ØRIC

USER MONTHLY

with Oric Enthusiasts

Europe's longest running
Oric Magazine

Number 67

March 1993
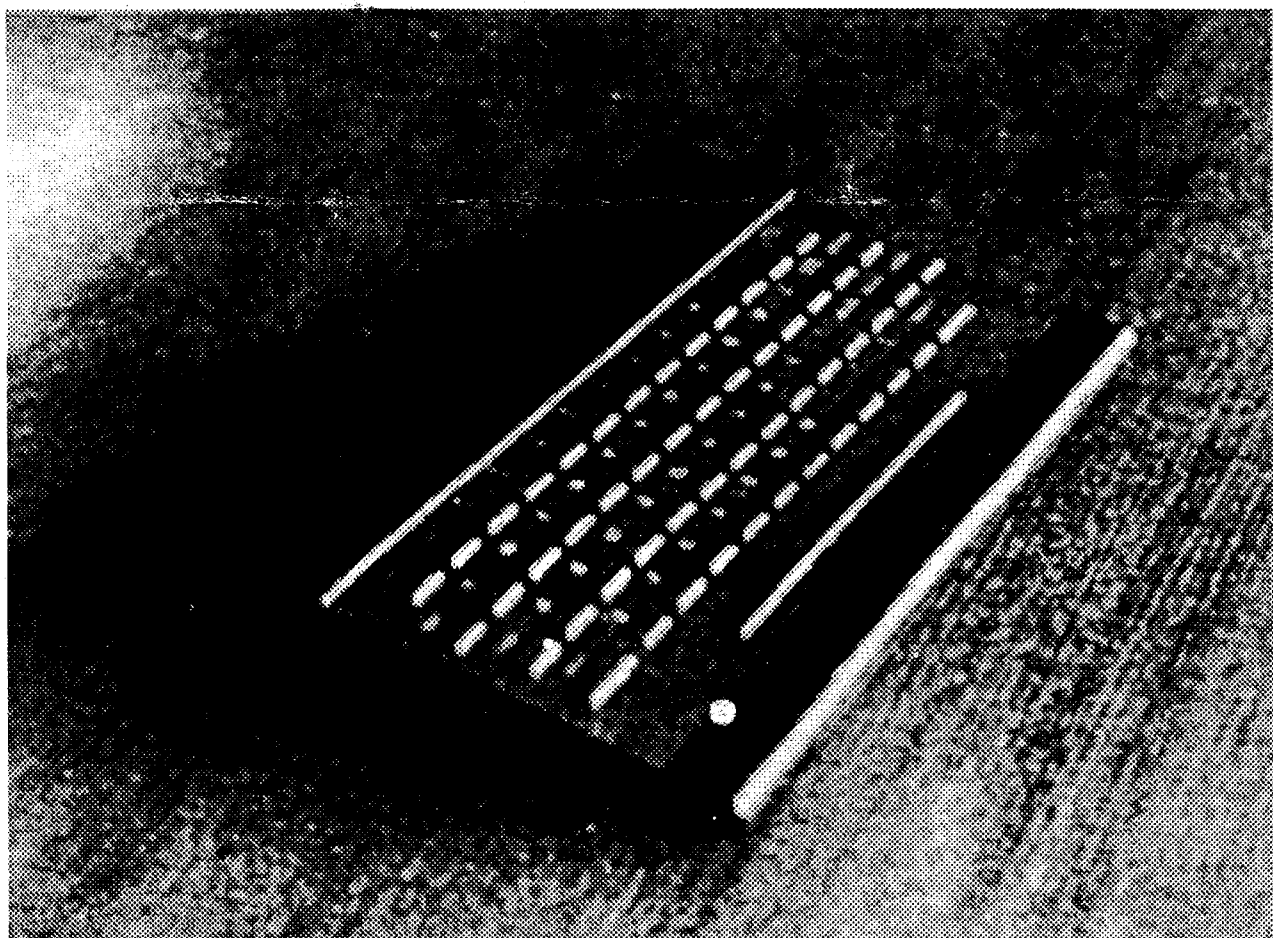
T H E   E D I T O R I A L

HELLO AND WELCOME TO THE MARCH AND HOPEFULLY THE SPRING ISSUE.
DATELINE - SATURDAY FEBRUARY 13th.
YES I AM TYPING THE EDITORIAL UP EXTRA EARLY THIS TIME. THE REASON IS THAT A GREAT EXPERIENCE HAS BEFALLEN ME. I HAVE SEEN THE SUN! IT IS THE FIRST TIME THIS MONTH AND BOY DOES IT PERK YOU UP!
AFTER OVER 3 MONTHS OF HARD SLOG KEEPING 'ORIC' MATTERS GOING - I THINK I HAVE FINALLY BROKEN THE BACK OF THE BACKLOG (IS THAT BAD ENGLISH MR.BOLTON - I CAN FEEL THAT CANE FROM HERE!).
OVER THE LAST TWO DAYS I HAVE BEEN DOING MY OWN THING ON THE ATMOS; NAMELY:- UPDATING MY SOFTWARE LIST (NEARLY 1100 FILES TO DATE), PLAYING ABOUT WITH SOME OF THE SOFTWARE ON OLD CEO DISCS, LOOKING FURTHER AT SOME OF HARRY PETERS' UTILITIES, LISTENING TO THE INTRODUCTION DEMO (SUPER!) TO JONATHAN BRISTOW'S NEW MUSICAL EDITOR CALLED 'SONIX' (WHERE IS THAT HEDGEHOG?), PLAYING A VERSION OF 'AWARI' FROM 'LANDSCAPE' WITH SYNTHESISED SOUNDS A LA 'VOTRAX', CHECKING OUT CONTROL CODES ON AN 'NEC' PRINTER, AND OF COURSE PLAYING 'DONT PANIC'.
MY COMFORT OVER THE WINTER HAS SADLY DISAPPEARED FROM THE BOOKSTALLS - NO NOT THE 'PLAYBOY' MAGAZINE,BUT THE 'GOLD C.D' MAGAZINE - A CHEAP WAY TO ADD TO THE OLD C.D. COLLECTIOM. STILL THERE IS ANOTHER SOUL C.D. MAG. DUE OUT AGAIN SHORTLY AND MEANWHILE I'M TUNED TO BOB HARRIS ON GOOD OLD RADIO ONE. BOB SAYS THAT HE WILL SHORTLY BE PLAYING A RE-ISSUED SONG FROM 'THE ELECTRIC PRUNES'. AH!
THE DAYS OF FLOWER POWER AND PSYCHADELIA. IT HAS JUST GOT TO BE THE FAMED 'I HAD TOO MUCH TO DREAM LAST NIGHT'. I'LL DIG OUT MY ORIGINAL 45 AND CAN WIND THE KIDS UP WHEN IT'S A HIT!
ANYWAY - ENOUGH FRIVOLITY,AND THAT'S THE END OF THIS ISSUE UNLESS I GET SOME WORK DONE.
BY THE WAY; I HAVE JUST HAD A NICE LITTLE CHAT WITH JOHN HURLEY. JOHN HAS BEEN GLANCING THROUGH BACK ISSUES OF 'O.U.M' AND OTHER ORIC MAGS. HE SAYS IT IS SURPRISING HOW MANY INTERESTING ITEMS HE HAD OVERLOOKED. I SUPPOSE JOHN THAT CERTAIN THINGS WERE NOT RELEVANT TO YOUR COMPUTING AT THE TIME AND NOW ARE. WHAT A BLESSING THE 'OUM' AND 'CEO' INDEXES ARE!

NOW ABOUT THIS POSITION YOU WOULD EXPECT THE INDEX - WELL TOUGH; IT IS ON THE BACK PAGE!
INSTEAD OUR 'MESSAGES' SECTION HAS PROVED POPULAR (EVEN THE C.E.O NOW DO ONE), AND SO HERE WE GO!

MESSAGE TO DAVID MACKENZIE FROM ROBERT CRISP
-------- -- ----- -------- ---- ------ -----

THANKS FOR YOUR SUGGESTIONS REGARDING MONITOR CONNECTIONS AS PER O.U.M # 66.
LIKE YOU I ALSO HAD A BBC MICRO AND ALSO FOUND IT SHORT OF MEMORY. I LIKED THE BBC ASSEMBLER,BUT IT WAS A PITY ABOUT THE MEMORY.

MESSAGE TO DAVE DICK FROM BRIAN KIDD
-------- -- ---- ---- ---- ----- ----

I DON'T THINK MUCH OF YOUR MENU SYSTEMS FOR O.U.M DISCS - I'LL DO THEM IN FUTURE - JUST TELL ME WHAT WILL BE ON THEM.

MESSAGE TO BRIAN KIDD FROM DAVE DICK
-------- -- ----- ---- ---- ---- ----

SOD OFF!

NO WAY AM I GOING TO WRITE TO YOU AND THEN WAIT FOR A REPLY. A LOT OF THE PROGRAMS ON THE DISC ARE LAST MINUTE ADDITIONS.
I HAVE HAD NO COMPLAINTS FROM ANYONE ELSE. TO BE HONEST IF I GO TO A RESTAURANT THEN THE THING THAT MAKES MY NIGHT IS THE FOOD NOT THE MENU!
AS YOU RECIEVE YOUR DISC AS 3.5" THEN YOU HAVE TO TYPE A WORD IN TO GO FROM ONE MENU TO ANOTHER AS THIS DISC IS COPIED FROM THE 3" MASTER,WHICH IS SPLIT BETWEEN 2 SIDES OF A DISC.
P.S. MY BIGGEST PROBLEM IS BUGGED PROGRAMS,AND WE ALL KNOW WHO PENNED 'FUNPARK'.
P.S.S. - APOLOGIES IF I SOUND NARKED,BUT I AM ALWAYS BLUNT. BY THE WAY I LIKE 'FUNPARK' AND SO DO THE KIDS.
P.S.S.S - I THINK THERE IS ALSO A BUG IN YOUR 'SUPER REVERSE' LISTING. I WILL DIG OUT THE LETTER.

MESSAGE TO JONATHAN BRISTOW FROM PAUL HUTTON
-------- -- -------- ------- ---- ---- ------

I WAS IMPRESSED WITH YOUR 'GO SNOW' WINTER SCENE ,WHICH WAS ON THE SECOND O.U.M DISC, PARTICULARLY THE EFFECT OF THE SNOW FALLING OFF THE LOG CABIN ROOF. IT GOES TO NUMBER 2 IN MY CHART OF INTERESTING SCREENS BEHIND THAT OF THE 'GIRL SCREEN',WHICH WAS ON THE WINTER '92 C.E.O DISK!

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

THE 1993 ORIC MEET

THE VENUE IS BOOKED. BE THERE OR BE SQUARE!
OUR SPECIAL ANNIVERSARY ORIC MEET WILL TAKE PLACE AT THE 'RIVETS SPORTS AND SPECIAL CLUB' IN AYLESBURY ON SATURDAY JULY 17 th. 1993. BATTLE COMMENCES AT 10.00 a.m AND WE SHUT UP SHOP AT 6. p.m. THERE WILL OF COURSE BE MORE ORIC MANIA, A BARBECUE AND A SELECTION OF MUSIC BACK AT THE EDITOR'S PLACE IN THE EVENING.
TICKETS FOR THE MEET ARE JUST 2 pounds. IF YOU ARE COMING THEN PLEASE GET YOUR TICKETS A.S.A.P AS WE HAVE TO PAY FOR THE VENUE IN ADVANCE.
IF YOU WANT TO CONTRIBUTE WITH DEMOS etc. THEN PLEASE LET ME KNOW.

MIND MADMEZ

COMING SOON TO A SCREEN NEAR YOU WILL BE THE LATEST EPIC FROM ARNT ERIK ISAKSEN. IT WILL BE DISC BASED (SEDORIC). IT WILL INCLUDE SOUNDS/MUSIC FROM J. B's 'MUSED' AND COULD HAVE OVER 50 SCREENS.
WHAT'S THE GAME ABOUT? I DON'T KNOW!
WATCH THIS SPACE!
IT WILL BE COMPATIBLE WITH THE 'ALTAI ' AND THE 'DKTRONICS' JOYSTICK INTERFACES.

MIDI PORT

WITH REGARD TO THE 'FAMED' TELESTRAT MIDI PORT, TREVOR SHAW HAS DESIGNED A MIDI INTERFACE FOR THE ORIC 1/ATMOS, BUT HAS NOT YET FOUND TIME TO BUILD AND TEST IT. JONATHAN BRISTOW IS KEEN TO HAVE IT AND HAS AGREED TO WRITE THE SOFTWARE. IF THE TELESTRAT REALLY DOES HAVE A BUILT IN MIDI PORT, INCLUDING THE ELECTRONICS TO DRIVE IT, THEN IT WOULD MAKE SENSE FOR ANY SOFTWARE TO BE COMPATIBLE WITH ALL 3 MACHINES. WITH THIS IN MIND TREVOR MAY HAVE TO MODIFY HIS DESIGN.
TREVOR ASKS IF SOMEONE CAN LET HIM HAVE A COPY OF THE CIRCUIT DIAGRAM OF THE TELESTRAT MIDI INTERFACE, OR AT LEAST TELL HIM WHICH CHIP IS USED AND WHERE IN MEMORY IT IS MAPPED TO?
IF NOT PERHAPS SOME KIND TELESTRAT USER COULD LET TREVOR HAVE ACCESS TO THE MACHINE TO FIND OUT FOR HIMSELF,
HIS DESIGN UTILISES A 6850 ACIA CHIP AND IS MAPPED TO #378 - #379 IN PAGE 3.
COME ON PLEASE HELP OUT!

SONIX

JONATHAN BRISTOW'S NEW MUSICAL EDITOR 'SONIX' IS WELL INTO THE PROGRAMMING STAGE. THERE WILL BE ADJUSTABLE BAR GRAPH, WHICH WILL DENOTE PITCH, NOISE AND VOLUME.

ZEBULON FOR THE AMIGA

THE GRANDCHILDREN OF TIM PHOENIX ARE TOTALLY HOOKED ON 'ZEBULON'. THE TROUBLE IS THAT AT THEIR HOUSE THEY HAVE AN 'AMIGA'. TIM WANTS AN 'AMIGA' VERSION OF 'ZEBULON' SO THAT HE CAN GET TO USE HIS ATMOS FOR 'TETRIX'. JONATHAN BRISTOW SAYS NO WAY JOSE!

A NEW NUMBER ONE!

YES FOLKS! I CAN CONFIRM THAT AS WELL AS WHITNEY HOUSTON BEING KNOCKED OFF (THE POP MUSIC CHARTS); 'TETRIX' HAS SLIPPED FROM POLE POSITION AS CURRENT ORIC TOP SELLER. IN ONE PERIOD OF 24 HOURS I RECIEVED 4 ORDERS FOR IT ON DISC.
I HAVE STILL TO PRODUCE A CASSETTE VERSION. IF I GET A MINUTE AND DO ONE THEN YOU WILL READ IT ON THE BACK PAGE.

DEAR DAVE,
I SPENT MANY ABSORBING HOURS ON 'ZEBULON' OVER XMAS, AND FINALLY COMPLETED IT. I THINK IT'S GREAT!
GOOD GRAPHICS AND PLENTY OF INTERESTING FEATURES. I SEE JONATHAN BRISTOW HAS YET ANOTHER ONE ("DON'T PANIC") ALREADY OUT.
HE CERTAINLY IS PROLIFIC.
I WAS VERY INTERESTED TO SEE THE LATEST O.U.M COVER (JAN'93). IT CERTAINLY DOESN'T FEEL 10 YEARS SINCE I FIRST STARTED TO
OGLE THE WONDERFUL ORIC-1 IN 'WHICH MICRO' AND 'PERSONAL COMPUTER WORLD'; AND PAINSTAKINGLY SAVED UP MY PRINCELY 130 POUNDS.
IT MUST ALSO BE JUST ABOUT 10 YEARS SINCE 'IJK' STARTED WORK ON 'ZORGONS REVENGE' - FUNNY HOW NO-ONE EVER REALLY MANAGED
TO IMPROVE ON THE GRAPHICS IN THAT CLASSIC IN THE DECADE SINCE.
- ALISTAIR WAY (CAMBRIDGE)

DEAR ALI,
'ZEBULON' IS CERTAINLY PROVING TO BE POPULAR. 'DONT PANIC' HAS ME TOTALLY HOOKED AND TO PROVE HOW BUSY JONATHAN
IS, I HAVE RECENTLY RECIEVED A DEMO VERSION OF 'SONIX' - A MUSICAL EDITOR AND THE FOLLOW-UP TO 'MUSED'.
IF EARLY INDICATIONS ARE ANYTHING TO GO BY,THEN THIS COULD BE TREMENDOUS. THE SAMPLE MUSIC IS EXCELLENT. IT STARTS FROM
NOTHING AND BUILDS AND BUILDS;ALL THE WHILE BRINGING IN OTHER CHANNELS AND INSTRUMENTS. TO GET THE FULL EFFECT YOU HAVE TO
PLAY IT THROUGH AN EXTERNAL SPEAKER. THE SCREEN DURING THE DEMO IS VERY NICE. A SCENIC VIEW AND 3 'PIPES' SHOW THE VOLUME
OF EACH CHANNEL IN A SORT OF FLAME - LIKE EFFECT. IT WILL BE A COUPLE OF MONTHS BEFORE IT IS FULLY FINISHED.
- DAVE

==

DEAR DAVE,
AFTER READING YOUR REPLY TO MY LETTER IN O.U.M ISSUE 66, I HAD A LOOK THROUGH THE LISTING FOR THE RANDOM SET-UP
AND FOUND IT. AFTER LOOKING AT IT FOR A WHILE I COULD NOT FIGURE OUT LINE 29060 ,WHICH READS : D2 INT(1+RND(I)*6), AND SO
DELETED IT. LO AND BEHOLD THEPROGRAM NOW RUNS PERFECTLY. I ALSO RECIEVED SOME COMMUNICATION FROM BRIAN KIDD ON THE MATTER,
FOR WHICH I AM GRATEFUL. PLEASE PASS ON MY THANKS.
- IAN BRADBURN (MIDDLESBOROUGH)

DEAR IAN,
GLAD THE PROBLEM IS SOLVED, AND I'M SURE BRIAN WILL BE PLEASED THAT HE HAS BEEN OF HELP. BRIAN HAS BEEN VERY
BUSY WITH PROGRAMMING OF LATE AND I THINK WE COULD SEE SOME EXCELLENT SOFTWARE FROM HIM IN THE NEAR FUTURE. HIS 'FUNPARK'
ON THE SECOND O.U.M DISC PROVES THAT HE HAS THE MAKINGS.
- DAVE

==

DEAR DAVE,
THANKS FOR O.U.M DISC NO.2.
I HAVEN'T HAD TIME TO DELVE INTO ALL THE PROGRAMMES ,BUT FOUND THEM MOST INTERESTING. I LIKE THE 'ORIC' AND 'ATMOS' LOGOS
VERY MUCH,BUT FOUND SOME OF THE DEMOS A BIT LONG WINDED.
- EDMUND WISNIEWSKI (HUDDERSFIELD)

DEAR EDMUND,
WELL WE CAN'T PLEASE EVERYONE,BUT I'M SURE THAT YOU'LL FIND A FEW THINGS OF INTEREST. THE 'LONG WINDED ' DEMO
MUST BE PART 3 OF THE SERIES ORIGINALLY LISTED IN 'ORIC COMPUTING' MAGAZINE. IF MY MEMORY SERVES ME RIGHT, THEN IT WAS STAN
HOLDEN WHO FAITHFULLY TYPED IT UP. THE GOOD NEWS IS THAT THERE ARE OTHER PARTS FOR FUTURE DISCS! THOUGH IT IS SOMEWHAT
LENGTHY; IT IS I FEEL A GOOD AID TO THOSE WHO ARE JUST GETTING INTO PROGRAMMING.
- DAVE

===

DEAR DAVE,
I THOUGHT THE FIRST O.U.M DISC WAS EXCELLENT,AS I THINK I'VE ALREADY MENTIONED. PARTICULAR FAVOURITES WITH THE
KIDS ARE 'SQWEEK 2' AND 'ESCAPE'. I WAS ALSO PLEASED TO SEE THE ORIC DEMO PROGRAM ('SHOWING OFF'),AS I NEVER GOT AROUND TO
TYPING IT IN FROM THE 'ORIC COMPUTING' MAGAZINE - SO THANKS TO WHOEVER WAS RESPONSIBLE. PERSONALLY I AM FINDING THE SPANISH
LESSONS HELPFUL TOO (I 'DID' SPANISH AT SCHOOL,BUT CAN ONLY REMEMBER THE ODD BIT HERE AND THERE).
I THINK DISC 2 IS ALSO GOOD - THE ONLY DISAPPOINTMENT I SUPPOSE BEING 'ORIC CAD',SINCE I ALREADY HAVE A COPY,WHICH I
CONVERTED FOR ORICDOS (ALTHOUGH I AM NOT SURE IT IS ENTIRELY BUG FREE!). 'LONE RAIDER' IS ANOTHER ONE POPULAR WITH THE
KIDS,AND I GAME WHICH I HAD BEEN UNABLE TO SUCCESSFULLY CONVERT TO DISC,AND WHICH THEREFORE THE KIDS HAD NOT SEEN UNTIL NOW!
SO THANKS TO EVERYONE WHO HAS BEEN INVOLVED IN PRODUCING THESE DISCS - I THINK THEY ARE AN EXCELLENT IDEA AND TREMENDOUSLY
GOOD VALUE. I'LL TRY AND DIG A FEW THINGS OUT WHICH MIGHT BE OF USE FOR A FUTURE DISC.
- TREVOR SHAW (SALTBURN - BY - THE - SEA)

DEAR TREVOR,
WELL WE SEEM TO HAVE KEPT EVERYONE HAPPY. ONE MAN'S MEAT IS ANOTHER MAN'S POISON,BUT BY HAVING AS MANY
PROGRAMS AS POSSIBLE OF DIFFERENT VARIETIES ON ONE DISC,WE APPEAR TO OF CATERED FOR EVERYONE. NO PERSON WHO TOOK THE FIRST
DISC WROTE TO SAY THAT THEY DIDN'T WANT THE SECOND AND I THEREFORE ASSUME FROM THIS FACT AND THE MANY LETTERS THAT I GET
THAT WE HAVE A SUCCESS ON OUR HANDS.
BEARING THIS IN MIND I AM ALREADY PREPARING THE THIRD OUM DISC FOR DESPATCH WITH THE MAY ISSUE OF O.U.M.
I THINK THEY ARE GOOD VALUE. 'ORIC-CAD' + OFFICIAL MANUAL WITH 'LONE RAIDER' AND OFFICIAL INLAY;EVEN WITHOUT THE OTHER
PROGRAMS MUST BE A BARGAIN AT 3.50. ESPECIALLY AS MANY OF YOU ARE STILL PAYING AROUND 3 POUNDS JUST FOR A 'MAXELL' 3" DISC.
I WAS TEMPTED TO DROP THE PRICE FOR 3.5" USERS,BUT TOOK INTO CONSIDERATION THE WORK INVOLVED IN TRANSFERRING AND ADAPTING
MENUS.
- DAVE

==

READERS LETTERS - CONTINUED

DEAR DAVE,
            I ENCLOSE A 3.5" DISK FORMATTED MSDOS 720K THAT CONTAINS THREE FILES:-
D65.EXE - A 65C02 DISASSEMBLER THAT WORKS ON 'INTELEK' FILES.
D65FILE - THE COMMAND FILE FOR 6502 DISASSEMBLER.
ORICATM.OBJ - THE ORIC ATMOS ROM IN AN 'INTELEK' FILE.
A65.EXE - PUBLIC DOMAIN 6502 ASSEMBLER.
A65.DOC - DOCUMENTATION FOR THE ABOVE AND SOME RELATED FILES.

    I KNOW THAT THIS ISN'T AN ORIC PROGRAM,BUT I NEEDED LARGE SECTIONS OF THE ORIC ROM FOR A O/S OF MY OWN. IT'S QUICKER TO
WRITE A CODE GENERATOR THAN TO TYPE THE LISTING IN BY HAND AS I AM A LAZY PERSON BY NATURE.
THE OUTPUT FROM 'D65' IS 'FILENAME.LST' AND CAN BE RENAMED TO 'FILENAME.ASM' AND FED TO THE PSUDOSAM 'A65' ASSEMBLER'
 'A65' IS A PUBLIC DOMAIN '6502' ASSEMBLER THAT USES A STRANGE SYNTAX,BUT IT HAS TWO GREAT ADVANTAGES - IT IS QUICK AND IT
IS CHEAP!
    I HOPE THAT YOU CAN FIND SOME OF THE USER GROUP WHO ARE INTERESTED IN THEM.
    IF YOU KNOW SOME ONE WITH A CIRCUIT DIAGRAM FOR THE DISK CONTROLLER (ATMOS) THEN I WOULD LOVE A COPY. TA.
                    - DOUGLAS MALCOLM-BROWN (HARPENDEN)

DEAR DOUGLAS,
            I THANK YOU FOR THE DISC,WHICH I'M AFRAID I HAVEN'T GOT AROUND TO LOOKING AT YET,ALONG WITH A FEW OTHERS.
    IF ANY READER WOULD LIKE A COPY OF THE PROGRAM ON 3.5" THEN WOULD THEY PLEASE SEND ME 5 x 24p STAMPS TO COVER THE COST OF
A DISC AND POSTAGE.
    A COPY OF THE CIRCUIT DIAGRAM SHOULD NOW BE WITH DOUGLAS.

            - DAVE
==
    DEAR DAVE,
            YOU MAY RECALL OVER THE PHONE THAT I SAID I WAS LOOKING AT THE FIX FOR 'TRON'. THE ARTICLE WAS IN ISSUE 40.
SHOULD YOU HAVE ANY REASON TO COMMUNICATE WITH OWE FRANSSEN COULD YOU PLEASE ASK HOW ONE CHANGES MEMORY LOCATION ADDRESSES
AT #C8FD AND #C909 TO #CCD9 WHEN THEY ARE IN ROM AND NOT AVAILABLE TO THE USER.
    I ENCLOSE A PRINT-OUT OF A BIORYTHMS PROGRAM AND IT MAY WELL BE THE ONE THAT ROB KIMBERLEY HAS BEEN HAVING PROBLEMS WITH.
I HAVE GENERALLY TIDIED IT UP.
    I HAVE TYPED IN THE 'SUPER REVERSE' PROGRAM FROM THE FEBRUARY O.U.M,BUT I DO SEEM TO BE HAVING TROUBLE WITH MAKING IT WORK
WITHOUT CRASHING. THE PROBLEM THROWS UP LINE 262 FOLLOWING ENTRY OF NUMBERS LOWER THAN THE PREVIOUS NUMBER ENTERED. I HAVE
ALSO HAD TO AMEND LINE 234 TO 'INPUT V$' RATHER THAN 'GET V$' AS WITH 'GET V$' YOU CAN ONLY ENTER ONE KEY PRESS.   IF MR.
KIDD WOULD CARE TO ELABORATE FURTHER; THIS IS ONE OF THE SORT OF THINKING PROGRAMS I LIKE HAVING A GO AT. THE PRESENTATION
IS VERY GOOD.
                    - JOHN HURLEY (YEOVIL)

DEAR JOHN,
            I HAVE HAD NO CONTACT WITH OWE AND I BELIEVE HE IS NO LONGER AN ORIC USER. PERHAPS SOMEONE OUT THERE,WHO HAS
USED HIS TRON FIX COULD POSSIBLY HELP OUT.
    I THANK YOU FOR THE BIO-RYTHM PROGRAM,WHICH IS NOT IN FACT THE ONE IN QUESTION. I HAVE RECENTLY HAD A NOTE FROM TREVOR
SHAW REGARDING THE PROGRAM AND THIS IS REPRODUCED IN THE 'MESSAGES' SECTION.
    REGARDING 'SUPER REVERSE'. IT WAS A RECIEVED JUST PRIOR TO GOING TO PRINT LAST TIME. I CHECKED IT LOADED. THOUGHT - "THIS
IS BLOODY HARD!", BUT DIDN'T CHECK IT OUT FOR BUGS. APOLOGIES FROM ME.
    PERHAPS MR.KIDD (BRIAN TO HIS FRIENDS, OR JUST MR.KIDD TO ME), PERHAPS THE WELSH WIZZARD COULD SORT THIS OUT.
    BY THE WAY JOHN - THANKS FOR THE SEIKOSHA PRINTER PROGRAM. IT LOOKS VERY USEFUL. I HAVE BEEN GETTING TO GRIPS RECENTLY
WITH CONTROL AND ESCAPE CODES ON BOB TERRY'S 'NEC' PRINTER, AND NOW FEEL AS THOUGH I SHOULD MAKE MORE USE OF THEM ON MY OWN
'SEIKOSHA'.
                    - DAVE
==

NOTE FROM THE EDITOR:

WELL THAT IS JUST A SMALL SELECTION FROM THE POSTBAG. VARIED IF NOTHING ELSE. I THINK TO REPRODUCE ALL YOUR LETTERS IN THE
MAGAZINE WOULD OFTEN MEAN NO ROOM FOR ANYTHING ELSE. HOPEFULLY I HAVE REPLIED TO EVERYONE ELSE.
    IT HAS BEEN A QUIET FEW HOURS TYPING THIS UP - ONLY 3 PHONE CALLS. GRAEME BURTON AND TIM COLGATE HAVE BOTH ORDERED "DON'T
PANIC". NO DOUBT TRYING TO BEAT MY NEW HI-SCORE (I HAVE JUST TOPPED THE 3000 PT. MARK). THEN SOME BAD NEWS - JONATHAN 'DONT
PANIC' BRISTOW ON THE PHONE!
    HE DECIDED TO SEE ABOUT WRITING "DON'T PANIC 2", BUT FIRST DECIDED TO HAVE A QUICK GO AT THE ORIGINAL. ANYWAY NIGHT BECAME
MORNING - NO NEW VERSION,BUT A NEW HI-SCORE. JONATHAN NOW BOASTS 3508 PTS.
    HE DID THIS BY USING THE 'PREMO' SETTING AND STARTING AT LEVEL 7.
    NOW THE QUESTION IS : WHAT CONSTITUTES A HI-SCORE. IS IT STARTING FROM LEVEL ONE, STARTING FROM ANY LEVEL, OR THAT SHOWN
ON THE HI-SCORE TABLE. FOR IN THIS GAME IF YOU REACH A SCORE OF SAY 2000 PTS AND THEN LOSE HALF OF YOUR SCORE; THEN THE
2000 IS SHOWN AS THE HI-SCORE BECAUSE IT WAS ATTAINED. THIS COULD TURN INTO AN ARTICLE. MEANWHILE DON'T FORGET THAT LINES
OF 3 CAN BE MADE VERTICALLY AND DIAGONALLY AS WELL AS HORIZONTALLY. THE DIAGONALS CAUGHT ME OUT. I HAD CLEARED A NICE TRIO
AND LO AND BEHOLD,BUT SOME SHAPES (THE NEGATIVES) ROLLED DOWN AND MADE UP A NICE DIAGONAL LINE,THUS DEPRIVING ME OF SOME OF
MY SCORE.

Machine Code for the Oric Atmos (Part 23)   Peter N. Bragg

The Age of the Dinosaurs
----------------------- So the Oric was launched on an unsuspecting world,
some ten years ago. However some of us had already aquired a few battlescars
a couple of years earlier from machines such as the Microtan 65. Tangerine
advertised the Microtan as a computer for less than £70. For that price,
plus VAT, you got a circuit board and a minimum selection of components,
which was fine, if you could do without little luxuries like building and
operating instructions, a keypad (keyboard) and power unit etc. After some
fourteen hours work that ate a complete soldering iron bit and left me about
£120 lighter, I actually had a working machine, running off a set of nicad
pencell batteries !!

Now for the easy bit. All I had to do is to program it. So open the manual
and .... Ye Gods !! look at all them weird numbers and labels !!
What the heck do they all mean ?

The hexadecimal numbering system was strange at first. Remembering to count
from "0" to "9" and then on to "A", "B" etc, up to "F" and then "10" took a
little getting used too. At least, there are no complicated calculations and
you only need to learn how to do it once. It's just a matter of getting into
the habit.

The instructions appeared to be described in inspired gibberish. I looked up
the word "operand" in a dictionary, which said "see opcode" so I looked that
up and it said "see operand", so now I know what recursion is !!

Phutttttt !!
----------- The next stage was to try to get some practical experience, so
I copied a code listing as accurately as possible, into the machine. I bet
you think that it had loads of bugs in it ??...Oh Ye of Little Faith !!
You are quite wrong. What really happened ? Well I had just entered the last
of several hundred bytes, when the nicad battery pack decided that it was
bedtime and said "Bye bye" and the Microtan promptly crashed !!!!!!
Did I tell you that there was no cassette interface ? Yup ! it's all part of
life's rich pattern !! So I entered a new instruction that invited it to go
forth and multiply itself !! After that I bowed to the inevitable and added
the expansion board and the power supply, which accounted for another
soldering iron bit, not too mention another £150. Happy days !!

The next problem was that the manuals were written for people who understood
all the buzz-words, which cut me out. It might have been easier if I had
been able to join a computer club, however my commitments mean't very
unsocial hours so I couldn't get to a club.

So, it was a case of DIY or nothing. I spent a fair bit of time while
travelling, reading up on the 6502 Instruction Set and compiling my own
brief description of how each instruction operated and what it did. Any
instruction that was difficult to understand, was tried out on the Microtan.

The Light Dawns
--------------- It soon became obvious that the sixty odd instructions were
in fact made up from a combination of a smaller number of fairly simple
operations. It was only necessary to become familiar with that small
collection of operations to have a key to all the programming facilities in
the computer. For me, it is much easier to remember a small number of
operations, than a much larger collection of labels and codes.

All languages, on the Oric, not just machine code, are simply products of
that small collection of operations. Once I had got to grips with most of
those operations, all I needed for programming, was a small crib card
listing the Instruction Set, plus a few addresses and other useful bits of
information.

I also found it a lot easier to write programs in terms of operations such
as "fetching this" or "testing that" and "branching there" etc, which is why
my programming is backed up by a fair amount of descriptive notes.

The Instruction Subset
---------------------- The 6502 Instruction Subset published in the last
article is simply an expanded version of part of my own listing of the full
6502 Instruction Set, which I use as part of a "crib card" set.

The subset published in the article, is by no means, the whole of the
Instruction Set. There are still quite a few instructions, yet to be covered,
as you will see if you compare it with the full 6502 Instruction Set, which
can be found in many books and manuals, including those for the Oric.

If you look at it you will see that the subset has been subdivided into
groups each containing a small set of instructions that are either similar
in operation (eg.Branch Instructions), or they are related in some way
(eg. Jump Instructions).

The subset is headed by three groups for the three main registers,
Accumulator, Register "X" and Register "Y" and it is easy to see that the
basic operations for these three are very similar. Hopefully, setting out
the instruction set in this way, concentrating on the operations that can be
done, will make it easier to use. You dont have to learn every label and
code. Look them up in the subset, as and when you need them.

Crash Course
------------ Hopefully, by now, you have more than enough in our small
subset to try some practical experiments of your own. Do have a try, because
you will learn far more that way, than you will ever learn, by simply
reading about it. At the very worst, you may well crash the computer, but
providing you have saved your work before you actually try it out, there is
no harm in that and you only need to reload to try again. Anything new,
seems difficult when you first try it. However, once you have tried a few
simple experiments of your own and have managed to get some of them working,
you will quickly find that it all becomes a lot easier. Sorting out a
program fault (debugging) might seem difficult at first, but you will be
surprised how much you can learn about programming in the process of finding
and correcting your mistakes.

The golden rule, as I have said before, is to keep it small. It is far
easier to write and debug a lot of short routines rather than one very long
one. After all, once you know that each routine works and will do what you
want it to do, you can then build up, by combining successful small routines,
one by one, to make up larger routines, if you really need to.

Programming in any language, takes a little time to get it right. Dont worry
if it does not work out first time. There are often several ways to get the
right result and the software you write, is the best software you can have.
....
"People who say it cant be done are often interupted by people doing it"
  (quote from "SAM Speaks")

AROUND THE WORLD IN 80 DAYS

THIS TRANSLATED 'NO MANS LAND' TITLE APPEARED ON A RECENT C.E.O DISK. IT IS A
NICE LITTLE ADVENTURE WHERE YOU HAVE TO OVERCOME ALL MATTER OF   THINGS TO GET
AROUND THEWORLD IN 80 DAYS. YOUNG MATTHEW IS BECOME ENGROOSED IN   THE   GAME AND
DID MANAGE TO GET ROUND IN 83 DAYS.
UNFORTUNATELY ON A COUPLE OF OCCASAIONS NOW ,WHILST IN MID-ATLANTIC, AN   ERROR
HAS OCURRED. DOES ANYONE KNOW OF A FIX FOR THIS?
I BELIEVE AT ONE TIME THAT IJK WERE TO RELEASE THIS.
OF COURSE THE FRENCH HAVE CHANGED THE HISTORY SLIGHTLY. YOU NOW START   AND   END
IN PARIS!

THE HI -SCORES

AS I TYPE THIS PAGE (FEB.22nd);HERE ARE THE LATEST ADDITIONS /   AMENDMENTS   TO
THE ALL-TIME HI-SCORE TABLE. (YOU HAVE ALL CERTAINLY BEEN BUSY).

KARATE - 23,800 - ARNT ERIK ISAKSEN.....COCK'IN - 34,750 - VINCENT TALVAS
SNAKE VENOM - 102,822 - STALE EIKBRAATEN ... SUPER ADV. BREAKOUT - 17,050 -
ARNT.
ICE GIANT - 15,780 - ARNT ... HARRIER ATTACK - 105,700 - STALE
ZEBBIE - 945,650 - STALE .... GUBBIE - 339,360 - STALE
RATSPLAT - 20,150 - STALE .... FORMULE 1 - 27,487 - ARNT
JEUX OLYMPIQUES - 50,147 - ARNT .... XENON III - 9,927 - STALE
FIREFLASH - 59,210 - STALE .... HOPPER - 40,170 - TIM COLGATE
DON'T PRESS THE LETTER Q - 1,229,620 - BRUNO DOSSIER
INSECT INSANITY - 43,300 - VINCENT TALVAS ... MR.WIMPY - 16,549 - ESPEN
ANDERSEN
LONE RAIDER - 80,500 - ESPEN ANDERSEN.... LIGHT CYCLE - 4,333 - ESPEN ANDERSEN
SCUBA DIVE - 3,510 - JARLE KARLSRUD .... LODE RUNNER - 16,738 - ARNT ....ROCK
RUN - 2,264 - PAUL HUTTON
DON'T PANIC - 3,107 (starting at level 1) - DAVE DICK
DON'T PANIC - 3,508 (starting at level 7) - JONATHAN BRISTOW
ATTACK OF THE CYBERMEN - 4,730 - HENRY MARKE... IMAGO - 6,820 (all screens) -
HENRY MARKE
MIDNIGHT FEAST - 1,500,120 - HENRY MARKE (79 screens cleared,a few lives left,
but it was dinner time) - note from the editor: - YOU ALWAYS GET THE FULL S.P
FROM OUR 'H'.
PSYCHIATRIC - 41,070 - HENRY MARKE .... CENTIPEDE - 59,240 - HENRY MARKE
CENTIPEDE (by utilising a bug in the program - I will tell you next time) -
175,660 - RENE MARKE.

TEN LITTLE INDIANS

MAYBE A SOLUTION TO PETER THORNBURN'S PROBLEM WITH 'TEN LITTLE INDIANS' COMES
FROM JAMES GROOM; AND I QUOTE:-
" I think you have to WAIT,then get off when the train stops. I think it puts
up the possible exits on the screen (i.e East). If not then try LEAVE TRAIN
when it stops;It's been a while since I actually played it (and I was actually
playing the Speccy version),but it is something like that. But don't blame me
if I'm wrong."

BACKGAMMON

A SOLUTION TO IAN BRADBURN'S RANDOM PROBLEM ON 'BACKGAMMON' FROM IJK HAS
ARRIVED FROM THE WELSH WIZZARD.
REPLACE LINE 1 WITH THE FOLLOWING (YOU WILL NEED AN AUTO-STOP ROUTINE TO DO
THIS) :-
1 CLS:Z$=KEY$:?"PRESS ANY KEY TO CONTINUE:REPEAT:A=RND(1):UNTIL KEY$ <> ""
THIS APPARENTLY WILL THEN PRODUCE RANDOM DIE AND REMOVE SOFTWARE PROTECTION.
FOR THOSE NEW TO PROGRAMMING; THE ? IS A SHORT COMMAND FOR 'PRINT'.

IT SEEMS A LITTLE ODD TO ME - ARE THERE A PAIR OF QUOTES MISSING!
===

WHAT DAY IS IT!

It would save me a little job if you could all date any correspondence
that you send me. Otherwise If I forget to mark it then I can´t keep them
in rotation.

APRIL IS MINE

I am taking the month of April off from answering queries by phone (the
Answerphone will be on) and also will not deal with any new written queries.

I will concentrate on having a break and catching up with any backlog. New
orders will still be processed and of course O.U.M will still be published.
 Hopefully I will get to use the Oric for myself for a while - even if it
only means testing some of the many pieces of software that are piling up.
DON´T FORGET - NO PHONE CALLS IN APRIL.
==

THE A to Z OF SOFTWARE HOUSES

With a new Wordprocessor to hand, Brian Kidd is now setting about the task
of re-typing his popular series on the A to Z of Software Houses.
 I know that James Groom has been in touch with him recently with regard to
some additions and queries.
==

MAINTAINING A HI-SCORE TABLE

IN A RECENT ´CEO-MAG´ A LISTING FOR A SUBROUTINE (FOR SEDORIC USERS) TO
INSTALL A HI-SCORE TABLE IN GAMES. WRITTEN BY LAURENT CHIACCHIERINI AND
USED IN HIS ´MAHJONG´ AND ´ORICSWAP´; IT WILL SAVE THE TABLE TO A
SEQUENTIAL FILE ON DISK.
 I AM GOING TO TRY IT WITH SOME OF THE GAMES THAT I HAVE,WHICH DON´T STORE
HI-SCORES. I´LL LET YOU KNOW HOW I GET ON.

PAPER TABLE NAPKINS

ALAIN WEBER IS A COLLECTOR OF PAPER TABLE NAPKINS AND WONDERS IF ANY OTHER
AMONGST YOU HAVE THE SAME HOBBY. HE WOULD BE PLEASED TO DO SWAPS.
==

MESSAGE TO ALLAN WHITAKER FROM DAVE DICK

WITH REGARD TO IJK´s ´ZEBBIE´. THERE APPEARS TO BE A BUG IN THE DISC
VERSION. THE GAME ,WHICH IS ON A ´GAMEINIT´ FORMATTED SEDORIC DISC, THROWS
UP A ´BUG´ WHEN YOU REACH THE ´BONUS SCREEN´ ACCORDING TO 2 OF OUR
´GAMESTERS´. HAVE YOU HEARD OF ANY PROBLEMS WITH THIS BEFORE OR HAS ANY
READER OUT THERE GOT A DISC VERSION,WHICH IS NOT ´BUGGED´??

MESSAGE TO JON BRISTOW FROM PETER THORNBURN

 DON´T PANIC

                    - ABSOLUTELY BRILLIANT!

PRIZE PUZZLE NO.1 COMPETITION WINNER

THE WINNER WAS MATHMETICIAN COLIN COOK. HIS PRIZE IS ON IT´S WAY TO HIM.
THE CORRECT ANSWER WAS 407.
THE SOLUTION WORKINGS ARE LISTED ELSEWHERE IN THIS ISSUE.

PRIZE RAFFLE

WE AGAIN PLAN TO HOLD A PRIZE RAFFLE AT THE NEXT ORIC MEET. IF YOU HAVE
ANYTHING TO DONATE THEN PLEASE SEND IT TO US OR BRING IT ON THE DAY.
 ALREADY OFFERED BY ROBERT CRISP IS A ´SHARP PC1211´ POCKET COMPUTER. IT
WAS THE FIRST COMPUTER HE EVER OWNED,AND COMES COMPLETE WITH MANUALS AND A
CASSETTE INTERFACE. MANY THANKS TO ROBERT.

EMULATORS ..... EMULATORS ..... EMULATORS ....

AN INTRODUCTION FROM DAVE DICK

    I SEEM TO RECALL READING IN OUR LITTLE MAGAZINE SOME TIME AGO THAT A
COMPANY IN SCOTLAND HAD PRODUCED AN ORIC EMULATOR FOR THE AMIGA OR
ATARI. O.K I SUPPOSE FOR TRANSFERRING DATA AND PERHAPS SUITABLE FOR
PLAYING ONE OF YOUR OLD ORIC GAMES WITH BETTER RESPONSES.
    I THOUGHT NO FURTHER ABOUT IT AS I DON'T OWN ANOTHER COMPUTER. JUST
RECENTLY HOWEVER, THE WORD 'EMULATOR' HAS CROPPED UP A COUPLE OF
TIMES IN CONVERSATIONS WITH ORIC USERS. TO START WITH DENIS REDFORD,
WHO OWNS OTHER COMPUTERS,SENT ME A COPY OF AN ARTICLE IN THE NOVEMBER
'92 ISSUE OF 'SINCLAIR/QL WORLD'.
    IT DEALS WITH ZX81 AND ZX SPECTRUM EMULATORS FOR THE 'QL'. THESE
EMULATORS ARE DISTRIBUTED ON A SHAREWARE BASIS. THEY COME COMPLETE
WITH MANUALS AND ARE REGULARLY UPDATED. EACH EMULATOR IS STORED ON 3.
5" DISC. IT IS REPORTED THAT 99% OF EXISTING ZX81 AND ZX PROGRAMS CAN
BE ADAPTED.
    FEATURES INCLUDE:- ZX81 PRINTER OUTPUT IS REDIRECTED TO THE QL
SERIAL PORT, THE QL KEYBOARD IS FULLY MAPPED ON THE ZX81 KEYBOARD,
TAPE COMMANDS OF SPECTRUM BASIC ARE REDIRECTED TO FLOPPY DISC,
SPECTRUM SOUND CAN BE HEARD VIA THE QL BEEPER OR VIA THE NETWORK
SOCKET. THERE ARE IN FACT TOO MANY FEATURES TO MENTION. (IF ANYONE
WOULD LIKE A COPY OF THE ARTICLE THEN PLEASE SEND 2 x 24 pence STAMPS)

    NOW IN 'ORICLAND' WE HAVE PERHAPS WITHOUT REALISING IT OUR VERY OWN
FORM OF EMULATORS. LET'S FORGET FOR NOW ABOUT READING 'MSDOS' DISCS
AND 'ARCHIMEDES' FILES.
  LET'S REFLECT AND THINK OF WHAT WE HAVE GOT.
  BY SIMPLY SWAPPING A ROM YOU CAM MAKE YOUR FAITHFUL OLD ORIC - 1
INTO AN ATMOS ,EXCEPT YOU CAN'T UTILISE THE 'FUNCT' KEY.
  MANY OF YOU HAVE NO DOUBT GOT SWITCHABLE ROMS IN YOUR ATMOS SO THAT
YOU CAN STILL MESS ABOUT WITH YOUR OLD ORIC-1 TITLES.
  THEN ALONG CAME 'SEDORIC DOS'. IT MEANT THAT BY LOADING THE FILE
'ROMORIC1' THAT YOU COULD THEN LOAD AND PLAY YOUR OLD ORIC-1 SOFTWARE
ON YOUR ATMOS. OF COURSE YOU HAD TO LOAD IT IN FROM CASSETTE. HARRY
PETERS AND HIS 'ROMV1.6' HAS CERTAIN FEATURES ,WHICH I INTEND TO
EXPLORE FURTHER.
  WHAT IS THE 'TELESTRAT' IF IT IS NOT AN EMULATOR! CARTRIDGES ALLOW
YOU TO LOAD YOUR ORIC-1 AND ATMOS SOFTWARE AND ON DISC.
    WELL THAT IS MY INTRODUCTION,WHICH LEADS INTO A LETTER I RECIEVED
FROM NIGEL ALEFOUNDER. I WILL PUBLISH THE LETTER AND THEN WE GO
STRAIGHT INTO NIGEL'S ARTICLE/THOUGHTS ON AN ORIC EMULATOR.
  UNFORTUNATELY NIGEL'S PRINTER IS ON THE BLINK AND I HAVE TO RE-TYPE
HIS ARTICLE. THEREFORE DEPENDING ON HOW LONG IT TAKES ME TO RE-TYPE
WILL BE THE DECIDING FACTOR ON WHETHER IT IS ALL PUBLISHED IN ONE GO
OR SPLIT OVER A FEW ISSUES.

AN INTRODUCTION FROM NIGEL ALEFOUNDER

    AFTER MY LAST COMMENTS ABOUT AN 'ORIC' EMULATOR FOR THE IBM PC   I
HAVE BEEN DOING SOME SERIOUS(!) THINKING ON THE SUBJECT. THE FRUITS
OF WHICH I HAVE MADE INTO AN ARTICLE.
  NOW I'M NO AUTHORITY ON 6502 MACHINE CODE,AND SO IF THERE ARE ANY
GLARING MISTAKES IN MY ASSUMPTIONS - BY ALL MEANS CORRECT THEM. IN
FACT,IF THE IDEA OF AN ORIC 'RUNNING' INSIDE AN IBM IS CLASSED AS
HERESY,BY ALL MEANS DON'T READ ON!
  AFTER SEEING A SPECTRUM AND A ZX81 UP AND RUNNING PROGRAMMES
'INSIDE' AN IBM PC;THE IDEA OF BEING ABLE TO PRESERVE THE LOYAL
ORIC'S IN THIS WAY HAS APPEALED TO ME. I HAVE AND OLD SECOND-HAND PC,
WHICH I GOT FOR FREE FROM AN EX-EMPLOYER AS IT WAS JUST SITTING THERE
DOING NOTHING.........

ORIC EMULATOR
FOR THE IBM PC

The idea of running one computers operating system inside another ,
as a programme, may seem a daft one. Afterall,why spend a lot of
money on a more technically advanced machine just to run the
programmes belonging to a much simpler one? A bit like buying a
FERRARI just to nip down to the corner-shop for some tea-bags.
  The advantages aren't apparent until you actually see one working in
the flesh. Recently I've seen both ZX81 and Spectrum emulators
running quite happily on an IBM PC clone. For all the world - as it
sat there, black 'K' cursor flashing on a white screen - it was a
Spectrum,it was a ZX81.
  All the software which originally ran on the Sinclair machines was
able to run in the new host. What's more,with the help of a cheap,
simple gadget you could load tapes directly! Where the superior
hardware came into it's own was in the added facilities that the
bigger memory and faster work-rate allowed. There were extensions to
the key scanning routines allowing the function keys to call up
extras like snapshots of memory to disk,changing the system speed and
forcing a reset.
  But,where the real justification for all this high-tech wizardry
actually counted,in my mind,was in fact that the smaller emulated
machine was being preserved. Not only it's spirit,it's quirky
eccentricity that you either love or hate,but also ahole raft of
business and game software which deserves a better fate than being
consigned to the attic - or worse - the bin!

  Now the whole charm of the Oric doesn't need me to explain. It is in
the style of it's box,the ease with which it can be used,the friendly
system software and the many facilities allowing conection to the
outside world. Not to mention a huge library of great software. There
is also no small measure of snob appeal;we are afterall a select
breed us ORIC users.
  To start with I thought the idea of 'putting' the Oric inside of an
IBM machine was pretty foolish,but as I begun to think about all of
the above I became more and more intrigued with the possibilities and
the avenues which would open up,and decided to try and think out ways
and means of doing this.
  Now I'm going to try and get technical. Feel free to put me right if
I've misunderstood the inner workings of either the ORIC or IBM
machines. I'm no expert in machine code for one thing,and another,my
programming skills generally leave a lot to be desired. What I've
tried to do is rationalise the project and separate out the various
tasks. Any programmers out there who feel up to the challenge,why not
have a go,or at least contribute to a discussion on the idea? I know
from reading OUM that many of you have IBM clones.
  Where the Z80 based machines built by Sinclair have an advantage
over the 6502 Oric is in the similarities between parts of the
instruction sets (the machine code needed to make the chip do
anything) and the way it is used. A quick glance through the
instruction set of the 8088 chip,which is the generic base all IBM
PC's are derived from,shows that the 6502's 150 or so instructions
have few direct equivalents. So one of the first obstacles to
overcome is conversion of the operation-codes from one language to
another. In many ways amn emulator is just a fast conversion utility.
  There are a few 'cheat' ways round this ,but all seem to lead into a
blind alley. For example - you can buy, through the shareware market
for PC clones (henceforth known as PC), 'cross-assemblers'. These
allow you to enter the assembly language listings of a simpler chip
like the 6502 and they will generate an 8088 hex-dump capable of
being 'linked' into a runnable programme. (The pseudo-Sam range is
one). All you would then need to do is disassemble the ORIC Rom,feed
the listing into the cross-assembler and produce runnable 8088
machine code. This falls flat because it won't really allow the
necessary in/out system for the programme to run as an Oric emulator.

  IN THE SECOND PART OF THE ARTICLE - WE WILL LOOK AT THE 'ULA', THE
'8912', 'C' AND ALL MANNER OF OTHER THINGS.

L E T ' S   G E T   T E C H N I C A L

A NEW FEATURE IS THIS. RATHER THAN LUMP CERTAIN INFORMATION/QUERIES INTO ODD LITTLE SPACES I'VE DECIDED THAT THEY WARRANT A PAGE OF THEIR OWN. SOME ARE RELATED TO HARDWARE,SOME TO FIRMWARE AND OTHERS TO UTILITY SOFTWARE. SO LET'S GET TECHNICAL.

- DAVE DICK

SPARE IC'S

HARRY PETERS HAS RECENTLY RECIEVED AN OLD 'KAYPRO' CP/M "PORTABLE" COMPUTER (ABOUT 20kg). THE MACHINE IS WORKING PERFECTLY. HOWEVER,NOTHING CAN BE DONE WITH THE OLD BEAST WITH IT'S OLD FASHIONED OPERATING SYSTEM WITHOUT GRAPHICS.
IN IT HARRY HAS FOUND TWO IC's WHICH ARE ALSO USED IN THE ORIC,NAMELY DISKCONTROLLER WD1793 and DATA SEPARATOR WD9216.
IF SOMEBODY NEEDS THESE CHIPS TO REPAIR A DISKCONTROLLER THEN THEY SHOULD CONTACT HARRY DIRECT AT: - MARATHON 28, 2924 XD KRIMPEN A/D IJSSEL, NETHERLANDS.

PERHAPS THESE MAY BE OF HELP TO DENNIS BONFIELD!
==

PROGRAMMING TECHNIQUES

COMING SOON TO O.U.M. WILL BE AN OCCASIONAL SERIES ON PROGRAMMING TECHNIQUES FROM MATTHEW COATES. MATTHEW HAS BEEN LOOKING AT SOME PROGRAMS/LISTINGS THAT HAVE BEEN PUBLISHED IN O.U.M AND HAS SOME IDEAS TO IMPROVE THEM . THIS SERIES WILL ALSO BE OF GREAT HELP TO THOSE WHO WRITE PROGRAMS.
==

CGA COLOUR MONITOR

BRIAN KIDD HAS RECENTLY ACQUIRED A CGA COLOUR MONITOR AND ASKS IF ANYONE HAS ANY IDEAS ON HOW TO CONVERT IT TO RGB. IT HAS A 9 PIN 'D' TYPE SOCKET,WITH 8 PINS UTILISED (PIN No.7 IS NOT USED).
THE MAKE IS 'TVM' AND THE MODEL IS MD3 - 50/60 Htz.
REPLIES TO O.U.M OR TO BRIAN AT :- 23 HOWARD CLOSE, ROYAL OAK, NEWPORT,GWENT. NP9 9FR
==

THE 'TAKE' COMMAND

STORING ARRAYS ON SEDORIC DISC HAS CAUSED A FEW PROBLEMS TO NEW READERS.
ON A TAPE SYSTEM, 'STORE' AND 'RECALL' ARE STAND ALONE FUNCTIONS e.g 'STORE A$' STORES AN ARRAY 'A$' ON TAPE. ON SEDORIC THE 'PUT' AND 'TAKE' COMMANDS ARE NOT STAND ALONE FUNCTIONS. THEY NEED TO BE APPLIED IN A 'FOR/NEXT' OR 'REPEAT/UNTIL' LOOP. FOR INSTANCE:-
```
              OPEN S,"FILE",2
              FOR R=1 TO 20 A$(R)=STR$(R)
              PUT 2,A$(R)
              NEXT
              CLOSE
```
WILL STORE AN ARRAY 'A$' ON DISC.

IF YOU HAVE A TAPE BASED PROGRAM AND NEED TO TRANSFER THE ARRAYS TO DISC THEN WITH SEDORIC YOU HAVE TO WRITE A SMALL PROGRAM,BUT I BELIEVE WITH 'ORICDOS' IT IS EASIER.
IF ANYONE HAS A PROGRAM TO TRANSFER ARRAYS THEN WE WOULD BE HAPPY TO RECIEVE IT AND PASS IT ON.
==

TANDATA

YOU MAY REMEMBER THAT ROBERT CRISP HAD GOT HOLD OF A 'TANDATA' MONITOR. LATEST FROM HIM IS THAT HE IS HOPING TO BORROW A LEAD FOR THE MONITOR SO THAT HE CAN WORK OUT THE CONNECTIONS. HE NOW HAS A MANUAL FOR THE 'TANDATA' SYSTEMS,BUT IT DOESN'T DESCRIBE THE MONITOR CONNECTIONS.
MEANWHILE FOR 40 pounds O.U.M READER KEN EVANS HAS BOUGHT A SECOND HAND RGB MONITOR. IT IS A 'TANDATA' PRESTEL MONITOR (RELEVANT TO ORIC?). MADE IN JAPAN BY MITSUBISHI (HE THINKS). IT HAS A 12" SCREEN. THERE MAY BE SOME MORE IN THE OFFING (A BIT DEARER THAN ROBERT'S SUPPLIER). THEY WERE ORIGINALLY USED IN A TRAVEL AGENTS AND THUS HAVE A FEW 'MINOR' SCREEN BURNS.
   PERHAPS KEN AND ROBERT SHOULD GET IN TOUCH WITH EACH OTHER.
KEN EVANS IS AT :- 25 ST.PAULS STREET NORTH, CHELTENHAM. GL50 4AQ (TEL: 0242 245030).
   ROBERT CRISP IS AT: - 44 BENTLEY GROVE, MEANWOOD, LEEDS. LS6 4AT (TEL: 0532 745294)
==

A HYBRID

A COUPLE OF QUERIES FROM ARNT ERIK ISAKSEN TO GET YOU THINKING.
ARNT ASKS THE FOLLOWING: " IS IT POSSIBLE TO USE THE 'VIC -1541' DISC DRIVE (CBM) WITH THE ORIC? IT USES A 6 PIN DIN-PLUG. ALSO,WHAT HAPPENS IF I REPLACE THE AMSTRAD ROM WITH AN ORIC ROM AND AT THE SAME TIME REPLACE THE Z80 PROCESSOR WITH A 6502? IS THIS POSSIBLE? I AM READY TO KILL THE AMSTRAD IF THIS IS POSSIBLE,AND 'ORIC AE1' WILL BE BORN".
WELL I THINK YOU WILL NEED TO IMPLANT THE ORIC 'ULA' SOMEWHERE AND THEN WAIT FOR PART 2 OF NIGEL ALEFOUNDER'S ARTICLE ON EMULATORS.

BRIAN'S PRIZE PUZZLE #2 - MARCH 1993

THE OTHER SUNDAY,THE HYMN NUMBERS ON THE CHURCH   HYMN   BOARD   APPEARED   AS
SHOWN:

```
             +
           + +
          +   +
       +++++++
       +      +
       + 192  +
       + 384  +
       + 576  +
       +      +
       +++++++
```

WHAT WAS SO UNUSUAL ABOUT THESE SETS OF NUMBERS,WAS THAT ALL WERE MADE UP
OF DIFFERENT DIGITS,AND NO TWO DIGITS WERE ALIKE.
ALSO THE 2ND NUMBER WAS 2 * NO.1 AND THE 3RD NUMBER EQUAL TO   THE   SUM   OF
NOS. 1 & 2

WHAT OTHER NUMBER SETS HAVE THESE PROPERTIES

ANSWERS TO ME BY MARCH 23rd PLEASE

1ST PRIZE - 10 DIGIT SCIENTIFIC CALCULATOR

2ND PRIZE - A & F'S 'PAINTER'
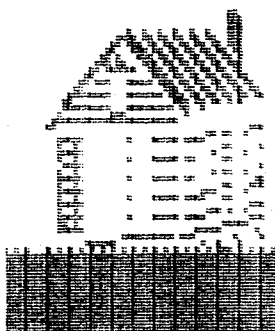
GOOD LUCK   - BRIAN KIDD

SOLUTION TO PRIZE PUZZLE NO.1

```
100 REM PRIZE PUZZLE #1 - PROG SOL.
101 :
102 REM PROGRAMME TO LIST ALL
103 REM ARMSTRONG NUMBERS FROM
104 REM A GIVEN SET OF NUMBERS.
105 :
106 REM ARMSTRONG NUMBERS ARE NOS.
107 REM THAT ARE EQUAL TO THE SUM
108 REM OF THE CUBES OF THEIR
109 REM DIGITS:
110 :
111 REM EG. 153 IS AN ARMSTRONG NO.
112 REM
113 REM 153 = (1^3) + (5^3) + (3^3)
114 REM 153 = ( 3 ) + (125) + ( 27)
115 :
116 PAPER 0:INK 7
117 CLS:PRINT"ARMSTRONG NUMBERS":PRINT
118 INPUT"ENTER SET START NUMBER ";ST
119 PRINT
120 CLS:PRINT"START NUMBER GIVEN =";ST:PRINT
121 PRINT"NOW WORKING OUT IF ANY ARMSTRONG"
122 PRINT"NUMBERS EXIST......":PRINT
123 PLOT 2,25,0:PLOT 3,25,"CONTINUE WITH SEARCH (Y/N)"
124 T=0:I=ST
125 I=I+1
126 Q$=STR$(I):Q=48040-LEN(Q$):W=Q-1
127 FOR F=1 TO LEN(Q$)
128 POKE Q,ASC(MID$(Q$,F,1))
129 Q=Q+1
130 NEXT F
131 POKE W,INT(RND(1)*7)+1
132 S=0
133 K=I
134 Q=INT(K/10)
135 R=K-10*Q
136 S=S+R*R*R
137 K=Q
138 IF K<>0 THEN 134
139 IF I<>S THEN 142
140 T=T+1
141 PRINT I:GOTO 144
142 PLOT 2,25,0:GOTO 125
143 A$="IS THE  ":B$="NUMBER"
144 PLOT 2,25,1:Z$=KEY$:GETZ$
145 IF Z$="Y" THEN 125
146 IF Z$="N" THEN HIRES:TEXT:END
147 GOTO 144
148 :
```
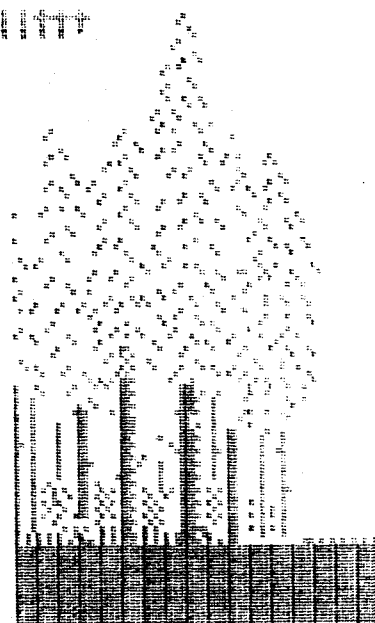
CPD-20   S.T.D.

A number of you have asked how the data in STD can be changed. The following is a very simple program to achieve this, a much prettier version is now supplied with the main program, called 'STDEDIT.COM'.

```
10    OPEN R, "STDCOD", 1
20    FIELD 1, PLACE TO $32
30    REPEAT: CLS : PRINT
40    INPUT "Number to amend"; N$: N$ = LEFT$ (N$, 4)
50    N = VAL (N$)
60    TAKE 1, N
70    PLACE > PL$
80    IF LEFT$ (PL$, 1) <> "*" THEN PRINT: PRINT PL$: PRINT
90    INPUT "New data to be entered"; P$
100   IF P$ = "=" THEN 130
110   LSET PLACE < P$
120   PUT 1, N
130   UNTIL N$ = "0000"
140   CLOSE: END
```

The program asks for the number whose data you wish to alter and strips it to the first four numbers. It then prints the existing data for your inspection. If you decide not to change it, type '=' and press RETURN, another number will be requested. If you do want to change the data, enter the new data and press RETURN. The program stores it on disc and then prompts for another number. To exit type the number '0000'.

Rambling on...

'READ' (COMMAND)

Principal:

The READ command is also used by GET and INPUT. Byte #2C tells you which command is using the routine; it is 00 (nul, b7-0 and b6-0) for INPUT, #40 for GET (not nul, b7-0 and b6-1) and #98 for READ (b7-1 and not nul).

A pseudo DATA pointer is used (#B2-3). This is initialised on the true pointer for READ, on #0034 for INPUT and #0036 for GET. At the end, if it is a READ, the true pointer (#B0-#B1) will be replaced with the current value. It is also necessary to save the value of TXTPTR (in #BA-#BB) because it is used to evaluate the data. In every case it is recovered at the end.

Numeric and alphanumeric values are treated separately. One complication for alphanumeric values is that if they are surrounded by quotation marks (only uses - to permit spaces at the start of data which would otherwise be ignored or the use of commas which would otherwise be treated as separators) it will be necessary to jump over them; several neat pieces of programming follow in relation to giving effect to them.

CCFD	LDX B0	CD89	LDX B0	Take the pointer address	
CCFF	LDY B1	CD8B	LDY B1	of DATA	
CD01	LDA #98	CD8D	LDA #98	b7=1: indicate READ and jump the TYA	
CD02	TYA	CD8E	TYA	#98 is the code for TYA!	
CD03	STA 2C	CD8F	STA 2C	place the command indicator	
CD05	STX B2	CD91	STX B2	save the DATA pointer	
CD07	STY B3	CD93	STY B3		
CD09	JSR $D0FC	CD95	JSR $D188	take the first variable	
CD0C	STA B8	CD98	STA B8		
CD0E	STY B9	CD9A	STY B9	and save its address	
CD10	LDA E9	CD9C	LDA E9		
CD12	LDY EA	CD9E	LDY EA		
CD14	STA BA	CDA0	STA BA		
CD16	STY BB	CDA2	STY BB	and save TXTPTR	
CD18	LDX B2	CDA4	LDX B2		
CD1A	LDY B3	CDA6	LDY B3	recover the DATA pointer	
CD1C	STX E9	CDA8	STX E9		
CD1E	STY EA	CDAA	STY EA	in TXTPTR	
CD20	JSR $00E8	CDAC	JSR $00E8	take character of data	
CD23	BNE CD42	CDAF	BNE CDCE	if not empty, jump	

Treat empty data

CD25	BIT 2C	CDB1	BIT 2C	Which instruction was it?	
CD27	BVC CD36	CDB3	BVC CDC2	jump if not GET	
CD29	JSR $E985	CDB5	JSR $EB78		
CD2C	BPL CD29	CDB8	BPL CDB5	wait for a character	
CD2E	STA 35	CDBA	STA 35	and save it (there is a 0 in #36)	
CD30	LDX #34	CDBC	LDX #34		
CD32	LDY #00	CDBE	LDY #00	take address of the data	
CD34	BEQ CD3E	CDC0	BEQ CDCA	unconditional: read the data	
CD36	BMI CDA9	CDC2	BMI CE35	jump if READ to seek next DATA	
CD38	JSR $CC10	CDC4	JSR $CCD7	so it's INPUT: display '?'	
CD3E	JSR $CCF4	CDC7	JSR $CD80	recover data at the keyboard	
CD3E	STX E9	CDCA	STX E9		
CD40	STY EA	CDCC	STY EA	and adjust TXTPTR in #0034	

CD42	JSR $00E2	CDCE	JSR $00E2	adjust TXTPTR after the comma	
CD45	BIT 28	CDD1	BIT 28	test type asked for	
CD47	BPL CD7A	CDD3	BPL CE06	if numeric, jump	

Treat alphanumeric asked for

CD49	BIT 2C	CDD5	BIT 2C	Type alpha:	
CD4B	BVC CD56	CDD7	BVC CDE2	if not GET, jump	
CD4D	INX	CDD9	INX	X=#35	
CD4E	STX E9	CDDA	STX E9	adjust TXTPTR (one could have returned a ' '	
CD50	LDA #00	CDDC	LDA #00	which is ignored by #00E2)	
CD52	STA 24	CDDE	STA 24	indicate terminator = 0	
CD54	BEQ CD62	CDE0	BEQ CDEE	unconditional	
CD56	STA 24	CDE2	STA 24	put the first character as terminator	
CD58	CMP #'*'	CDE4	CMP #'*'	is it in fact a '*'	
CD5A	BEQ CD63	CDE6	BEQ CDEF	yes, it was a terminator, jump, C=1	
CD5C	LDA #':'	CDE8	LDA #':'	no, the instruction separator	
CD5E	STA 24	CDEA	STA 24	is a better separator	
CD60	LDA #','	CDEC	LDA #','	but the comma has priority	
CD62	CLC	CDEE	CLC	indicate no character to jump	
CD63	STA 25	CDEF	STA 25	save the second terminator	
CD65	LDA E9	CDF1	LDA E9		
CD67	LDY EA	CDF3	LDY EA	take TXTPTR	

CD69	ADC #00	CDF5	ADC #00	to add 1 to it if the entry
CD6B	BCC CD6E	CDF7	BCC CDFA	starts with a quote mark
CD6D	INY	CDF9	INY	not forgetting the high byte
CD6E	JSR $D500	CDFA	JSR $D5BB	evaluate the string pointed to by AY
CD71	JSR $D852	CDFD	JSR $D90D	adjust TXTPTR on the string
CD74	JSR $CB07	CE00	JSR $CB51	do a LET
CD77	JMP $CD82	CE03	JMP $CE0E	and pass to the next

Treat numeric asked for

CD7A	JSR $DFCF	CE06	JSR $DFE7	Evaluate a numeric value
CD7D	LDA 29	CE09	LDA 29	take the integer variable flag
CD7F	JSR $CAEF	CE0B	JSR $CB39	and do a LET

End a READ

CD82	JSR $00E8	CE0E	JSR $00E8	Take the current character (in the DATA)
CD85	BEQ CD8E	CE11	BEQ CE1A	and jump if end of instruction
CD87	CMP #','	CE13	CMP #','	is it a DATA seperator?
CD89	BEQ CD8E	CE15	BEQ CE1A	yes, OK
CD8B	JMP $CC95	CE17	JMP $CD1F	no, so it's an error
CD8E	LDA E9	CE1A	LDA E9	
CD90	LDY EA	CE1C	LDY EA	save the DATA pointer
CD92	STA B2	CE1E	STA B2	which points to the ',' or the #00
CD94	STY B3	CE20	STY B3	
CD96	LDA BA	CE22	LDA BA	recover TXTPTR
CD98	LDY BB	CE24	LDY BB	
CD9A	STA E9	CE26	STA E9	
CD9C	STY EA	CE28	STY EA	to continue the READ
CD9E	JSR $00E8	CE2A	JSR $00E8	another variable to load?
CDA1	BEQ CDCF	CE2D	BEQ CE5B	no, exit
CDA3	JSR $CFD9	CE2F	JSR $D065	yes, you want a ','
CDA6	JMP $CD09	CE32	JMP $CD95	and start again

Find next DATA

CDA9	JSR $CA1C	CE35	JSR $CA4E	Find the end of instruction
CDAC	INY	CE38	INY	and jump
CDAD	TAX	CE39	TAX	was the seperator a ':'?
CDAE	BNE CDC2	CE3A	BNE CE4E	yes, jump
CDB0	LDX #2A	CE3C	LDX #2A	prepare X for 'OUT OF DATA'
CDB2	INY	CE3E	INY	index the high link byte
CDB3	LDA (E9), Y	CE3F	LDA (E9), Y	and take the link
CDB5	BEQ CE20	CE41	BEQ CEAC	if end of program, 'OUT OF DATA'
CDB7	INY	CE43	INY	if not, index the line number
CDB8	LDA (E9), Y	CE44	LDA (E9), Y	take the low byte
CDBA	STA AE	CE46	STA AE	and save it
CDBC	INY	CE48	INY	
CDBD	LDA (E9), Y	CE49	LDA (E9), Y	take the high byte
CDBF	INY	CE4B	INY	
CDC0	STA AF	CE4C	STA AF	and save it
CDC2	LDA (E9), Y	CE4E	LDA (E9), Y	take the code of the first keyword of the
CDC4	TAX	CE50	TAX	line and save it in X
CDC5	JSR $CA0D	CE51	JSR $CA3F	adjust TXTPTR to the start of the line
CDC8	CPX #&DATA	CE54	CPX #&DATA	does the line start with DATA?
CDCA	BNE CDA9	CE56	BNE CE35	no, continue the search
CDCC	JMP $CD42	CE58	JMP $CDCE	yes, go and deal with the data

Exit from a READ/GET/INPUT

CDCF	LDA B2	CE5B	LDA B2	Take the current DATA pointer

First, I must apologise for missing the last few issues of O.U.M. It is a particularly fierce time in industry and survival is the order of the day. Luckily, so far, I have survived but this week I have had to say farewell to quite a few colleagues and every news report seems to add more gloom with people losing their livelihood. I hope that we all can look forward to better times very soon.

It is at a time like this that a hobby such as computing can be a therapeutic diversion and, of course, the ORIC provides a good platform to achieve this on. Software is very reasonably priced and its BASIC and hardware is easily understood, so I must try to create some more time in which to dabble. I have told Dave that I would limit this article to one page but I will strive to resume normal service for the April issue.

WORD-SPEED

I am pleased to announce that Ray McLaughlin has passed an update for WORD-SPEED onto me, so I will be evaluating it and I intend to release details in the next issue.

DISC BASIC

I intend to continue with the series on how to make use of SEDORIC DOS's facilities and having covered sequential access files the next topic will be Sorted Sequential Files.

GEOFF PHILLIP'S BOOK

If memory serves me right, then I will be covering the cassette input/output facilities next month.

TAPE ODDMENTS

I was examining a small box lurking at the back of my loft which had a few tapes in them. They are for the ORIC-1 (some can be converted for the ATMOS as they are BASIC programs) but they may of interest to some users. Anyway, to cover postage, etc. they can be bought for 50p each. The list includes :-

1   *Bar Blaster* by Byteland (1983?). A variant of the Breakout game. I have 2 copies.

2   *Cascade 50* by Cascade Games (1983). A collection of mainly BASIC programs covering a wide variety of simplistic games.

3   *Leopard Lord* by Kayde Software Ltd. (1983). This company was one of the first to bring out a series of adventure games for the ORIC. 2 copies.

4   *Memory Map* by Byteland (1983?). A maze game. 2 copies.

5   *Word Processor* by Juniper Computing (1983). This was a fairly simple word-processor written for the ORIC and the Dragon-32, which has been mentioned a few times in recent issues. 4 copies.

There are a few more but I need to have a look at them first and see if they are satisfactory. So see you next month .... Allan.

ORIC Enthusiasts

DATELINE: SATURDAY FEB.27th.
FOR SOME REASON IT HAD TO SNOW JUST LIKE WHEN I ORGANISED A FEBRUARY 'ORIC MEET' A FEW YEARS AGO. I SOON DISCOVERED THAT THE VENUE WAS NOT WHERE I THOUGHT AND HAD LED JONATHAN HAWORTH AND DAVID WILKIN TO BELIEVE. ANYWAY,IN THE END WE ALL MEET UP. ALSO ALONG WERE MY YOUNGEST SON - MATTHEW AND JON'S SON NICHOLAS AND A PAL OF HIS (I NEVER DID FIND OUT HIS NAME).
WHY WERE WE IN HEMEL HEMPSTEAD? IT WAS THE LOCATION FOR AN 'ALL FORMATS COMPUTER FAIR' ORGANISED BY THE WIDELY 'ACCLAIMED' BRUCE EVERISS. I HAD CHECKED WITH BRUCE TO MAKE SURE THAT THE SHOW WAS STILL ON. BRUCE VAGUELY REMEMBERED BEING INVOLVED EITH ORIC. HE SAID HE WORKED ON THE SOFTWARE SIDE AND AFTER I HAD THROWN A FEW NAMES AT HIM HE REMEMBERED THAT IT WAS 'TANSOFT'. I ASKED IF HE WOULD LIKE TO DO AN INTERVIEW FOR 'O.U.M' READERS,BUT HE DECLINED ON THE GROUNDS THAT HE WAS SHY!
FOR THE 4 pound ENTRANCE FEE (I'D FORGOTTEN MY 1 pound OFF VOUCHER),IT WAS A BIT OF A DISSAPOINTMENT TO ME. NOWHERE NEAR AS MANY STANDS AS THE ONE ATTENDED AT THE HORTICULTURAL HALLS A COUPLE OF YEARS BACK. EVEN SO, BY CHARGING AN ADMISSION FEE AND THEN A MINIMUM OF 60 pounds PER STAND,THERE MUST BE SOME PROFIT IN BEING A SHOW ORGANISER.
JON NOTED THAT WERE NOT MANY 'BARGAINS'. IN THE WAY OF 'ORIC' MATTER HE FOUND TWO CASSETTE LEADS AND TWO ORIC-1 BOOKS.
SECOND-HAND 720K,3.5" DRIVES COULD BE HAD FOR 30 pounds - NOT CHEAP. DAVID AND I BOUGHT SOME 3.5" DISCS AND NEAR THE END I PICKED UP A COUPLE OF 5.25" 'TEAC' 40 TRACK DOUBLE SIDED DRIVES. I ALSO BOUGHT A RIBBON FOR HALF THE NORMAL PRICE FOR THE SEIKOSHA PRINTER. I WOULD OF BOUGHT MORE RIBBONS,BUT THE VENDOR INSISTED THAT THE 'AMSTRAD 8256' RIBBON WAS NOT COMPATIBLE WITH MY PRINTER. WHEN I GOT HOME I FOUND I WAS RIGHT. DON'T BELIEVE ALL A SALESMAN TELLS YOU!
BY BARTERING AT A STAND THAT WAS PACKING UP I MANAGED TO GET THE NEW LYNX HAND HELD GAMES MACHINE FOR 30 pounds. BY NEW I MEAN LATEST MODEL FOR WHEN I GOT HOME I DISCOVERED THAT THE MACHINE ITSELF WAS NOT NEW. ARE ALL NEW MACHINES SUPPOSED TO HAVE THE SERIAL NUMBER REMOVED AND THE NAME 'SAM' ENGRAVED ON THE UNDERSIDE WITH A KNIFE?
THE BULK OF THE STANDS DEALT WITH THE NEWER MODELS - PC's (PLENTY OF PD/SHAREWARE),AMIGA ,ATARI AND CD ROM MATERIAL. THERE WAS A SPLATTERING OF CASSETTE SOFTWARE FOR THE COMMODORE AND SPECTRUM MACHINES.
INEVITABLY THE GANG OF THREE ENDED UP IN THE BAR AREA TO DISCUSS ORIC MATTERS.
WE TALKED ABOUT TRACK/SECTOR ERRORS THAT CROP UP ON SEDORIC. JON TOLD ME OF HIS PLANS FOR ARTICLES FOR FUTURE ISSUES OF O.U.M AND UNVEILED 'THE NAKED ORIC'. (SEE REPORT ON ANOTHER PAGE).
NICHOLAS HAWORTH HAS BEEN LOGGING ONTO THE CYCLONE BULLETIN BOARD RECENTLY AND NOW INTENDS TO START UP AN ORIC BOARD (FULL DETAILS ELSEWHERE). NICHOLAS HAS CERTAINLY BEEN BUSY OF LATE. HE IS ALSO STILL WORKING ON AN ORIC VERSION OF A WELL KNOWN BOARD GAME.
ALL IN ALL A FRUITFUL AFTERNOON SPENT IN GOOD COMPANY AND WILKIE ASKED ME TO PRINT THE FACT THAT HE BOUGHT ME A PINT!
MANY TOPICS WERE COVERED IN OUR CHIT-CHAT INCLUDING MIDI INTERFACES (AT LAST A REALITY FOR THE ORIC), THE TELESTRAT , WORDSPEED etc.etc.
AS WE BADE OUR FAREWELLS WE LOOKED FORWARD TO THE AYLESBURY ORIC MEET IN JULY AND THERE WAS A HINT FROM DAVID AND JON THAT A VISIT TO PARIS IN JUNE WAS ON THE CARDS.

- DAVE DICK

===

THE FRONT COVER

READERS MAY LIKE TO KNOW THAT THE FRONT COVER OF THIS ISSUE SHOWS THE PROTOTYPE ORIC-1. IT'S COLOURS WERE TEAK AND APPLE GRREN AND IT WAS AIMED AT THE EXECUTIVE DESK TOP USER. ONE OF ORIC'S MAIN SHAREHOLDERS,NAMELY 'BRITISH CAR AUCTIONS',WERE NOT IMPRESSED THAT THE COLOURS WERE COMMERCIAL ENOUGH AND SO THE YOU GOT YOUR OLD GREY ONE.
===

"THE NAKED ORIC"

THIS IS THE LATEST PUBLICATION FROM OUR JONATHAN HAWORTH. THE TITLE 'THE NAKED ORIC' IS I BELIEVE A STRAIGHT TRANSLATION OF THE PHRASE "ORIC A'NU".
ALL IN ONE BOOK IS THE DISASSEMBLY OF THE ORIC -1 AND ATMOS ROMS FROM #C000 TO #CFFF. THE OTHER ADDRESSES WILL BE COVERED IN THE SEQUELS AS THIS IS JUST 'THE NAKED ORIC PART ONE'.
UNASHAMEDLY TRANSLATED FROM FABRICE BROCHE'S PUBLICATION,THIS 61 PAGE WORK IS OF THE SAME QUALITY PAPER OF JON'S OTHER RECENT PUBLICATIONS.
AS WELL AS THE TEXT THAT GOES WITH ADDRESSES,THERE ARE ALSO FLOWCHARTS AND AN INDEX.
MANY ITEMS OF INTEREST AND TOPICS FOR DISCUSSION. FOR EXAMPLE THE COMMENT AT #C9FB IS:- IS IT POP? ,WHILST AT #C47D IS :- PRINTER OFF (POINTLESS!).
PLENTY OF POINTS TO THINK ABOUT.
FOR THOSE WHO DIDN'T KNOW, FABRICE BROCHE WAS THE AUTHOR OF SEDORIC AND THE TELESTRAT ROM.
THIS BOON FOR THOS INTERESRED IN THE WORKINGS OF THE ROM CAN BE ORDERED DIRECT FROM JON HAWORTH AT: 3 MADINGLEY ROAD, CAMBRIDGE. CB3 OEE.
PRICE INCLUDING POSTAGE IS: 4 pounds.
===

BITS 'N' BOBS

SUPERCOP

I HAVE NOW RECIEVED A 'GOOD' COPY OF 'SUPERCOP' FROM HARRY PETERS. IT TURNED OUT THAT IT WASN'T THE FACT THAT THE VERSION I HAD WAS CORRUPTED,BUT IT UTILISED COMMANDS ONLY APPLICABLE TO HARRY'S V1.6 ROM.
THE COPIER IS FOR FOR: - TAPE TO DISC,DISC TO TAPE, AND DISC TO DISC. I NOW HAVE TO TEST IT THOROUGHLY AND WILL REPORT FURTHER.

TWO LINER

REGARDING THE TWO LINER IN THE LAST ISSUE OF O.U.M - STAN HOLDEN WROTE IN TO SAY:- "REMOVE THE FULL STOPS IN LINE 1 AND CHANGE 126 TO 123 IN LINE 2 FOR SOMETHING A LITTLE DIFFERENT"

FUNPARK

THOSE WHO RECIEVED THE SECOND O.U.M DISC WILL PROBABLY OF SPOTTED A BUG IN 'FUNPARK'. ACCORDING TO BRIAN KIDD THERE WERE NO SEEN ERRORS USING 'POP'. HE SAYS TO OVERCOME THE 'RETURN WITHOUT GOSUB' ERROR YO SHOULD DO THE FOLLOWING:-
ADD LINE 9632   IFA=13 THEN GOTO 3674
AMEND LINE 3874 TO READ: GOTO 92 (NOT REURN)
AMEND LINE 3838 TO READ: GOTO 38 (NOT RETURN).
AS THE DISC IS SEDORIC YOU CAN THEN OVERWRITE THE ORIGINAL FILE WITH - SAVEO"FUNPARK",AUTO
IF PREFERRED YOU MAY SEND YOUR DISCS BACK TO ME (DAVE).

TURBOLOAD

BRIAN KIDD TELLS ME THAT HE NOW HAS A FULLY WORKING VERSION OF THE 'TURBOLOAD' PROGRAM FROM STEPHEN NEACHEN, AND IS CURRENTLY TESTING IT.

RUMANIA BOUND

AS WELL AS EMBARKING ON HIS VISITS TO SPAIN,OUR RESIDENT TEACHER FRANK BOLTON WILL BE SPENDING SOME TIME IN RUMANIA THIS YEAR HELPING WITH RELIEF WORK.
THE INTREPID FRANK WILL BE TAKING ALONG AN ORIC-1 , A CASSETTE PLAYER AND WORD PROCESSING PACKAGE. YOU CAN'T KEEP A GOOD MACHINE OUT OF THE THICK OF IT.
BEST WISHES TO FRANK.
NOW MR.HOPPS - DID YOU EXPORT ANY ORICS INTO RUMANIA?

THE SERIAL PORT

TREVOR SHAW SAYS THAT HE HAS HAD NO FEEDBACK REGARDING HIS FILE TRANSFER PROGRAM THAT WAS PRINTED IN THE DECEMBER O.U.M. HE WANTS TO KNOW IF ANYONE HAS TRIED IT AND IF IT WORKS PROPERLY.
I KNOW A LOT OF INTEREST HAS BEEN SHOWN FROM LETTERS THAT I RECIEVE. A FEW OF YOU HAVE NOW DUG OUT YOUR MODEMS AND SOMEONE HAS JUST PURCHASED ONE. PLEASE LET ME KNOW READERS - HOW FAR YOU HAVE GOT SO FAR. UNLESS THE INTEREST IS THERE THEN WE WON'T GET A FURTHER ARTICLE ON THE SERIAL INTERFACE FROM TREVOR.
MEANWHILE I HAVE SENT TREVOR A DISC SO THAT I CAN HAVE THE PROGRAM. IF ANYONE WOULD LIKE A COPY THEN THEY SHOULD SEND A BLANK DISC PLUS 2 x 24 pence STAMPS TO ME (DAVE). ALTERNATELY YOU CAN SEND 2.00 TO INCLUDE A 3" DISC, 1.00 TO INCLUDE A 3.5/5.25"

TREVOR ALSO ASKS IF READERS WOULD LIKE A GLOSSARY OF TERMS. HE ALSO ASKS IF YOU WOULD BE INTERESTED IN ARTICLES ABOUT OTHER COMMUNICATIONS TOPICS e.g: BULLETIN BOARDS,HOMEWORKING,MACHINE TO MACHINE FILE TRANSFER (e.g. ORIC TO ARCHIMEDES OR P.C).
COME ON READERS PUT THOSE PENS TO PAPER. WRITE TO YOUR EDITOR NOW!!! THIS MAGAZINE IS HERE TO MEET YOUR REQUIREMENTS - SO DO IT NOW!

YET MORE BITS 'N' BODS

QUOTE OF THE WEEK
----- -- --- ----

I WAS RECENTLY GIVEN THIS QUOTE ABOUT ERSTWHILE MANGAING DIRECTOR OF 'ORIC', MR.BARRY MUNCASTER - " BASICALLY HE WAS A CROOK".
    AS WE CANNOT AFFORD A WRIT I CANNOT PUBLISH THE NAME - JUST A FEW ONE LINERS:-
 1 PRINT" HE ENDED UP DRIVING PAUL KAUFMAN'S MERCEDES"
 2 PRINT" HE WOULD DO WELL AS A DOUBLE GLAZING SALESMAN FOR ONLY THE BEST FIT .... (WELL ALMOST)
 3 PRINT" SOUNDS LIKE AN AUSTRALIAN WHO WOULD GO WELL WITH A SHEILA!"
 4 PRINT" IN HIS CURRENT OCCUPATION DOES HE OWN A 'FISHY' BUSINESS.

===

ALL FORMATS FAIRS

WITH THIS ISSUE YOU WILL FIND A 1 pound OFF VOUCHER FOR ONE OF THE MANY 'ALL FORMATS FAIRS' STAGED AROUND THE COUNTRY.
===

ROBERT COOK AND 'LORIGRAPH'
------ ---- --- ---------

ROBERT INFORMS ME THAT HE DIDN'T USE 'LORIGRAPH' FOR THE PICTURES HE DREW. IN FACT HE USED 'OUM CAD' WITH AMENDMENTS FROM JAMES GROOM. HE PAINSTAKINGLY TRACED THE PICTURES ONTO GRAPH PAPER AND DID IT ALL PIXEL BY PIXEL.

B U L L E T I N   B O A R D

A BULLETIN BOARD FOR THE ORIC IS THE LATEST VENTURE FROM NICHOLAS HAWORTH.
 IT WILL BE CALLED 'ORICALL'. ('ORICALL' WAS THE NAME GIVEN TO THE NEVER TO BE PUBLISHED 'ORIC CLUB' MAGAZINE AT THE TIME THAT ORIC WERE TO TAKE A SUBSTANTIAL NUMBER OF PAGES ON PRESTEL TO CREATE AN ORIC DATABASE FOR MODEM USERS).
 THE BULLETIN BOARD WILL BE RUN OFF A P.C.
 NICHOLAS WANTS A MINIMUM OF 13 USERS TO MAKE IT WORTHWHILE AND THEREFORE WOULD THOSE INTERESTED PLEASE DROP ME A LINE SO THAT NICHOLAS KNOWS WHETHER TO PROCEED.
    ABOUT THE BULLETIN BOARD
    ----- --- -------- -----
    I HAD A CHAT WITH YOUNG NICK AT HEMEL AND BASICALLY THIS IS WHAT IS ENVISAGED:-
    THE BULLETIN BOARD WOULD INCLUDE ANY LATE NEWS FROM O.U.M AND THE C.E.O. THE COST TO LOG ON WOULD BE THAT OF A TELEPHONE CALL.
 LETTERS ADDRESSED TO JON HAWORTH AND DAVE DICK COULD BE LEFT.
 THERE WOULD BE AN ORIC FILE SECTION WHERE YOU COULD DOWNLOAD FILES DIRECT e.g PUBLIC DOMAIN.
 SOFTWARE UPDATES: PERHAPS BE ABLE TO UPDATE SHAREWARE AND COMMERCIAL SOFTWARE. AS AN EXAMPLE IF YOU WANTED THE LATEST UPDATE TO SEDORIC (OBVIOUSLY NICK WOULD HAVE TO TALK TO ALLAN WHITAKER ON THIS ONE). YOU WOULD BE ISSUED WITH A PASSWORD. AS CALLS ARE LOGGED THEN YOU WOULD BE INVOICED FOR THE UPDATE. OF COURSE IF YOU PASSED YOUR PASSWORD AROUND THEN YOU WOULD END UP PAYING FOR ALL YOUR MATES UPDATES.
 A LINK TO O.U.M - DATA FILES e.g. MATERIAL FOR AN ISSUE OF O.U.M COULD BE UPLOADED DIRECT TO O.U.M. YOU COULD ALSO SEND YOUR PROGRAMS FOR EVALUATION.

 OPENING HOURS - THESE WOULD BE AT CERTAIN TIMES TO BE DECIDED BY AND PUBLISHED BY NICK.

    WELL - HOW DOES THAT GRAB YOU?
 HAVE YOU ANY FURTHER IDEAS?
 WILL YOU BE ONE OF THE 13+?
 WRITE TO O.U.M NOW!!!!!

                                                    - DAVE DICK

===

THE NEXT ORIC MEET IN AYLESBURY IS ON SATURDAY JULY 17th

DAVE LOOKS AT THE LETTER 'A'

A COUPLE OF MONTHS BACK I SAID THAT I WOULD LOOK AT MY PERSONAL A to Z OF SOFTWARE. I GOT MY INDEX AS UP TO DATE AS TIME WOULD PERMIT AND SO THERE ARE STILL SOME GAPS. I HAVE ONLY INCLUDED THOSE TITLES THAT I HAVE ON DISC AND THEREFORE SOME STILL ONLY ON CASSETTE ARE OMITTED.
  TO GIVE A NARRATIVE ON EACH TITLE WOULD MEAN THIS SERIES RUNNING FOR MANY YEARS,AND SO I'VE ONLY GONE INTO DETAIL ON THE LESSER KNOWN ONES. EVEN SO, THIS COULD LAST FOR MANY MANY ISSUES. WE START WITH THE LETTER 'A'.

  ANTICS - Geoff Heynes translation of a French 'rescue the maiden game', with overtones of DINKY KONG. Written by Stephane Massart and originally entitled SINGERIE,this super game was available on a CEODISC.
  ATTACK OF THE CYBERMEN - IJK's arcade is compatible with the ALTAI/PASE interfae.
  ACHERONS RAGE - SOFTEK title by S.CHAPMAN. Like many from this company there is a training mode. You are in outer space and zap all.
  A VIEW TO A KILL Pts.1 and 2 - DOMARK's rendition of the James Bond movie. Two arcade adventures.
  A VIEW TO KILL Pt.3 - Jean Boileau got hold of this and passed it to the CEO. Based around the Eiffel Tower,this is an utterly frustrating maze/arcade. I've given up on it. Does anybody understand it?
  ANTICRACK (V2.1b) - Andre Widhani's tape header reader.
  AFRICA - was on the first OUMDISC.
  ARRAYSORT - from MICR'ORIC - you enter 10 random words and they are sorted alphabetically.
  AWARI - The very basic and very slow rendition of this strategy game from Geoff Phillips.
  AWARI - from LANDSCAPE as part of their VOTRAX speech program. You play the game and listen to the phonems.
  ATTACK ON KIXI - penned by Simon Graschwitz. Simon and a friend had a five pound wager on who could produce the best game for the Oric. This was the result. Never officially released it nevertheless found it's way to France and then back here to old blighty. A good Invaders game and with Simon's permission will go on PD or a future OUMdisc.
  APPENDRE L'ANGLAIS - from the Winter 1990 CEODISC this is English lessons for the French. Of course it could help us with our French.
  ALPHABET - from the same CEODISC a fun game. Control your man ,avoid the blocks and pick up the letter 'A'. Next screen you pick up 'A' and 'B' ,and so it goes on. All against the clock.
  ATTERRISSAGE - same source as the last two. A simple listing. Land yout craft on th pads.
  ATLANTID - a novel French arcade from Sprites.
  ADDING - Judy Simms's addition program. I got the correct answer working it out in my head,but was told I was wrong. Reason being that when you are at school you are have to put the last digit first.
  AUTHOR - Tansoft's word processor adpated for disc by Owe Fransson.
  ACCOUNT BOOK - Softbacks program now coupled with ORIC-CALC and available from our mail order section.
  ASTRONOMER - Rob Kimberley's Oric version on PD - CPD -51
  A TABLE - Daniel 'WILLY' Duffau passed this on to me . Written by M. Archambault. You insert the names of your guests and waiters etc. for a dinner party. The permutations of who sits where are displayed. When you're happy you print it off. I'm sending this to the Queen!
  ATMON - the Mick Poat conversion of this dissasembler/monitor. Mick,by the way,was the famed drum machine man.
  ALPHA - Sedoric utility for sorting a directory.
  ARROW OF DEATH Pts.1 and II - Mysterious Adventures from Channel 8. Graphical and available on disc from OUM Mailorder.
  AIGLON - a French arcade that is about as smooth as SPOKKY MANSION!!!
  ATMOSAPARIS - C.Rey's French MONOPOLY from THE'ORIC.
  ARIA - some serious music from a CEODISC.
  AIRLINE - C.C.S title - strategy for Richard Branson fans - I've sent this to the British Airways board.
  ARTIST - a drawing aid.
  ANAGRAM - that's what it is!
  ACROBATES - novel Breakout from HEBDOLOGICIEL.
  AROUND THE WORLD IN 80 DAYS - from NO MANS LAND - a nice graphical strategy now in Enlish.

  WELL I ENJOYED DOING THAT. SOME PROGRAMS I HADN'T LOOKED AT FOR A LONG TIME.
  NEXT TIME ROUND WE WILL LOOK AT THE LETTER 'B' ONWARDS.
                                                              - DAVE DICK

```
100 REM  RANDOM DRAGONS FOR ORIC
105 'QUIT
110 CLS:HIRES
120 X=INT(RND(1)*66)+4
122 Y=X:P=X:Q=X
124 B=INT(3*RND(1))-1
130 PRINT,"ANY KEY  -   NEW FRAME"
135 PRINT,"<ESC>    -   END";
140 F=INT(3*RND(1))-1
145 B=INT(3*RND(1))-1
147 C=INT(16*RND(1))+1
150 X=X+F:Y=Y-B:Q=Q+B:P=P+F
160 IFX<10 OR X>239 OR Q>239 OR Q<10 THEN X=100:Q=33
170 IFY<10 OR Y>239 OR P>239 OR P<10 THEN P=33:Y=100
180 CURSETX,Y,1
181 CURSET 239-X,Y,1
190 CURSET X,199-Y,1
195 CURSET 239-X,199-Y,1
200 CURSET Q,P,1
204 CURSET 239-Q,P,1
210 CURSET Q,199-P,1
213 CURSET 239-Q,199-P,1
220 CURSET Y,X,1
224 CURSET 239-Y,X,1
230 CURSET Y,199-X,1
234 CURSET 239-Y,199-X,1
240 CURSET P,Q,1
244 CURSET 239-P,Q,1
250 CURSET P,199-Q,1
253 CURSET 239-P,199-Q,1
300 IN$=KEY$
304 IF IN$=""THEN 140
310 IF IN$=CHR$(27) THEN CLS:END
320 TEXT
330 PRINT@2,4;"New value  X [";X;"]";
335 INPUT X
340 PRINT@2,7;"New value  Y [";Y;"]";
345 INPUT Y
350 PRINT@2,10;"New value  P [";P;"]";
355 INPUT P
360 PRINT@2,13;"New value  Q [";Q;"]";
365 INPUT Q
400 CLS:HIRES:GOTO140
```
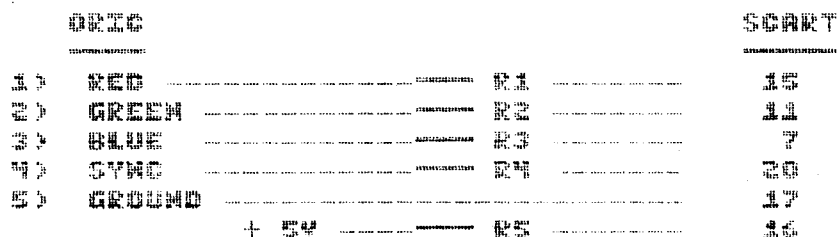
FROM HARRY PETERS COMES THIS TYPE-IN FOR READERS. IT IS A 'MANDELBROT' DRAGONS PROGRAMS THAT DRAWS A NICE PICTURE.

NOTE TO TAPPERS:- LINE 5 IS ONLY FOR 'SEDORIC' USERS AND IS NOT NEEDED FOR THOSE ON 'ORICDOS' OR THOSE WHO ARE CASSETTE BASED.
THOSE WITH 'SEDORIC' CAN UTILISE 'FUNCT' and 'J' TO SAVE HAVING TO TYPE 'CURSET' IN EVERY TIME.

RECENTLY I HAVE CONNECTED A COLOUR TELEVISION WITH SCART PLUG TO MY ORIC AND NOW HAVE BEAUTIFUL COLOURS,AND A VERY SHARP IMAGE ON MY MONITOR.
HERE IS A DRAWING OF THE MONITOR LEAD AS I MADE IT.
THE RESISTORS ARE IN THE SCART PLUG. THE +5V I TOOK FROM THE POWER SUPPLY.

```
        ORIC                                    SCART
        ----                                    -----

   1)   RED    ---------------------- R1 ------------- 15
   2)   GREEN  ---------------------- R2 ------------- 11
   3)   BLUE   ---------------------- R3 ------------- 7
   4)   SYNC   ---------------------- R4 ------------- 20
   5)   GROUND ------------------------------------- 17
            + 5V ------------------ R5 ------------- 16
```

R1=R2=R3=R4 = 470 OHMS
R5 = 68 OHMS (note from the Editor - I think it was 68 - if it should be 60 then please let me know HARRY!)

WHEN THERE IS STILL NO IMAGE THEN R5 CAN BE DELETED.

                                              - HARRY PETERS

==

T A I L E N D E R

WELL HOPEFULLY YOU WILL THINK THIS TO BE ONE OF THE BETTER ISSUES OF O.U.M PRODUCED.
PLANNED FOR FORTHCOMING ISSUES ARE THE FOLLOWING:

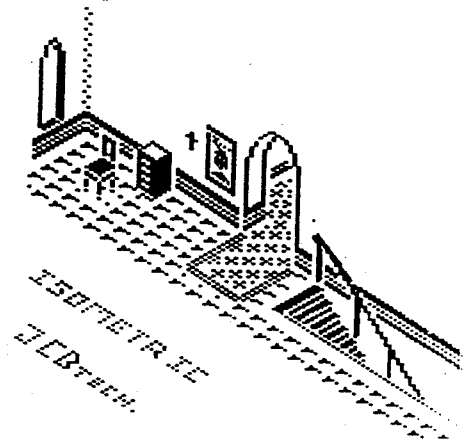AN ARTICLE ON SCART FROM JON HAWORTH.

MORE ON EMULATORS.

THE FINALE TO THE C.E.O STORY FROM VINCENT TALVAS.

A CONTINUATION OF BRIAN KIDD'S A TO Z OF SOFTWARE HOUSES.

MORE LISTINGS,MORE TIPS AND MORE.

GET THOSE ITEMS IN.

CLOSING DATE FOR ITEMS FOR INCLUSION IN THE APRIL O.U.M IS MARCH 24th.

==

OUM DISC No.2

ALL THOSE WHO RECIEVED THE SECOND O.U.M DISC SHOULD ALSO OF RECIEVED A C.A.D MANUAL, A LONE RAIDER INLAY AND A 2 PAGE INSTRUCTION SHEET. IF YOU DID NOT RECIEVE ALL THEN PLEASE GET IN TOUCH.
ON EARLY EDITIONS OF THE OUM DISC THE PROGRAM 'STARSIGN' WAS OMITTED FROM THE MENU. IT IS ON THE DISC. PLEASE DO ONE OF THE FOLLOWING: - a) CALL IT FROM BASIC, b) AMEND YOUR MENU or c) SEND THE DISC BACK.
HAVE YOU PAID ?????
IF YOU STILL OWE FOR YOUR DISC OR INDEED IF YOU STILL OWE FOR ANY OTHER SOFTWARE THEN SEND ME THE MONEY NOW!
UNLESS ACCOUNTS ARE SETTLED WITHIN 14 DAYS (OR A GOOD EXCUSE GIVEN) THEN NO FURTHER CREDIT WILL BE GIVEN.
==

RENEWAL OF SUBS.

RECENTLY WHEN SOMEONES SUBSCRIPTION TO O.U.M HAS EXPIRED I HAVE SENT THEM THE LATEST ANYWAY. THIS IS BACKFIRING. ONE IN PARTICULAR HAD 2 LETTERS WARNING THAT SUBS. WERE DUE THEN A LETTER WITH A FREE GRATIS ISSUE. AFTER A WHILE I PHONED HIM AND HE SAID: 'OH I WAS GOING TO DROP YOU A LINE. I DON'T USE THE ORIC MUCH NOW AND WASN'T GOING TO BOTHER'
BLOODY CHARMING!
MY ROLE AS PROGRESS CHASER IS NOW CEASING. IF YOU DON'T PAY UP WHEN SUBS ARE DUE THEN YOU GET NAFF ALL!. IF THERE IS A PROBLEM AND YOU WANT TO RENEW AND CAN'T AFFORD IT FOR A FEW WEEKS THEN JUST DROP ME A LINE TO EXPLAIN.
==

SEDORIC - IS THERE A BUG!

RECENTLY ANOTHER CASE OF TRACK 14,SECTOR 01/02,FAULT 10 HAS CROPPED UP WITH A SEDORIC USER.
IS IT THE POWER? IS IT SEDORIC? IS IT THE DIP SWITCH SETTINGS ON THE DRIVES?
EVERYONE HAS THEIR OWN IDEA. THE MOST POPULAR BEING:"TURN IT OFF FOR A WHILE AND TRY AGAIN LATER".
I INTEND TO GATHER ALL THAT HAS BEEN PRINTED ON THE SUBJECT AND WOULD WELCOME YOUR INPUT.
==

SECOND-HAND SOFTWARE

THE FOLLOWING CASSETTE SOFTWARE IS FOR SALE:
ORIC-CAD (TANSOFT) + MANUAL - 2.50
ORIC-MON (TANSOFT) + MANUAL - 3.00
ORIC-CALC (TANSOFT) + MANUAL - 3.00
all prices include postage. Send your monies to Dave Dick.

GRANDAD

NOW IN STOCK ARE A FEW COPIES OF 'GRANDAD' - THE QUILLED TEXT ADVENTURE FROM PAUL BAKER. THESE ARE 3.50 EACH.

ALTAI JOYSTICK INTERFACES

THESE INTERFACES ARE NOW COMPLETELY OUT OF STOCK AND NO MOR SUPPLIES ARE ENVISAGED.
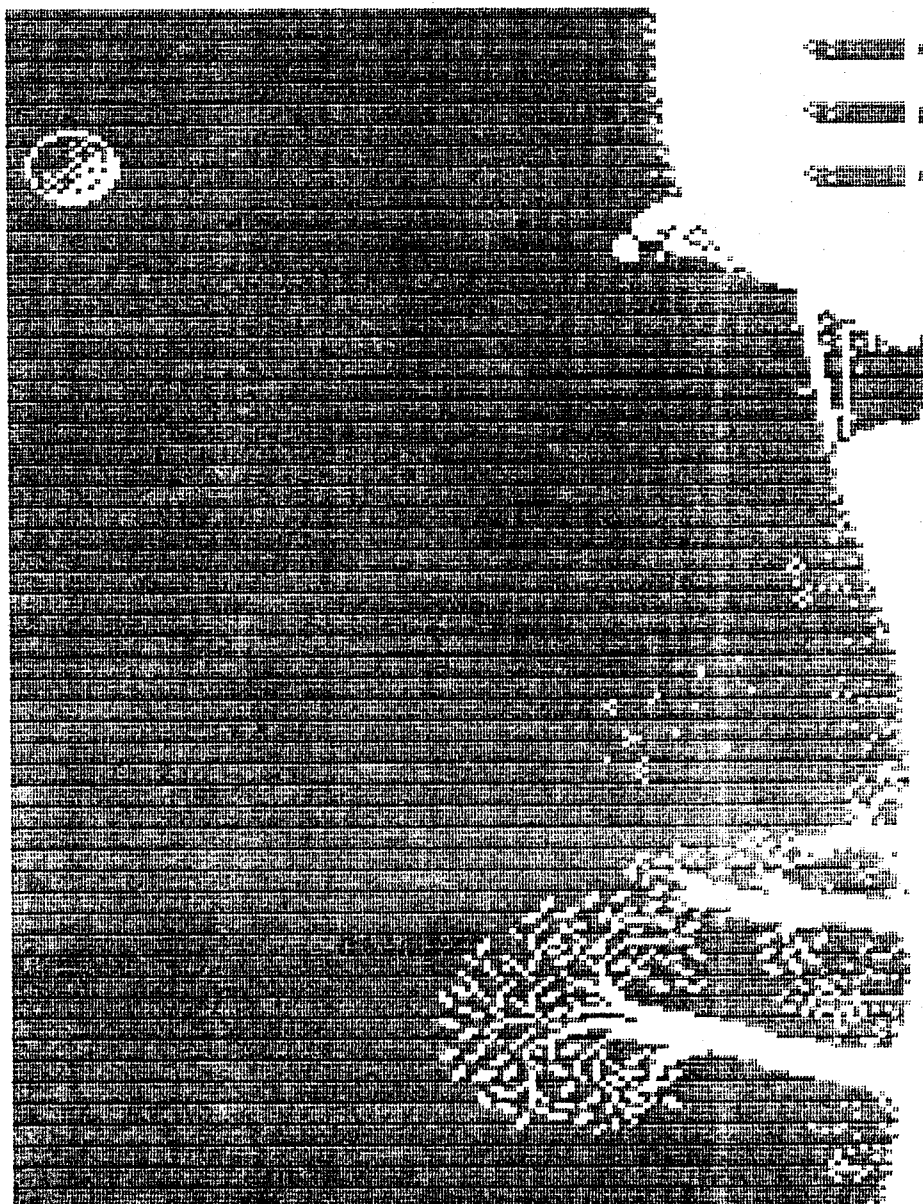I HAVE RECENTLY RECIEVED AN INTERFACE FROM FRANCE. WHEN I HAVE TRANSLATED THE INSTRUCTIONS I WILL GIVE IT A TRY AN REPORT FURTHER.

IN THE FLOWER GARDEN AGAIN, GARFIELD?
HOW'D YOU GUESS?
Randy Wrenn

THE BACK PAGE

WELL THAT'S THE END OF ANOTHER ISSUE AND SO TO THE INDEX:-