(X,Y)=SCRN(X,Y)
 40 NEXT
 50 NEXT
 60 HIRES:PAPER6:INK0
 70 FOR Y=0 TO 24:S=0:TB=Y AND 1:M=255
 80 FOR X=2 TO 39:CURSET X*6,Y*8,3
 90 C%=A%(X,Y)
100 IF C%=10 THEN S=1:C%=32:GOTO125
110 IF C%=8 THEN S=0:C%=32:GOTO125
115 IF C%<7 AND C%>0 THEN M=0:C%=32
117 IF C%=0 THEN M=255:C%=32
120 IF S=1 THEN GOSUB 300:GOTO130
125 CHAR C%,0,1
130 NEXT:NEXT
140 INPUT"Filename ";F$
150 ESAVE F$:END
300 HF=(1-TB)*4
310 FOR I=HF TO HF+3
320 A=PEEK(#9800+8*C%+I)
330 AL=AA+2*(I-HF)
340 POKE AL,A:POKE AL+1,A AND M
350 NEXT:CHAR 96,1,1:RETURN
400 CLS
405 GOSUB 450
410 GET A$:IF A$=CHR$(3) THEN 440
420 PRINT A$;
425 IF A$=CHR$(13) THEN IF PEEK(#268)<25 THEN PRINT CHR$(10);
430 GOTO 410
440 PRINTCHR$(17);:RETURN
450 FOR I=1 TO 39:READ D:PLOT I,25,D:NEXT
460 FOR I=1 TO 16:READ D:PLOT I,26,D:NEXT:RETURN
470 DATA 0,197,211,195,32,107,101,121,115,58,32,65,45,70,61,115,104,97
480 DATA 100,105,110,103,44,32,74,61,100,111,117,98,108,101,32,104,101,105
490 DATA 103,104,116,0,72,61,115,105,110,103,108,101,32,104,101,105,103,104
495 DATA 116
```

INSTRUCTIONS FOR USE

The program is used to create a HIRES screen which can be saved under a given
filename and then loaded into LORIGRAPH to be printed out.

It uses the TEXT screen and allows input of control-D for double printing, and
ESCAPE codes for double height or colour. Anything written in colour will appear
as black unless it is also in double height, when it will appear shaded. The
program converts the TEXT screen into a HIRES screen compatible with LORIGRAPH.
You may have to read up your ESC keys to become familiar with the sequences
required for full control.

HI DAVE! This is output from the
enclosed program. It
can be used with LASER to make
pleasing notices like this one.
It converts coloured text into double
height

As you can see, it is quite
versatile in mixing single height
double height characters, but needs a
bit of practice for anything
elaborate. I am also writing an
article about colour on the Oric,
which you should receive in time.
Hope you had a nice holiday!
Colin Cook

AND WHY NOT A PC-XT!
--- --- --- - -- --

from FABRICE FRANCES - MONSIEUR EMULATOR

I am sorry you can NOT use Euphoric on your PC XT: be sure that if it had been feasible, I would have done it since I hate nowadays' computer market. I mean I find it wonderful to have computers increasingly powerful, but I hate the pressure on consumers to buy computers at an equal increasing rate. Please don't think I eat a new computer every morning... Sure, I try to keep a PC quite up to date (er... say two or three years late), but I wear it much longer than my socks. I had this PC for my twentieth birthday in '86 and used it up to a few months ago (two months exactly, this corresponds to the birth of my second daughter and I had to put it in a box in the garage in order to give some square meters). The second PC started to run piece by piece in '92 or '93. BTW, i don't want to bother you with this private story but this gives me an idea of what could be the base of an article for OUM. This could be entitled " A too powerful Oric " or" why an XT can not emulate our Oric". So, here it is...

Emulation has moved recently to the front scene with Apple's set to move from the 680x0 series to the Power PC architecture. Thanks to the big ratio of rom calls in Macintosh' softwares and some special instructions designed for emulation in the power PC instruction set, the burden of interpreting 680x0 instructions has not been too high and we may say Apple has succeeded where it would be very hard to obtain similar results in the 80x86 market (mainly because there is not the same code re-use discipline, though this might come with Windows 95). By the way, we have not talked about our favorite computer yet, but this was just to say emulating another computer needs a big power ratio, and I would like to bring some figures in the Oric's case (once again, Apple's success lies in the good discipline of Macintosh's software, using ram routines that have been re-written in native Power PC code). So, let's go to our main subject: trying to emulate the Oric on a PC XT (like Dave's one or mine). Obviously, the 6502 and the 8088 (or 8086) don't share a similar design, they are not compatible nor is there a way to easily translate assembly source code from the 6502 to the 8086(a technique we may talked about). In this case emulation is really "interpreting a 6502 machine code program" in the same way the Basic in Oric's ram interprets a Basic program. What does the Basic interpreter do? To keep things short, for each line of the program, it reads the first byte (which is the token code of the instruction in all cases excepting the assign instruction) and uses it as an index in an array of all instructions' addresses in order to execute the code of the given instruction. Then, this code may read additional bytes to get some parameters (eg CURSET 120,100,1) Well, the same technique may be applied for 6502 interpretation: using an array of 256 addresses, each address pointing to the start of a routine doing the job of machine code instruction. So, as everyone here is reading Peter Bragg articles, interpreting 6502 code with a 6502 might be (silly?):

```
interpret: php ;saving emulated 6502 flags
           lda (PC),y ;reading next op-code
           inc PC  ; advancing Program Counter
           beg nextpage ;need to increment highbyte
           tax  ;using the op-code as...
           lda low-addresses,x  ;...an index in an array
           sta JUMP  ;...of addresses (well,
           lda high- addresses,x ;.. one array for LSB,
```

```
        sta JUMP+1 ;...and one for MSB)
        jmp (JUMP) ;...then jumping to that address.
```

and the code for a LDA in Zero Page could be:

```
        lda (PC),y :getting the ZP address
        inc PC    ;pointing PC to next op-code
        beg nextpagealso ; crossing a page
        tax     ;using the ZP address
        plp ;getting the emulated flags
        lda 0,x ;at last!
        jmp interpret ; and the story goes on...
```

Notice that we would already need a 20MHz cpu to emulate a 1MHz one, and the job was made easier by identical processers... Now, here is wsat might be a very fast interpretation with a 8086 processor, avoiding costly branches thanks to interpreter code duplication (memory is not much a cancern): for the same LDA Zero Page instruction with Intel syntax:

```
lodsb  ;getting the Zero Page address...
mov bl,al ;...in bx register
mov cl,OricMem[bx] ; cl is 6502's a register
or cl,cl  ; setting N and Z flags
lahf  ;...and storing them in ah
lodsb  ;Interpreter code:getting next op-code
mov bl,al ;...in bx register
jmp Opcode[bx] ;and branching to its routine
```

Well, the code is smaller thanks to some 16-bit instructions, but not much faster than the 6502 version: assuming the 4 bytes prefetch queue of the 8088 (6 bytes for the 8086) does not empty, it consumes 83 cycles on a 8088 to execute a 3 cycles 6502 instruction (79 cycles on a 8086), and we have not dealt yet with interrupts pending. Also, when emulating a computer, cpu is not enough, we have to deal with perpherals like keyboard, screen, timers, sound generator (all these running parallel with the cpu), and if we want to run at the same speed than the emulated computer, we may add the clock to the previous list. Sorry Dave, no 8086 or 8088 is able to run at 33 MHz... (the same code fragment requires 34 cycles on a 80186 or 286 thanks to wired effective address computations and separated address/data buses, so there is more hope with these processors but don't forget the overhead involved with IOs and screen writing). So, a 286 running at 16 or 25MHz is the strict mininum for a 1MHz 6502 emulation.For a complete system emulation, however, it depends on the simplicity of the design (from this point of view, the Oric has no luck compared to a Commodore 64 or a BBC, due to its 6-pixels-per-byte screen and serial attuibutes...) Ok, time to end for this time. Don't be sorry with your XT, Dave, this just means you have powerful Oric's! To give a last example consider a small program computing the XOR sum of 256 bytes. The following 6502 program takes 2.3 ms at 1MHz:

```
      xorsum: eor array,y
              iny
              bne xorsum
```

while the following XT program takes more than 1,8 ms (at 4.77MHz):

```
   xorsum: lodsb
           xor bl,al
           loop xorsum
```

LONG LIFE TO ORIC !!   - FABRICE FRANCES

READERS LETTERS
------ ------

DEAR DAVE,

WENDY AND I BOTH ENJOYED THE AYLESBURY ORIC MEET. SHE HAS
ALREADY ASKED IF WE CAN GO AGAIN NEXT YEAR.

IN ADDITION TO BUYING A DISK INTERFACE, I BOUGHT 47 BACK ISSUES OF
THE CEO-MAG, AND A COPY OF THE SEDORIC MANUAL.

AN ITEM THAT APPEALED TO ME AT THE 'MEET' WAS JON HAWORTH'S "SEE-
THROUGH" ATMOS. I HAVE A SPARE ATMOS KEYBOARD AND AN ORIC CIRCUIT
BOARD (WHICH NEEDS REPAIRING), SO MAYBE I WILL PUT THEM TOGETHER IN A
SEE-THROUGH CASE.

WENDY WAS THRILLED TO BE ABLE TO JUGGLE IN FRONT OF AN AUDIENCE. SHE
GOES TO A JUGGLING CLUB IN LEEDS EVERY WEDNESDAY EVENING. I GO WHEN
I'M NOT WORKING. SHE'S A LOT BETTER THAN ME AT JUGGLING; I'M PUSHED
INTO THE OVER - 40s CORNER ON WDNESDAY NIGHTS. KIDS OUGHT NOT TO BE
ALLOWED TO JUGGLE,THEY GET FAR TOO GOOD,TOO QUICKLY!

SINCE RETURNING FROM THE AYLESVBURY MEET I HAVE BEEN BUSY SORTING
OUT SOME COMPUTER HARDWARE. I HAVE NOW GOT AROUND TO SOLDERING
TOGETHER A CABLE TO CONNECT MY ORIC TO MY TANDATA MONITOR. I BOUGHT A
CUMANA DOSK INTERFACE AT THE MEET AN HAVE NOW GOT THE INTERFACE
CABLES. I HAVE A CASE FROM A BURROUHS COMPUTER,WHICH HOLDS 2 DISK
DRIVES AND THEIR POWER SUPPLY. I JUST NEED SEDORIC, AND THE DISK
DRIVE,WHICH I HOPE I CAN GET LOCALLY FROH A COMPUTER FAIR. CAN ANYONE
TELL ME HOW TO CONNECT 2 (OR MORE) DRIVES TO THE ORIC?

I HAVE BEEN GIVEN AN EPSON LQ WIDE-CARRIAGE PRNTER,WHICH I INTEND TO
USE WITH MY ORIC. ALTHOUGH I HAVE NOT USED AN ORIC AS A DISK-BASED
SYSTEM YET, I HAVE OFFERED TO LEND IT TO ARNT ERIK ISAKSEN WHEN HE
COMES TO LEEDS.

AS WELL AS PUTTING MY ORIC SYSTEM TOGETHER, I HAVE ALSO SPENT TIME
ON OTHER HARDWARE. A FEW MONTHS AGO I BOUGHT A MACINTOSH 512K CHEAPLY.
IT DIDN'T COST MUCH BECAUSE THERE WAS A SLIGHT FAULT. THE COMPACT MACS
HAVE DISPLAY,MAIN CIRCUIT BOARD,POWER SUPPLY AND A DISK DRIVE BUILT
INTO THE SAME CASE. THE EARLIER MODELS OF COMPACT MACS (INCLUDING THE
512K) DON'T HAVE A FAN. THEY GET HOT AND THE POWER SUPPLY IS FRAGILE
AND OFTEN A TRANSFORMER ON THE POWER SUPPLY BOARD BURNS OUT,WHICH IS
WHAT HAPPENED WITH MINE. I BOUGHT A REPLACEMENT POWER SUPPLY FROM AN
ADVERT IN MICROMART. WHEN IT ARRIVED IT WAS LESS THAN PERFECT. ONE OF
THE CONNECTORS ON A LEAD FROM THE POWER SUPPLY WAS DA5AGED AND
DIFFICULT TO REMOVE. I EVENTUALLY MANAGED TO REPLACE IT WITH THE ONE
FROM THE DAMAGED POWER SUPPLY. THEN THE REPLACEMENT POWER SUPPLY
WOULDN'T POWER UP AND THIS WAS TRACED TO A BLOWN (AND WELL HIDDEN)
ON-BOARD FUSE. FINALLY THE ON-BOARD LOUDSPEAKER WAS MISSING FROM THE
REPLACEMENT BOARD AND THE ONE ON THE BROKEN BOARD WAS RIVETED IN
PLACE.

I HAVE ALSO ADDED AN EXTERNAL FAN TO THE MACINTOSH. I USED ALUMINIUM
MESH,FROM A CAR BODY REPAIR KIT, WHICH I BENT TO THE SHAPE OF THE TOP
AND BACK OF THE COMPUTER. TO THIS, I HAVE BOLTED A SMALL MAINS POWERED
FAN FROM AN OLD PC. THE THEORY IS THAT THIS WILL PUSH COOL AIR IN
THROUGH THE SLOTS AT THE TOP OF THE CASE AND WARMER AIR OUT THROUGH
THE SLOTS AT THE BOTTOM OF THE CASE.

I NOW HAVE A WORKING 512K MACINTOSH WHICH I HAVEN'T USED YET AS I
DON'T HAVE A COPY OF THE START-UP SYSTEM DISK. I HAVE ALREADY BOUGHT
ONE PIECE OF SOFTWARE FOR IT FROM A CAR BOT SALE FOR 50 PENCE. I WOULD
ALSO LIKE A MANUAL FOR IT.

                                        - ROBERT CRISP (LEEDS)

LETTERS (Contd.)

DEAR ROBERT,
             GLAD THAT YOU AND YOUR DAUGHTER (WENDY) ENJOYED THE
MEET. IT IS ALWAYS NICE TO MEET UP WITH PEOPLE WHO I HAVE ONLY
PREVIOUSLY COMMUNICATED WITH ONLY BY TELEPHONE OR LETTER. IT WAS GREAT
TO SEE WENDY'S JUGGLING ACT. IT MADE A PLEASANT INTERLUDE IN THE DAY'S
COMPUTER PROCEEDINGS.
    I'LL CONTACT YOU SEPARTELY REGARDING THE CONNECTION OF 2 DISC
DRIVES TO THE ORIC.
    YOU HAVE CERTAINLY BEEN BUSY ON THE HARDWARE FRONT. IT IS ALWAYS
INTERESTING TO READ ABOUT YOUR EXPLOITS.
    IF ANYONE OUT THERE HAS A START-UP DISK OR SPARE MANUAL FOR YOUR
MACINTOSH THEN PERHAPS THEY COULD GET IN TOUCH WITH YOU.
    ROBERT CRISP IS AT: 44 BENTLEY GROVE, MEANWOOD, LEEDS. LS6 4AT (TEL:
0113 2745294)
                                                       - DAVE
===
===========================

DEAR DAVE,
             MANY APOLOGIES FOR THE LACK OF COMMUNICATION OVER THE
LAST FEW MONTHS. I HAVE BEEN EXTREMELY BUSY AT WORK AND AT HOME. I
HAVE HAD TO MAKE SEVERAL BUSINESS TRIPS. I HAVEN'T DONE ANY ORIC
PROGRAMMING SINCE JUNE,BUT HOPE TO GET BACK TO IT NOW. I WILL WRITE
AGAIN WITH AN UPDATE ON MY SOFTWARE/HARDWARE EFFORTS LATER.
                                   -   RAY   McLAUGHLIN
(SHEFFIELD)

DEAR RAY,
             NICE TO HEAR FROM YOU AGAIN. YOU WERE SORELY MISSED AT THE
MEET. WE ALL LOOK FORWARD TO HEARING FROM YOU SOON REGARDING YOUR
EFFORTS.
===
==================

DEAR DAVE,
             I ENJOYED THE MEETING,IT SEEMED TO GO VERY WELL INDEED.
THE ROUGH SKETCH IN BASIC OF THE LOTTERY PROGRAM THAT I HAD AT THE
MEETING,HAS NOW BEEN TRANSLATED INTO A MUCH NEATER MACHINE CODE
VERSION,WHICH DOES THE SAME THING,BUT FORTY TIMES AS FAST. I STILL
HAVE QUITE A LONG WAY TO GO,TO FINISH ITKOR AT LEAST MAKE IT SOMETHING
USEFUL. DAVID WILKIN TOOK A COUPLE OF NUMBERS FROM THE BASIC
VERSION,FOR HIS TICKET. THERE'S A OPTIMIST FOR YOU!
                                   -   PETER   BRAGG
(SUTTON)

DEAR PETER,
             I LOOK FORWARD TO SEEING THE COMPLETED LOTTERY PROGRAM.
I DON'T KNOW HOW WILKIE GOT ON WITH THE NUMBERS HE TOOK AT THE MEET -
I'VE ONLY SPOKEN TO HIM FOR A SHORT TIME SINCE HIS RETURN FROM
FRANCE,AUSTRIA AND ITALY!
    I HOPE THAT YOU HAD A PLEASANT BREAK IN THE ISLE OF MAN WITH YOUR
WINNINGS!
                                                       - DAVE
===
=========

MORE LETTERS
———— ———————

DEAR DAVE,
          ENCLOSED IS THE CURRENT VERSION OF 'CYBOJUDGE'. I'M
GETTING FED UP WITH IT AND AM CONSIDERING RELEASING IT AS IT STANDS
AND ALLOWING OTHERS TO ADD ANY FURTHER SCREENS IF THEY WISH . WHAT DO
YOU THINK???

    AM BLUSY FIDDLING AROUND WITH THE 'ST' AT THE MOMENT,PLAYING WITH
MUSIC PACKAGES AND DUFF GAMES. TRYING TO GET RID OF VIRUSES AND
GENERALLY SWEARING A LOT. MY 'ST' DISCS BOOT UP WITH THE MESSAGE: 'USE
AN ORIC INSTEAD!!'
                        STEVE 'THE MUSO' MARSHALL (EDINBURGH)

    DEAR STEVE,
          AS SOON AS I GET AN HOUR I'LL HAVE A PROPER LOOK AT
YOUR 'CYBOJUDGE'. IT IS CERTAINLY AN INTERESTING IDEA THAT OTHERS ADD
TO THE GAME. FOR THOSE NEW TO PROGRAMMING IT WOULD GOOD EXPERIENCE FOR
THEM TO ADD TO PROGRAM. FOR EXPERIENCED PROGRAMMERS IT WOULD BE A WAY
OF IMPLEMENTING THEIR OWN IDEAS ETC. PERHAPS WE COULD HAVE A
COMPETITION TO SEE WHO COULD ADD TO IT THE MOST. IF THIS IS THE WAY
THAT I DECIDE TO GO, THEN I WOULD PUT IT OUT ON THE NEXT OUMDISC, AND
PAY YOU A FEE FOR YOUR WORK.
                                        — DAVE
==
============

    DEAR DAVE,
          PLEASE SEND ME MORE DETAILS OF YOUR USER GROUP, AND A
SAMPLE MAGAZINE. I HAVE BEEN AN ARDENT ATMOS ENTHUSIAST FOR SOME TIME.
I WOULD BE ESPECIALLY INTERESTED TO HEAR FROM ANY ORIC USER.
          KEVIN GURD, 27 THE MILLPOND, HOLBURY, SOUTHAMPTON, HANTS.
SO45 2QN.

    DEAR KEVIN,
          HOPE YOU FOUND THE BACK ISSUE AND THIS ONE OF INTEREST.
 PERHAPS YOU COULD DROP ME A LINE STATING WHICH PARTICULAR ASPECTS OF
THE ORIC INTEREST, AND THEN I AM SURE THAT SOMEONE WITH SIMILAR
INTERESTS WILL CONTACT YOU. WE DO NOT HAVE ANY OTHER READERS IN THE
SOUTHAMPTON AREA, TWO FROM PORTSMOUTH AND ALA BOWERS FROM THE ISLE OF
WIGHT WHO WORKS IN POOLE.
                                        — DAVE
==
================

    DEAR DAVE,
          I SAW YOUR SMALL AD. IN 'MICRO MART', AND AM INTERESTED
IN HEARING ABOUT YOUR ACTIVITIES. I RECENTLY BOUGHT AN ORIC ATMOS AND
COLOUR PRINTER FROM A CAR BOOT SALE VERY CHEAPLY,AND SURPRISINGLY THEY
BOTH WORK. I HAD AN ATMOS SHORTLY AFTER THEY CAME OUT
INITIALLY,UNFORTUNTALEY IT DEVELOPED A FAULT AND HAD TO BE SCRAPPED.
    THE ORIC IS NOT MY PRINCIPAL INTEREST AS I HAVE RECENTLY ACQUIRED A
PC SYSTEM,HOWEVER I AM INTERESTED IN HEARING FROM OTHER
OWNERS,PRINCIPALLY IN RESPECT OF SOFTWARE AND SPARES ETC. SPECIFICALLY
I HAVE A PROBLEM IN THAT WHILST THE PRINTER WORKS, THE INK 'PENS'
APPEAR TO HAVE DRIED UP COMPLETELY AND BARELY PRODUCE ANY MARK AT ALL.
ARE YOU AWARE OF ANY SOURCE FOR REPLACEMENTS? ALSO THERE WAS NO

LETTERS (Contd.)

MANUAL FOR THE PRINTER WHICH IS THE ORIC MCP40. IF ANY OF YOUR MEMBERS
ARE IN POSSESSION OF ONE THEN I WOULD GLADLY PAY FOR COPYING THE TEXT.
          - K.KENNEDY, 12 SALKELD ROAD, LOW FELL, GATESHEAD, TYNE &
WEAR. NE9 5UD

   DEAR MR.KENNEDY,
                    I WILL BE SENDING YOU A LIST OF WHAT I HAVE LEFT
IN THE WAY OF SOFTWARE AND SPARES ETC. IF ANY OTHER READERS HAVE ITEMS
TO DISPOSE OF THEN PERHAPS THEY COULD DROP YOU A LINE. WE HAVE A FEW
READERS IN THE NORTH EAST, AND PERHAPS THEY COULD GET IN TOUCH WITH
YOU. I'M SURE THEY REMEMBER WHAT IT WAS LIKE TO FEEL THAT THEY WERE
THE ONLY ORIC OWNER LEFT IN BRITAIN!
   I HAVE A FEW SETS OF MCP40 PENS LEFT IN STOCK, AND BRIAN KIDD TELLS
ME THAT HE HAS FOUND A SUPPLIER IN NEWPORT WITH PENS AND PAPER. BRIAN
WILL COME UP WITH A PRICE TO INCLUDE POSTAGE. I'M SURE THIS WILL
INTEREST JACK LUPTON,WHO IS SHORT OF PENS AND PAPER.
   I WILL SEE IF I HAVE GOT A SPARE MCP40 MANUAL. IF NOT THEN I WILL
PHOTOCOPY MINE FOR YOU.
   I SEE THAT YOU ARE A PC OWNER. IF IT IS AT LEAST A '386',THEN I AM
SURE THAT THE ORIC EMULATOR WILL BE OF INTEREST TO YOU. IT IS
AVAILABLE FROM JON HAWORTH FOR THE PRINCELY SUM OF 1.50.
                                        - DAVE
===
======

   DEAR DAVE,
                MANY THANKS FOR BOTH YOUR LETTER AND THE SUBSCRIPTION TO
O.U.M. THIS MAKES ME VERY PLEASED AND PROUD. IT WAS A DELIGHT TO READ
THE JUNE AND JULY ISSUES,AND SEE HOW MUCH DEVOTION YOU PUT IN THIS
PUBLICATION.

   DEAR FABRICE,
                 GLAD YOU ENJOYED THE MAGAZINES. IT REALLY IS A TEAM
EFFORT HERE AT O.U.M. AS WELL AS OUR RESIDENT WRITERS, WE HAVE MANY
OTHERS DOING THEIR LITTLE BIT. FOR EXAMPLE: YOUR HANDWRITTEN LETTER
WAS TURNED INTO AN ARTICLE BY MY SON MATTHEW. HE USED THE AMSTRAD
NOTEPAD (NC100).
   THE ARTICLE STARTS ON PAGE 19 — AND MANY THANKS FOR IT.

===
=======

BITS 'N' BOBS

ON THE MOVE
── ─── ────

A FEW READERS HAVE RECENTLY MOVED. HERE ARE THEIR NEW ADDRESSES.

HANS KRAUS, DORMANNGASSE 14, A-1220 WIEN, AUSTRIA

ADRIAN MATTHEWS, 55 WIMBLEDON MALL, 3 DERBY ROAD, BOURNEMOUTH. BH1 3PS

ANDRE WIDHANI, KENTZLERDAMM 8, 20537 HAMBURG, GERMANY.

MARK OXLEY, COACH HOUSE FLAT, LANDAVIDDY LANE, POLPERRO, CORNWALL. PL13 2RS.

PETER THORNBURN, 21 CHURCH WALK, BRANT BROUGHTON, LINCOLN. LN5 0SN (TEL: 01400 272549).

JOHN FOGGIN, 29 BOLSOVER STREET, ASHINGTON, NORTHUMBERLAND. NE63 0HA

ARNT ERIK ISAKSEN IS CURRENTLY TAKING A BUSINESS STUDIES COURSE IN BRITAIN. HIS TERM-TIME ADDRESS IS: 18 AVIARY MOUNT, ARMLEY, LEEDS. LS12 2NX.

AS SOON AS TIME PERMITS I WILL SEND OUT AN UPDATED CONTACT LIST, AS THERE HAVE BEEN NUMEROUS AMENDMENTS OVER THE PAST YEAR.
==
===============

NEW READERS
─── ───────

THANKS TO AN ADVERT THAT BRIAN KIDD MANAGED TO GET IN 'MICRO MART', I HAVE RECIEVED LETTERS FROM 6 NEW ORIC CONTACTS. I HOPE THEY ENJOY THIS ISSUE. A HUGE ORICIAN WELCOME TO: CHARLES SHERWOOD (ADDLESTONE), THE COMIC SHACK (LEYTONSTONE), KEVIN GURD (SOUTHAMPTON), K. KENNEDY (GATESHEAD), TIMOTHY MILLER (SHEFFIELD), AND C. PHILLIPS (SCARBOROUGH).

THANKS TO OUR ADVERT ON THE INTERNET WE WELCOME DAVID HARRISON (BURGESS HILL) NAD ALL THE WAY FROM MADRID IN SPAIN WE SAY HELLO TO JOSE ANTONIO OROSTIVAR.
==
===============

BACK IN THE FOLD
──── ── ─── ────

I RECENTLY DID A MAILSHOT TO EX-READERS WITH REGARD TO THE ORIC EMULATOR. CONSEQUENTLY WELCOME BACK TO RICHARD FARRELL OF DARLINGTON,WHO IS LOOKING TO GET BACK ON THE ORIC. ALSO IN TOUCH HAS BEEN EX-O.U.M. EDITOR AND BOURNEVILLE RESIDENT - ROBERT COOK. ROBERT PLANS TO PAY ME A VISIT SOON. I'M SURE WE WILL HAVE PLENTY TO CHAT ABOUT.
==
=================

MORE BITS AND BOBS

THE DECEMBER ISSUE OF ORIC USER MONTHLY WILL BE A SPECIAL ONE,AS IT
WILL BE OUR 100th ISSUE. WHAT A LANDMARK! I DON'T THINK ROBERT COOK OR
I EVER ENVISAGED THAT O.U.M. WOULD STILL BE PUBLISHING OVER 8 YEARS
AFTER IT'S INCEPTION.
    PLANS ARE AFOOT TO MAKE THE DECEMBER ISSUE A VERY SPECIAL ONE. WE
WANT TO MAKE IT A BIGGIE. WE WOULD LIKE AS MANY ARTICLES AS POSSIBLE
FROM ALL OF YOU. IF YOU HAVE NEVER WRITTEN AN ARTICLE BEFORE,THEN THIS
IS THE TIME TO START. GET WRITING AND GET THOSE ARTICLES IN.
===
=======

NOVEMBER O.U.M.

 ARTICLES FOR INCLUSION IN THE NOVEMBER ISSUE SHOULD REACH ME BY
OCTOBER 20th AT THE LATEST PLEASE.
===
===========

BULL ELECTRICAL

    I RECENTLY RECIEVED A MINI-CATALOGUE FROM BULL ELECTRICAL. ITEMS OF
INTEREST ARE:
    SPEECHPAK VOICE SYNTHESIS PLAYBACK UNIT WITH WORDS OM EPROM -
12.99
    SPEAKER MOUNTING BRACKETS - 3.99 A PAIR
    CCTV MODULES - WIRE STRAIGHT INTO A SCART SOCKET AND VIEW DIRECTLY
ON YOUR T.V. - 79.95
    CCTV - VARIOUS OTHER OPTIONS
    28" COLOUR VGA SCREENS - UNCASED,BUT WITH PSU AND CABLE - 199
pounds.
    1.44M FLOPPY DISC DRIVES OR 1.2M DRIVES (THESES ARE CUSTOMER
RETURNS) - 4.99

    BULL ELECTRICAL ARE AT: 250 PORTLAND RD, HOVE,SUSSEX. BN3 5QT
    TEL: 01273 203500
===
===========

RAFFLE TICKET

    DON'T FORGET TO SAVE THE RAFFLE TICKET THAT IS ATTACHED TO THIS
ISSUE OF O.U.M. A DRAW WILL TAKE PLACE BEFORE XMAS FOR PRIZES DONATED
BY BRIAN KIDD.

OUMDISC NO.7

    HOLIDAYS AND WORKLOAD HAVE MEANT THAT NO FURTHER WORK HAS BEEN DONE
ON THE NEXT OUMDISC FOR SOME TIME. I AM HOPING TO GET BACK ON IT IN A
COUPLE OF WEEKS - I'LL TRY TO RELEASE IT IN NOVEMBER.

THE GRAND RAFFLE

AND WHAT A RAFFLE - 27 PRIZES - 147 POUNDS WORTH OF TICKETS SOLD -
THANKS TO KIMBO FOR THE ARM TWISTING, TO THOSE WHO DONATED PRIZES, AND
TO THOSE WHO BOUGHT TICKETS.

PRIZE	DONATED BY	TKT	WINNER
TRACKBALL	MATTHEW DICK	Y60	WENDY CRISP
DISK CASES	FRANK BOLTON	B23	JIM GROOM
YEARS SUBS TO OUM	OUM	B8	DAVID WILKIN
QUICKSHOT JOYBALL	ALAN BOWERS	Y2	TOM OSWALD
ORIC ATMOS	ROB KIMBERLEY	B24	JIM GROOM
BOTTLE RED WINE	ROB K - KIMBO	Y77	BOB TERRY
3" DRIVE	KIMBO	Y52	GARRY EGERTON
PC-XT (MINUS MONITOR)	KIMBO	Y82	PAUL SCHOFIELD
CASIO SA-8	CHRIS HEARN	Y48	KIMBO
BOTTLE WHITE WINE	CHRIS HEARN	B12	DAVID GOODRUM
MICROVITEC GRN MONITOR	KIMBO	Y98	DAVE DICK
4" MONITOR	ARTHUR CRAWFORD	B16	TREVOR SHAW
SWITCHED MODE PSU	ARTHUR CRAWFORD	Y5	TOM OSWALD
BOX LISTING PAPER	ROBERT CRISP	**	KIMBO
PSION ORGANISER	ROBERT CRISP	Y86	COLIN COOK
MODEM	ROBERT CRISP	Y19	BAM
MODEM	ROBERT CRISP	B6	DAVID WILKIN
MODEM	ROBERT CRISP	B35	PETER THORNBURN
1.2M, 5.25" DRIVE	JON HAWORTH	B21	JIM GROOM
SPECTRUM & PRINTER	JOHN HUGHES	Y20	ALLAN MOORE
SEDORIC MANUAL	JON HAWORTH	Y4	JOHN HURLEY
14" ANTI GLARE FILTER	COLIN COOK	Y69	ARTHUR CRAWFORD
5.25" CLEANING KIT	COLIN COOK	Y35	ALAN BOWERS
3.5" DRIVE (EX-AMIGA)	KIMBO	Y12	CHRIS EVANS
5.25" DRIVE (40/80T)	KIMBO	Y1	TOM OSWALD
3.5" DRIVE	JOHN HUGHES	B31	PETE WEISNER
BOX OF ORIC BOOKS/MAGS	DAVID WILKIN	Y39	STEVE MARSHALL
COPY HOLDER	DAVID GOODRUM	Y18	ALLAN MOORE

** DENOTES BID OF 3 POUNDS BY KIMBO TOOK THE PRIZE.
Y = YELLOW AND B= BLUE TICKETS.

YOU SHOULD ALL OF RECIEVED YOUR PRIZES BY NOW. IF NOT THEN PLEASE
CONTACT OUM.

AS USUAL - MANY PEOPLE DECLINED THEIR PRIZES WITH SHOUTS OF "PUT IT
BACK IN"
AT ONE POINT I THOUGHT THAT WE MIGHT RUN OUT OF TICKETS TO DRAW.
I THINK THE RAFFLE TOOK UP AS MUCH TIME AS THE EMULATOR DEMO -
HOURS!

MANY THANKS TO ONE AND ALL.

SABU HITS WALTHAMSTOW

Walthamstow Assembly Hall was the stage for a wrestling show on the 7th of July 1995. Only 200 people showed up for a memorable evening of wrestling.

The show that was topped with a main event between Sabu and the Dirtbike Kid, kicked off with a 8 man knockout tournament. The Witchdoctor pinned Big T in the first match of the evening by dropping the heavy Big T on his head. Ouch... Doug Williams, who is a promising British wrestler, won his match against Jackie Pallo Jr, who was probably in his prime 30 years ago. However, the heat in the hall was turned up during the third match between Andre Baker (wrestling teacher) and Phil Powers (his 16-year-old student). The high-lights of this match was the brawling outside the ring and Baker's use of a fry-pan brought by one of the hardcore fans. The result was that both wrestlers were counted out of the ring and eliminated from the tournament. Judge Dredd (400 lbs) from the U.S.A. showed Tony McMillan no mercy in the last bout of the first round. Williams showed some of his hot moves, including two types of moonsaults, in his semi-final against the Witchdoctor. Even though Williams is a great wrestler, he was pinned by Judge Dredd in the final following a chokeslam.

Main Event : Sabu vs the Dirtbike Kid. Sabu's European debut was advertised in Britain's best wrestling magazine, Power Slam. Sabu from Bombay, India is one of the world's craziest wrestlers, and everybody looked forward to this match. No one was disappointed after the match as it turned out to be a 4**** classic with many of the hottest moves in professional wrestling. Moonsaults in and out of the ring and other moves and holds made an extatic atmosphere in the small hall. Most of the fans raised from their seats to get the best possible view of this match.

After about 15 minutes, Sabu was thrown out of the ring. All the fans started to roar "table...table...table...". Sabu is famous for his use of table, and the Kid was placed on the table outside the ring after Sabu "knocked him out" with the use of a wooden chair. Sabu jumped out of the ring and onto the helpless kid on the table. This was a solid table unlike the regular American "fake" table and the sound of the hit was remarkable. Following this move, the crowd started to roar "one more time...one more time...one more time...". Sabu went into to the ring and jumped onto the kid with one of the stiffest legdrops I have ever seen in wrestling. Still shocked after the stiff table legdrop, I was shocked another time when the Kid refused to go down for a pin after crawling back into the ring. However, Sabu used a chair and placed it at the back of his legs and did a legdrop with chair onto the Kid's face. The Dirtbike Kid went down for the pin after an impressive performance. For another applause from the crowd, Sabu raised the Kid's arm to show him the respect he deserved to get after taking a lot of punishment during the match. The consequences of this "table-breaking", chair-smashing, hardcore match were several broken ribs for both of the wrestlers (non-fake).

On the following day, Dean "the King" Ayass arranged a wrestling fan convention where wrestling fans met each other and discussed wrestling, talked with the wrestlers, listened to Q&A sessions with wrestling experts, bought videos, and much more during a long but very enjoyable day.

How can we relate wrestling to the Oric? Both wrestling and the Oric were at their peaks in the 80s, but are now minority interests. However, by being in touch with the core fans, the interests of both can be carried on. As long as the core remains intact there is life. Despite difficulties, wrestling and the Oric will survive into the 21st century. I hope all of us, the Oricians, know that OUM is the Oric's core and that the only way to keep this core intact is to pay our subscriptions to the OUM.

Arnt Erik Isaksen

AND MORE LETTERS

DEAR DAVE,
          I HAVE A PROBLEM FOR ANY ORIC USERS WHO,LIKE ME,HAVE THE
CITIZEN 120D PRINTER AND USE 'AUTHOR' AS A WORD PROCESSOR.
  HOW CAN I SET THE PRINTING STYLES WITHOUT FIRST USING THE RE-SET
BUTTON, OR PUTTING IT IN BEFORE LOADING. IF I AM DOING A LOT OF
PRINTING,IT MEANS I HAVE TO LEAVE THE PRINTER ON,OTHERWISE I HAVE TO
START AGAIN.
  I'VE STUDIED THE 'AUTHOR' MANUAL,BUT CANNOT WORK OUT HOW TO ACCESS
THE CONTROL CODES FOR THE PRINTER. I WOULD LIKE TO USE DIFFERENT PRINT
STYLES ON ONE DOCUMENT, BUT THIS IS NOT POSSIBLE AT THE MOMENT,WITHOUT
USING THE RE-SET BUTTON. THERE IS ALSO THE DANGER OF LOSING THE
PMROGRAM WITH THIS METHOD,IF THE WIRES ARE MOVED.
                              - KEN DUDDLE (3 HOBART ST,
LEICESTER. LE2 0JS....TEL:0116 251 8889)

DEAR KEN,
          NOT QUITE SURE WHAT THE PROBLEM IS. YOU SAY THAT IF YOU
ARE DOING A LOT OF PRINTING,THEN YOU HAVE TO LEAVE THE PRINTER ON.
SOUNDS LOGICAL TO ME - HOW ELSE WOULD YOU PRINT IF THE PRINTER WERE
NOT ON!
  UNFORTUNATELY, OR FORTUNATELY (DEPENDING ON WHICH WAY YOU LOOK AT
IT), I DON'T POSSESS A CITIZEN PRINTER, AND HAVEN'T THE FOGGIEST HOW
'AUTHOR' WORKS, BUT A KNOW A MAN WHO DOES! NO - NOT THE MAN FROM THE
'AA', BUT IN FACT THERE ARE A FEW OF YOU OUT THERE USING 'AUTHOR'. SO
PLEASE GUYS - PUT KEN OUT OF HIS MISERY AND SOLVE HIS PROBLEM - PUT
THE GUN AWAY!
  BY THE WAY - KEN IS ON CASSETTE.
                                                  - DAVE
===
=============

DEAR DAVE,
          I MUST TAKE THIS OPPORTUNITY TO CONGRATULATE YOU AND ALL
CONCERNED ON THE VERY SUCCESFUL 'MEET'. IT WAS VERY GOOD TO SEE IN THE
FLESH PEOPLE WHOSE NAMES I HAD ONLY READ, AND TO PICK UP SNIPETS OF
INFORMATION - THE INTERNET DEMO WAS OF PARTICULAR INTEREST.
      WITH THANKS - PAUL SCHOFIELD (BRADFORD)

DEAR PAUL,
          GLAD YOU GOT SOMETHING OUT OF THE 'MEET'. ALTHOUGH A FEW
OF US PUT A FAIR BIT OF WORK/TIME INTO ORGANISATION AND DEMOS, IT IS
PEOPLE LIKE YOURSELF WHO TRAVEL TO THE 'MEET', WHO MAKE IT ALL
WORTHWHILE. HOPE TO SEE YOU AGAIN NEXT YEAR.
                                                  - DAVE.
===
=====================
DEAR DAVE,
          THE FAULT I RECENTLY EXPERIENCED WITH 'WORD-SPEED' REALLY
IS INEXPLICABLE. I WAS SAVING A LETTER TO THE 3.5" DRIVE,USING THE "="
OPTION FOR THE SAME FILENAME. I OVERWROTE THE PREVIOUS FILE. THE
SAVINMG STOPPED EARLY WITH A "BREAK ON BYTE" MESSAGE (I'VE FORGOTTEN
WHICH ONE), AND THE COMPUTER JUMPED BACK INTO BASIC. I DID A 'DIR' TO
SEE WHETHER THE FILE WAS INTACT:IT WAS,BUT MUCH SHORTER THAN BEFORE.
OH DEAR! I DIDN'T SUSPECT THE DRIVE,AS I'D CLEANED IT RECENTLY,AND IN
ANY CASE 'WORD-SPEED' WOULD HAVE THROWN UP A MESSAGE ABOUT A HARDWARE
FAULT, I ASSUME, AND NOT CRASHED.

LETTERS (CONTD.)

TWO AND A HALF HOURS OF TYPING WAS MY PROBLEM,SO THAT'S WHEN I
PHONED YOU. I DECIDED TO TRY AND SAVE THE WHOLE OF RAM TO A DISK,
ASSUMING 'SAVE' WAS STILL RESIDENT, ALTHOUGH 'WORD-SPEED' USES ONE OF
DR.RAY'S OWN ROUTINES. (I NEVER GOT ROUND TO IT). IF THAT HADN'T
WORKED, I WAS GOING TO USE 'CSAVE' TO DO THE SAME ONTO CASSETTE. (I
DIDN'T HAVE TO). THERE WAS NO HARM CLEANING THE DRIVE HEADS ONCE
AGAIN BEFORE THE ATTEMPT, SO I PUT A DISCLEANER IN AND DID A 'DIR!'. A
FUNNY THING HAPPENED: I GOT A "DISK IS WRITE PROTECTED. PRESS ANY
KEY." MESSAGE. EH? FROM DIR? I CAN'T REMEMBER THE EXACT STEPS
NEXT,BUT ON REPACING THE DISCLEANER WITH THE ORIGINAL DISK, I SOMEHOW
FOUND THE COMPUTER BACK IN 'WORD-SPEED', WITH THE WHOLE TEXT INTACT!
THAT IS SIMPLY NOT SUPPOSED TO HAPPEN. WHEN A M/C PROGRAM CRASHES,IT
IS SUPPOSED TO STAY CRASHED,UNLESS DIRECT COMMANDS LIKE 'CALL' ARE
ISSUED.
SO I DIDN'T NEED THOSE START ADDRESSES AFTER ALL,BUT THANKS FOR YOUR
HELP ANYWAY,DAVE. OBVIOUSLY THE IMPOSSIBLE CAN HAPPEN, BUT MIRACLES
TAKE A LITTLE LONGER!
                    - COLIN COOK (PITSEA)

DEAR COLIN,
            I'M SO PLEASED TO HEAR THAT ALL THAT TYPING WAS NOT
LOST.
PERHAPS DR.RAY CAN THROW SOME LIGHT ON THE REASON FOR SUCH EVENTS,
BUT I BELIEVE IT IS JUST A GENERAL ORIC FREAK.
I KNOW THAT WHEN I'VE SOMETIMES BEEN USING 'EASYTEXT', THAT THE
COMPUTER HAS HUNG UP COMPLETELY,AND TO MY AMAZEMENT I'VE DONE A HARD
RE-SET (TURNED EVERYTHING OFF AND THEN BACK ON), RE-LOADED 'EASYTEXT',
AND LO & BEHOLD MY TEXT WAS STILL INTACT. I TEND TO THINK IT WAS LEFT
BUFFERED IN THE INTERFACE.
IT COULD BE THAT THE UPDATE OF 'WORD-SPEED' THAT I'VE SENT YOU STOPS
THIS OCCURING AGAIN.
                    - DAVE.
==
=========================

DEAR DAVE,
            'EUPHORIC' IS AMAZING! I HAVE INSTALLED IT ON SEVERAL
MACHINES IN THE OFFICE, FROM A 386dx25 (WHICH JUST ABOUT RUNS AT 60%
OF FULL SPEED) TO A 486dx2-66 (WHICH WILL GO TO AN AMAZING 500%
WITHOUT ADVERSELY AFFECTING THE DISPLAY!). OF COURSE,THIS IS FAR TOO
FAST FOR MOST GAMES,BUT I'M THINKING OF USING IT FOR COMPILATION AND
I'M SURE THERE ARE OTHER PROGRAMS THAT WOULD BENEFIT FROM THE
INCREASED SPEED.
JIM GROOM AND I BOTH HAD PROBLEMS WITH 'WRITEDSK', AND I EVENTUALLY
WORKED OUT THAT IT WAS WRITING THE FIRST TRACK OF THE VIRTUAL DISK
FILE ONTO EVERY TRACK OF THE PHYSICAL SEDORIC DISK IN THE DRIVE.
IT SEEMS THAT JON HAWORTH HAS BEEN DISTRIBUTING A DODGY VERSION OF
THE PROGRAM,AND SINCE HE WAS ON HOLIDAY I DECIDED TO TRY TO GET HOLD
OF A NEW COPY MYSELF. SO,ON THURSDAY LAST WEEK I BORROWED A
COLLEAGUE'S PC AND THEIR COMPUSERVE ACCOUNT TO SEE IF I COULD FIND THE
'EUPHORIC' PAGE ON THE INTERNET. IT WAS MUCH EASIER THAN I
EXPECTED,AND I NOW HAVE A COPY OF 'WRITEDSK.EXE' THAT WORKS,AND THE
LATEST VERSION OF 'EUPHORIC' (0.76), WHICH ALSO EMULATES THE
TELESTRAT!

LETTERS (Contd.)

   PERHAPS YOU COULD PASS ON A WORD OF ENCOURAGEMENT TO STEVE MARSHALL
FOR ME. I DO READ AND GREATLY ENJOY HIS '8-BIT A to Z' ARTICLES, AND
I HOPE HE WILL CONTINUE AND SEE IT THROUGH TO THE END. IT'S ONE OF THE
BEST BITS IN THE MAGAZINE AT THE MOMENT.
   HERE'S A SUGGESTION FOR AN IMPROVEMENT TO THE 'BINGO' PROGRAM ON THE
LAST OUMDISK: DELETE LINES 100-1120 AND REPLACE WITH -
   1100 B(Z)=B(F)
THIS REDUCES THE TIME TAKEN BY THE INITIAL RANDOMISATION FROM ABOUT
30 SECONDSW TO LESS THAN 4 SECONDS.
                - MATTHEW COATES (SAWTRY)

   DEAR MATTHEW,
                THANKS FOR   THE   INTERESTING LETTER. I'M SURE   THAT
STEVE,JON AND BRIAN (BINGO) WILL ALL TAKE NOTE.
                                              - DAVE
==
===============

   DEAR DAVE,
                IT'S WITH REGRET THAT I INFORM YOU   THAT I WON'T BE
RENEWING MY O.U.M SUBSCRIPTION. RECENT CHANGES IN CIRCUMSTANCES HAVE
DICTATED A DRASTIC REDUCTION IN COMPUTER USE AND I AM PRESENTLY IN THE
PROCESS OF DISPOSING OF MUCH OF THE HARDWARE ACCUMULATED OVER THE
YEARS. I WILL BE HANGING ONTO MY ATMOS THOUGH AS IT HAS SERVED ME WELL
OVER THE PAST 4 YEARS AND ALSO BECAUSE IT HAS THE BEST 8-BIT DOS I
HAVE YET COME ACCROSS,BAR NONE. BY WAY OF A 'SWAN-SONG' OF SORTS, I AM
INCLUDING AN UPDATE TO THE 'SAMPLER' SOFTWARE I WROTE,WHICH I HOPE MAY
BE OF INTEREST. FEEL FREE TO EDIT/DISTRIBUTE THE DISK CONTENTS AS YOU
SEE FIT.
   ALSO ENCLOSED IS A 3" DISK AND A CHEQUE TO COVER THE COST OF
'MAGNETIX' - MY CURIOSITY HAS GOTTEN THE BETTER OF ME!
   BY THE WAY,DO YOU KNOW WHETHER OR NOT JONATHAN BRISTOW GOT THE
SAMPLER HARDWARE I BUILT FOR HIM? A LACK OF ANY RESPONSE LEADS ME TO
CONCLUDE THAT EITHER HE NEVER GOT IT OR WAS LESS THAN HAPPY WITH THE
RESULT. OR MAYBE HE'S NOT MUCH OF A LETTER WRITER... OH WELL.
   LASTLY, I HAVE A NEW 'INSECT INSANITY' HI-SCORE FOR ALL ORICIANS TO
ASPIRE TO - 149250 - WITHOUT HAVING TO RESORT TO CHEATS OF ANY KIND -
HONEST!!
   TO CONCLUDE, I HOPE THE MAGAZINE CONTINUES TO PROSPER. YOUR HEYP
OVER THE YEARS HAS BEEN GREATLY APPRECIATED AND WHO KNOWS, I MAY BE
LOOKING TO RENEW MY MEMBERSHIP AT A LATER DATE.

   P.S.   WOULD YOU THANK PETER BRAGG THROUGH THE MAG. ON MY BEHALF FOR
SORTING OUT MY BBC DISK PROBLEMS.
                                - DENIS BONFIELD (LONDON)

   DEAR DENIS,
                IT ALWAYS SADDENS ME TO LOSE A READER,ESPECIALLY ONE
LIKE YOURSELF WHO HAS SENT IN SO MANY INTERESTING PROGRAMS FOR US ALL
TO USE. FROM YOUR 'MORSE TUTOR' (ON OUMDISC1) TO YOUR 'SAMPLER' (ON
LATEST OUMDISK), THE ORIC FRATERNITY HAVE MUCH TO THANK YOU FOR.
   I DO HOPE THAT YOU FIND YOUR WAY CLEAR TO RENEW IN THE FUTURE - YOU
WON'T BE THE FIRST.
   THANKS FOR THE 'SAMPLER' UPDATE,WHICH WILL GO OUT ON THE NEXT
OUMDISC.

LETTERS (Contd.)

I HOPE YOU WILL SET US A GOOD SCORE TO BEAT ON 'MAGNETIX' - IT REALLY IS A HELL OF A GAME.
JONATHAN BRISTOW DID INDEED RECIEVE THE SAMPLER HARDWARE. HE BROUGHT IT TO THE MEET. HE ISN'T MUCH OF A LETTER WRITER - BUT THAT'S NO EXCUSE! I'VE ASKED HIM TO DROP YOU A LINE.

                                                    - DAVE
==
====================

DEAR DAVE,
            AS YOU KNOW, JONATHAN BRISTOW SPENT A COUPLE OF DAYS IN LINCOLN WITH ME AFTER THE 'ORIC MEET'. SO FOR US, THE '95 ORIC MEET LASTED UNTIL TUESDAY. WHEN WE EVENTUALLY GOT TO LINCOLN (WE BROKE DHWN ON THE A1), I SHOWED J.B. THE DRAGON 64 (DISK P.S.U ALLOWING) AND THE TI 99/4A - HE SEEMED FAIRLY IMPRESSED BY THE DRAGON'S PROCESSOR,PERHAPS I COULD BRING IT TO NEXT YEARS MEET AS PART OF ALTERNATIVE MICROS?
THEN CAME THE ORIC AND IN BETWEEN DRINKING VAST QUANTITIES OF BEER,THERE CAME QUITE A LOT OF GAMES PLAYING, A REFRESHER COURSE ON 'SONIX' FOR MY BENEFIT, AND A FEW ROUNDS ON 'MAGNETIX' - THE ULTIMATE GAME FOR THE ORIC? RESERVE ME A COPY PLEASE.

WHAT DID HAPPEN TO 'WAR OF THE WORLDS' (CRL SOFTWARE)? - J.B FOUND A 2 PAGE ADVERT IN 'YOUR COMPUTER' (JULY'84),AND HAD THOUGHTS ABOUT WRITING HIS OWN VERSION (REMEMBER J.B?) THE ADVERT DID SAY IT WAS AVAILABLE FOR THE 48K SPECTRUM,AND WOULD BE CREATED FOR CBM 64,ELECTRON,ORIC etc. SO PERHAPS IT WAS NEVER WRITTEN FOR THE ORIC?

ON THE ALTERNATIVE MICROS SCENE - HAS ANYONE OUT THERE GOT DETAILS OF THE POWER SUPPLY CONNECTIONS FOR A 'SORD M5' AND 'CAMPUTERS 96K LYNX'?

ANYWAY,ALL FOR NOW,AND THANKS FOR ANOTHER BRILLIANT ORIC MEET.
                        - PETER THORNBURN (LINCOLN)

DEAR PETER,
            IT'S GREAT TO SEE THAT ORICIANS GET TOGETHER,EVEN AFTER THE ORIC MEET! THAT'S WHAT IT'S ALL ABOUT. I MIGHT OF GUESSED THAT THE BEER FLOWED!
PERHAPS SOMEONE OUT THERE CAN HELP WITH THE POWER SUPPLY DETAILS. MEANWHILE I'LL CHECK WITH A COUPLE OF CONTACTS THAT I HAVE, WHO ARE INTO THE 'OLDIES'!
                                                    - DAVE
==
========

FOOTNOTE FROM THE EDITOR
-------- ---- --- ------

I THINK THAT WILL DO FOR READERS LETTERS THIS TIME AROUND. THAT'S NOT TO SAY THAT I HAVEN'T RECIEVED MORE. I'M WORKING MY WAY THROUGH THEM,AND WILL EITHER REPLY PERSONALLY OR IN THE NEXT ISSUE OF O.U.M
THE WAY THINGS HAVE BEEN GOING RECENTLY; I COULD FILL UP A WHOLE ISSUE WITH YOUR LETTERS. - DAVE

MORE FROM ALAN BOSWORTH
---- ---- ---- --------

   FOR SALE - A 464 COMPUTER - NOMINAL CHARGE.

   HELP WANTED - ALAN IS HAVING A PROBLEM WITH SOME VIDEO GENIE DISCS.
HE NEEDS A COPY OF A DISC WITH SOME FILES ON IT,IN ORDER THAT HE MIGHT
ANALYSE IT.

   ALAN   BOSWORTH's   ADDRESS   IS: AROSFA,   WATTS   GREEN,
CHEARSLEY,AYLESBURY,BUCKS. HP18 0DD (TEL: 01844 208380).

   IF MY MEMORY SERVES ME RIGHT - I BELIEVE THAT ALISTAIR WAY USED TO
LIVE IN CHEARSLEY. AM I CORRECT,ALISTAIR.
===
=======

   THE ONLY WAY IS UP
   --- ---- --- -- --

   O.U.M READERSHIP FOR 1995 TO DATE IS AS FOLLOWS:
    JAN. - 80, FEB. - 80, MARCH - 80, APRIL/MAY - 81, JUNE - 83
    JULY - 83, AUG. - 86, SEPT./OCT. - 87
   AFTER A DROP AT THE END OF LAST YEAR, T IS NICE TO SEE AN UPWARD
MOVEMENT.
===
=========

   LATE NEWS ON MAGNETIX
   ---- ---- -- --------

   JUST AS I WAS ABOUT TO SEND OUT 'MAGNETIX', I SPOTTED A LITTLE
PROBLEM. BASICALLY THE PROBLEM WAS CAUSED BY THE FACT THAT EVEN IT
LOOKED AS THOUGH THE GAME PLAY WOULD DEFAULT TO KEYBOARD OPTION 'A',
IT DID IN FACT DEFAULT TO 'PASE' JOYSTICK. TO GET AROUND IT YOU HAD TO
CHANGE THE CONTROL OPTION FROM 'A' TO 'A'! THANKS TO A COUPLE OF
PHONE CALLS THE PROBLEM WAS SOLVED BY ADDING AN EXTRA LINE TO THE
PROGRAM. YOU CAN NOW GO STRAIGHT INTO PLAY ON KEYBOARD OPTION 'A'
WITHOUT HAVING TO GO THROUGH THE CONTROL SECTION.
   WHEN YOU FIRST PLAY THE GAME, JUST LET THE TITLES ROLL AWAY FOR
AWHILE, AS YOU WILL THEN BE TREATED TO THE HI-SCORE TABLE AND A RATHER
NICE PIECE OF MUSIC DONE VIA 'SONIX'.
   THE SOUND EFFECTS ON THE PROGRAM ARE DONE VIA A JONATHAN BRISTOW
PROGRAM ENTITLED 'SFXED'. WE HOPE TO MAKE THIS PROGRAM AVAILABLE AS AN
AID TO BUDDING GAMES PROGRAMMERS OUT THERE. OF COURSE, IF YOU'VE
COMPLETED 'MAGNETIX', THEN YOU'LL ALREADY KNOW THIS.

===
==============

   SAMPLER CIRCUIT
   ------- -------

   IF ANY READER IS INTERESTED IN DENIS BONFIELD'S SAMPLER CIRCUIT, THEN
HE HAS AGREED TO SEND ME THE P.C.B TEMPLATE. I WONDER HOW MANY OF YOU
HAVE THE EQUIPMENT TO PRODUCE IT.

AYLESBURY ORIC MEET '95
---------- ---- ---- ---

IT SEEMS JUST A DISTANT MEMORY NOW - THAT SCORCHING HOT SATURDAY IN JULY,WHICH HERALDED THE AYLESBURY ORIC MEET.

THE VENUE WAS A NEW ONE FOR THIS YEAR AND WAS WELL RECIEVED - PLENTY OF SPACE & GOOD BAR FACILITIES.

I HAD RETURNED HOME AT ABOUT 1 A.M FROM A DISCO ON THE SATURDAY MORNING EXPECTING TO SEE JEAN BOILEAU. NEAR THE PHONE WAS A MESSAGE THAT MATTHEW HAD TAKEN - "JEAN DELAYED BY FRENCH CUSTOMS. NEW E.T.A AROUND NOON". (FOR NEW READERS TO O.U.M - JEAN IS A FRENCH GUY,AND PRESIDENT OF CLUB EUROPE ORIC).

AT 7.A.M I WAS UP AND PREPARING TO MOVE MY COLLECTION OF ORIC GOODIES TO THE CLUB HOUSE.

THE CLUB WASN'T UNLOCKED AND HADN'T BEEN CLEANED FROM THE NIGHT BEFORE. PANIC OVER - THE KEYS ARRIVED AND I SET ABOUT WITH A BROOM.

PETER THORNBURN ARRIVED ALONG WITH JIM GROOM AND FIANCE BAM,WHO HAD STAYED LOCALLY IN LODGINGS THE NIGHT BEFORE. JON AND NICK HAWORTH SET UP STALL ON THE STAGE. PRIDE OF PLACE GOING TO THEIR '486',WHICH WOULD DEMO THE EMULATOR AND INTERNET.

THE HALL STARTED TO FILL. THEY CAME FROM ALL OVER. TREVOR SHAW AND SON CALLED IN FOR A FEW HOURS,BREAKING THEIR JOURNEY TO THEIR HOLIDAY RESORT. ALISTAIR WAY HAD TAKEN THE TRAIN FROM EDINBURGH. LOTS OF NEW FACES THIS YEAR,PLUS ALL THE REGULARS.

A PHOTO SHPULD APPEAR ELSEWHERE IN THE MAG. OF MOST OF THE ATTENDEES (I SAY MOST,BECAUSE SOME HAD POPPED INTO TOWN OR BECAME CAMERA SHY etc.).

THE ROLL CALL FOR THE DAY WAS AS FOLLOWS:

JOHN PEACH,CHRIS HEARN,COLIN COOK,PETER BRAGG,DAVID GOODRUM AND ANDREW,DAVE AND MATTHEW DICK,BOB TERRY,JON AND NICK HAWORTH,JEAN BOILEAU,JIM GROOM AND BAM,MATTHEW COATES,ARTHUR CRAWFORD,RON EVANS,JOHN HUGHES,PETER THOSNBURN,GARY EGERTON,ROB KIMBERLEY,JONATHAN BRISTOW,DAVID WILKIN,PAUL SCHOFIELD,TREVOR SHAW AND SON,ALISTAIR WAY,HENRY AND RENE MARKE.

DURING THE DAY WE SAW DEMOS ON THE EMULATOR,THE INTERNET,PETER BRAGG'S CAMERA AND MAGNETIX.

JOHN HUGHES SHOWEF US HIS SYSTEM THAT HE HAD PUT INTO NEWSAGENTS IN HIS HOME TOWN. THE CASED UNIT CONSISTED OF AN AMSTRAD MONITOR,DISC INTERFACE,3.5" DRIVE AND ATMOS. EVERYTHING CONCEALED,BUT THE SCREEN. NO NEED FOR THE ATMOS TO BE VISIBLE AS JOHN AND DR.RAY HAD COME UP WYTH A ROUTINE TO ALLOW THE PROGRAM TO SELF-RUN WHEN THE SYSTEM WAS TURNED ON. LOCAL COMPANIES HAD PAID TO ADVERTISE,AND THE NEWSAGENTS PAID A RENTAL FEE. IN RETURN THEY TOOK SOME OF THE ADVERTISERS FEES. IT HAD PROVED QUITE SUCCESSFUL. MEMBERSHIP AT THE LOCAL SPORTS CLUB HAD INCREASED DUE TO THE ADVERTS. UNFORTUNTAELY A CHANGE IN JOHN'S WORKING HABITS MEANT THAT HE HAD TO DROP THE JOB. OF COURSE,IF YOU FANCY TRYING IT FOR YOURSELF,THEN YOU COULD CONTACT JOHN WITH REGARD TO HIS SOFTWARE PACKAGE - MOST IMPRESSIVE.

JEAN BOILEAU ARRIVED TO GREAT CHEERS OF "TERRORIST!".

PEOPLE CHATTED AWAY,AND NEW FRIENDSHIPS CAME ABOUT.

THE ORDERS FOR LUNCH HAD BE PHONED THROUGH TO A LOCAL CHIPPY,AND ON IT'S ARRIVAL WE ALL SAT DOWN TO OUR FISH,PIES,CHICKEN,SAUSAGES etc.

AT THE END OF LUNCH WE PERSUADED WENDY CRISP ONTO THE GREEN OUTSIDE AND SHE GAVE US HER MOST ENJOYABLE JUGGLING ACT. NICE ONE WENDY!

BY NOW THE TEMPERATURE WAS WELL INTO THE EIGHTIES (SOD METRICATION), AND THE BEER FLOWED.

NEXT UP WAS THE GRAND RAFFLE - AS USUAL IT WAS A MOMENTOUS OCCASION - ALL THE USUAL WISECRACKS!

MEET (Contd.)

THE AFTERNOON SESSION SAW SOFTWARE,DRIVES,INTERFACES ETC. BEING BOUGHT UP.

JON HAWORTH DID CRACKING BUSINESS ON BACK ISSUES OF THE CEOMAG, AND DUPLICATED EMULATORS AND SEDORIC.

PETER THORNBURN'S PRINTER WAS THE SUBJECT OF MUCH TAMPERING.

ALL THE TIME,UNKNOWN TO US,BRIAN KIDD AND HIS YOUNG FAMILY WERE 2 MILES AWAY AT A FETE! MY WIFE HAD TURNED UP AT THE RAILWAY STATION TP MEET THE KIDD'S AFTER THEIR LONG TRAIN JOURNEY FROM NEWPORT IN WALES. THEIR HAD BEEN PROBLEMS ON THE TRACK,AND BRIAN CHANGED HIS PLANS.

BRIAN ACTUALLY FOUND HIS WAY TO MY HOUSE - JUST 200 METRES FROM THE MEET. NO ONE IN OUR ROAD OR AT THE LOCAL SHOPS KNEW WHERE THE CLUB HOUSE WAS. TWICE BRIAN MUST HAVE PASSED THE ROAD LEADIKNG TO THE CLUB HOUSE,AND MUST OF BEEN ONLY 80 METRES AWAY. MY HEART WENT OUT WHEN I HEARD,BUT I COULDN'T OF MADE THE DETAILS OF GETTING THERE ANY PLAINER. PERHAPS I SHOULD OF DONE THEM IN WELSH! ANYWAY, BRIAN ENDED UP AT A FETE BEING HELD AT ANOTHER CLUB HOUSE WITH A SIMILAR NAME.

AT ABOUT 5.30 WE SET ABOUT STARTING UP THE BARBECUE AT THE BACK OF THE CLUB HOUSE. WE TUCKED INTO HOT DOGS AND BEEFBURGERS,AND OF COURSE - MORE ALE.

FOR THE EVENING I HAD BEEN BOOKED BY A LOCAL FOOTBALL CLUB TO DO A DISCO - LUCKILY IT WAS AT THE SAME VENUE.

AT 8.P.M I STARTED THE MUSIC WHILST THE REMNANTS OF THE ORICIANS KEPT DRINKING. THERE WAS JIM GROOM AND BAM,PETER THORNBURN,ALISTAIR WAY,MATTHEW COATES,JEAN BOILEAU, AND DAVID WILKIN.A

ALISTAIR GOT INVOLVED IN FEEDING THE HUNGRY FOOTBALLERS,MATTHEW MADE HIS WAY HOME, JEAN AND JON WENT BACK TO MY PLACE.

THE DISCO WENT ON UNTIL ABOUT MIDNIGHT AND I SET OFF FOR HOME - WHAT A LONG DAY THAT WAS.

JEAN,JON,ALISTAIR AND PETER STAYED OVER. NEXT MORNING WE CHATTED AND TRIED TO SORT OUT THE HEAPS OF ORIC GEAR I HAD BROUGHT BACK. THE COLLECTION HAD GROWN,BECAUSE I WAS LEFT WITH A PILE OF RAFFLE PRIZES TO SEND ON.

JIM AND BAM TURNED UP FROM THEIR LODGINGS.

FIRST JEAN WAS DRIVEN TO THE RAIL STATION - THANKS SO MUCH TO JEAN FOR KEEPING THE FRENCH FLAG FLYING.

ALISTAIR WAS THEN TAKEN TO THE STATION - MARVELLOUS TO SEE YOU AGIAN ALI AND DON'T LEAVE IT SO LONG AGAIN.

PETER LOADED UP HIS CAR WITH ALLSORTS AND JONATHAN - THEY WERE LAST SEEN HEADING FOR LINCOLN TOGETHER - I HOPE HE'S IN THE R.A.C!

FINALLY WE DESPATCHE JIM AND BAM TO THE RAIL STATION FOR THEIR JOURNEY BACK TO BRUMMIELAND - A SMASHING COUPLE - WHEN'S THE WEDDING?

AND SO THAT WAS IT FOR ANOTHER YEAR! ALWAYS A PLEASURE TO SEE EVERYONE.

THANKS TO ONE AND ALL FOR COMING ALONG.

WE REALLY MUST DO IT AGAIN SOME TIME - BUT NOT UNTIL NEXT YEAR!

I EXPECT,LIKE ME,YOU MADE PLENTY OF PROMISES AT THE MEET. HAVE YOU KEPT THEM ALL?

I'M STILL STRUGGLING TO FULFILL ALL MINE - WHAT'S YOUR EXCUSE!!!

- DAVE DICK.

ORIC MEET GROUP PHOTO — JULY '95

===
==========

A NOTE FROM COLIN COOK

" HI, I'M COLIN. THAT'S ME ABOVE — SIXTH FROM THE LEFT,BETWEEN MATTHEW COATES (WHAT A PAIR OF LEGS!) AND WENDY CRISP (SEHE LOOKS AS THOUGH SHE HAS LOST A LEG!).

SOME TIME AGO IN OUM,SOMEONE ASKED ABOUT HOW TO ACHIEVE COLOURED GRAPHICS ON THE ORIC, AND I REALISED THERE IS QUITE A LOT ABOUT THE POSSIBILITIES FOR COLOUR THAT COULD BE DESCRIBED IN AN ARTICLE. ON THE FOLLOWING PAGES IN THE FIRST PART OF THAT ARTICLE.

REGARDING MY 'NOTICEABL' PROGRAM (PAGE 17 OF THIS ISSUE) — I NOW REALISE THAT IT SHOULD BE QUITE EASY TO CONVERT FOR THE ALTERNATE GRAPHICS SET. IF ANYONE ASKS, THEN I WILL DO SO. THE CHARACTERS,THOUGH,ARE DIFFICULT TO SEE PROPERLY IN THE HANDBOOK, SO ANY PROGRAM WHICH USES THEM TO CONSTRUCT IMAGES WOULD NEED SOME KIND OF MENU,AND THERE MAY BE BETTER PROGRAMS AROUND TAN MINE FOR CONSTRUCTING SUCH PICTURES". — COLIN

THE RAINBOW ORIC   — PART 1.

Some of you with colour monitors and an interest in programming for colourful displays, may feel held back by the apparent complexity of the Oric system for obtaining colour. Well, hopefully, some of the mystery will be dispelled by what is coming up in these pages, as we take a leisurely stroll through the graphics capabilities of the machine, at least as far as the Basic language will allow, although I cannot guarantee that at the end of it, you will be creating graphics of the Bristow ilk!

The Text Screen

Firstly, most programmers will have seen and learned to use the familiar PAPER and INK commands to enliven text, but how do they work? When the Oric is first switched on, there are only 38 columns of text space available, and yet the full screen width is 40. The two columns on the extreme left hand side are used to hold invisible 'characters' which control the colours of screen background (PAPER) and foreground (INK), and these columns are permanently present on the screen and the 'characters' they contain are written onto the first two text positions of every line as the screen is scrolled, during a program listing, for example. The default command, when the machine is first powered up, is PAPER 7, INK 0, which gives us a white screen with black letters. At least, this is what cassette users will see; disk users may get a different picture, but more about that later.

It is possible to overwrite the 'characters' present in the 1st two columns, by typing CTRL and the right square bracket together, then pressing RETURN. You will see the cursor returning one line down and two places to the left of its previous position. Anything now typed will be in white, and the entire line it is sitting on will become black. What is going on? To explain this, we must first look more closely at these 'invisible characters', to understand what they are and how the computer 'knows' they are there, and why they do not show on screen excepting for their effects on things visible on screen.

Your Oric screen is like a grid, 40 squares across by 28 squares down, and each square corresponds to one byte of memory in RAM (random access memory). This screen memory starts at the top left hand corner of the screen at memory location 48000 and ends at the bottom right hand corner at 49119. We can use the POKE command now in a little experiment to put values directly into any of these locations. Try POKE 48000,33 and press RETURN. You will see a ! appear in the top left hand corner of the screen. As this is in the Status Line, which is not scrolled with the rest of the screen, the ! will remain until you decide to change it, or the Oric's own operating system overwrites it with a message like "Searching..." when you load a tape. There is only one "visible" character lower than number 33, and that is the 'space', normally obtained by pressing the Space Bar, and it is only visible when it replaces another character. Try POKEing 48000 with 32 now, and the ! will disappear. But what would happen if we put a value between 0 and 31 into a screen memory box? This is where we have to be careful, because certain values have unwanted effects, but let's try a value of 17 in the same location. The status line turns red! This is because the value 17 is what is known as a "background attribute", and turns the paper colour to red to the right of where the attribute appears, but only on the line in which it appears. The attribute square itself is also coloured red. We can set the line to any background colour by selecting the appropriate number from the following list:

16	black
17	red
18	green
19	yellow
20	blue
21	magenta
22	cyan
23	white

If we now leave the status line alone, and go back to our text area of 27 rows, we can set the whole screen to a particular colour using the PAPER command. We can then check that the values in the first column are correct for attributes by PEEKing the appropriate location. As each location directly below the top left hand corner is greater by 40 than the one above, we can check each location by typing PRINT PEEK(48040+R*40) , where R is the row number starting with R=0 for the top row of the screen and ending with R=26 for the bottom row.

We can now have some fun with background attributes, and show that they can be placed anywhere on the text screen, by POKEing the appropriate value, 16-23, anywhere between the addresses of 48040 and 49119. The colour bar goes to the extreme right hand edge of the screen, except where it meets another colour on the same line. Of course, the bar is invisible if its colour is the same as the overall PAPER colour, but it can still get in the way of other bars and stop them from reaching the right hand edge. We can use this effect to create a pattern of all the colours in the status line again, by POKEing consecutive squares with the attribute sequence, ending with white, and then placing a black attribute at the end to stop the white from filling the rest of the line. Type in and RUN the following program:

```
10 FOR A=0 TO 7
20 POKE 48000+A,16+A
30 NEXT
40 POKE 48008,16:END
```

You may by now have noticed that the order of background attributes is the same as that of PAPER and INK colours, the only difference being that the background attributes are numerically greater by 16 than the colour numbers. Ink colours also require squares to hold values invisibly, and these are foreground attributes. They have the values 0 to 7 just like the INK colours, but they are placed automatically in the 2nd column from the left of the screen when the Oric is powered up. These squares have memory addresses of 48041+R*40, with R again being the row number from 0 to 26. Try setting this column to hold a value of three in every square by typing INK 3 <return>, and use the PRINT PEEK function to look at the values put there. Unless you have taken away the protection of these 1st two columns by typing CTRL-] and then typed over the squares, you should find threes, or whatever value of INK you chose to put in. I use a PAPER 0:INK 3 command on my disk system when it powers up, but I also use CTRL-], so that most of the time the screen is black with white text on it. If I am editing a program by using the EDIT command, however, a blank line is inserted above the program line being edited, and this still contains the attributes for INK and PAPER. To change the contents of the line, I use CTRL-A to copy part of it into memory, but on reaching the part I want to change, I use the up-arrow to put the cursor in that blank line above to insert the changes. Anything typed in the line comes out in yellow! This makes it easier to see my new corrections, and if I need more space, I can use the down-arrow to force a scroll and type in yellow anywhere in the new space EXCEPT in the first two columns.

Using POKE to change screen colours is laborious, though, and there are three other much easier ways of putting foreground and background attributes on the screen. The first and easiest way to achieve this is to use the PLOT command, as described in your handbook. The syntax is PLOT X,Y,N where X is the column number, that is, the vertical columns of squares across the screen, which go from 0 to 39. Y is the row number, and goes from 0 to 26. N is simply the value placed in the square, just the same as if we had poked it there, except that we do not have to know the absolute memory address of the square we want to affect; the Oric calculates that for us from the X and Y values.

Try PLOT 0,0,17 <return>, and the top line of the text screen (below the status line) will turn red. Now type PLOT 1,0,4 <return> and nothing may be apparent if the top line was blank. What do you think should have happened? Well, if you move the cursor up to the top of the screen, over the third square, and begin typing, you will find out if you are right. The text should come out blue!

— COLIN COOK

WANTED

JEAN BOILEAU
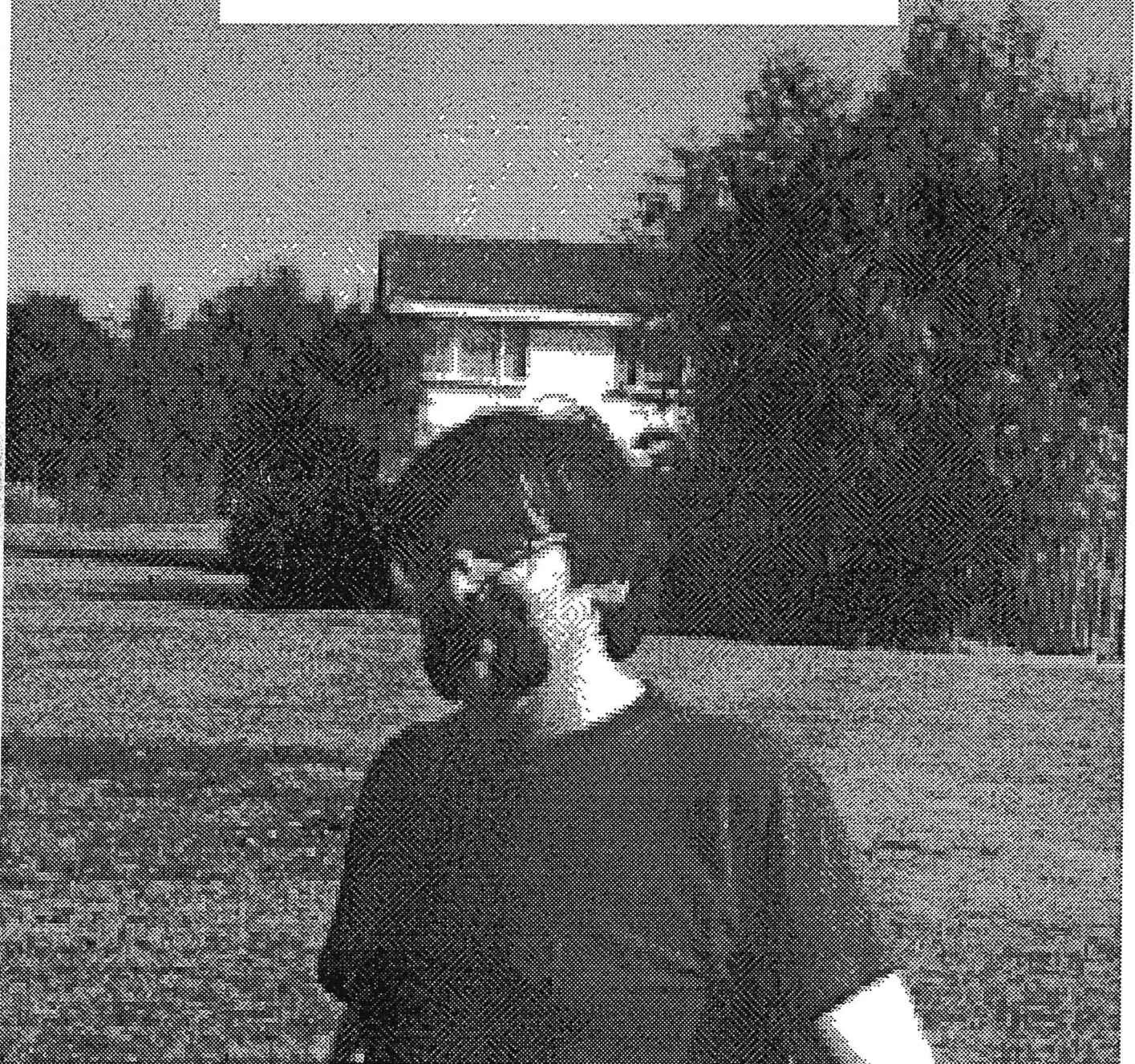
FOR TERRORISING SPECTRUM OWNERS