ORIC COMPUTING THE COMPLETE ORIC USER MAGAZINE NOVEMBER/ISSUE 1

HORRORS HORRORS In adventure with



ROUTINE

SOFTWARE REVIEWS

WATCH OUT! FOR NEXT MONTHS COMPETITION WIN AN ORIS MCP-40 RINTER PLOTTER

FICIAL ORIC OWNERS USERS GROUP PUBLICATION





As a newly formed Users Group, following a very popular micro and lauching a new magazine in support, we are pleased to announce, at this early stage, that our Group has received official approval from Oric Products International. Whilst we remain an independent Users Group this situation works well for us by increasing our User base potential throughout the world. It is this constructive attitude that will give our Group members the maximum benefit of being an Oric owner and a member of Oric Owners Users Group. With that, and the launch of the inaugural issue of 'Oric Computing', we set about a task to surpass all others in our field. The objective being to bring you one of the most advanced and active Users Groups in modern micro technology. We are a new breed - Never has any other Britisy industry ever spawned the likes of us - The Users!

For the last few months we have been operating a Users Group for the Oric-1 under a different flag of support. Whilst this has aided the new Oric Owner with information, the size and scope of the operation has caused us to expand still further. From Monday, 7th November, 1983, the Group's Head Quarters will be operated from a new address especially acquired for this purpose.

Unit 14, Worle Industrial Centre, Queens Way, Worle, Avon. BS22 0BX

Tel:- (0934) 516681 Ansafone after 17.30 hrs.

Our attention at this time must be centered around our monthly magazine because of its importance as a communications media for its readership. In the first instance our magazine is generated solely by contributions from its members, as a result, we would like to ask that our members be industrious in their support of their magazine. With this situation working for us, we shall be able to bring you a well balanced magazine covering a wide range of interests. Acting as it does, as a working tool, our 'Oric Computing' can benefit the Users requirements for an expansion of knowledge on his chosen interests. We ask you therefore to send us articles of all descriptions including software, hardware and general articles covering the wide aspects of computing with the Oric. Your views and opinions are most welcomed also, for without these we may well become lost in this world of computers and stray from our path. Whether you are a novice or an experienced User, we would still like to hear from you as this will enable us to cater for those topics and interests that we hope to develop through these pages.

NEW FACES AT ORIC

Oric Products International, manufacturers of the Oric 1 microcomputer, has further strengthened its sales, marketing and technical teams with four recent appointments.

Philip Denyer, previously Lasky's Micro Computer Manager, has joined as Sales Controller, responsible for instituting and controlling sales systems and the training, motivation and organisation of the sales force. At Laskys he was responsible for building-up Lasky's Micro Department, which now accounts for a significant proportion of the company's activities.

Manufacturing Manager, Mike Prymaka co-ordinates all aspects of production from purchasing and quality control to dealing with overseas suppliers and manufacturers. He holds a fellowship in Manufacturing Management and immediately prior to joining Oric spent 1¹/₂ years with LKB Biochrom, manufacturers of electronic instrumentation.

Rosalind Zawadska, previously Oric's Training Manager has now been appointed Dealer Manager with reponsibility for independent dealers and Greg Wood, previously with Tandata Marketing becomes the company's acting Export Manager. He will assume the title of Viewdata Manager together with responsibility for all viewdata related matters as and when Oric become active in this field.

ORIC PRESS RELEASE - 19th October 1983

MORE OUTLETS FOR ORIC

The Oric 1 Micro is to be sold in all branches of the Comet and Rumbelow chains. 10,000 Oric 1's (48k) have been ordered by Rumbelows while Comet has placed an order for 5,000 Orics and 1,500 of its newly introduced printer, all for October delivery.

October promises to be Oric's best production month to date despite the disastrous fire which wrecked its main assembly plant at Feltham last week. Within 24 hours of the fire, Oric were already back in production in a new factory and all scheduled October deliveries will be completed by the end of the month.

NEW TELEPHONE NUMBER

0934 - 516681

Ansafone after 17.30

2	TAPE V	ERIFY	9782 209FCB	JSR \$CB9F
	ROUT		9785 A9A1	LDA #\$A1
TAPE	* N		9787 A097	LDY #\$97
VERIFY		2	9789 20EDCB	JSR \$CBED
by D. Newell	9700 A 59C	LDA \$9C	978C 209BFA	JSR \$FA9B
C. P. Nowell	9702 A49D	LDY \$9D	978F 4CB5C4	JMP \$C485
	9704 8500	STA \$00	9792 1007	BPL \$979B
One of the most important features	9706 8401	STY \$01	9794 5665	
missing from the Oric's Operating	9708 08	PHP		LSR \$65,X
System must be that of a Cassette	9709 2025E7	JSR \$E725	9796 72	222
Tape Verify routine. A routine			9797 6966	ADC #\$66
such as this should be an integral	970C 20CAE6	JSR \$E6CA	9799 79696E	ADC \$6E69,
part of the machine as a working	970F 202397	JSR \$9723	979C 67	222
tool. The Oric has a fairly reliable	9712 2004E8	JSR \$E804	979D 202E2E	JSR \$2E2E
Load and Save system, however the	9715 28	PLP	97A0 00	BRK
question still hangs over the	9716 A600	LDX \$00	97A1 0D0A54	ORA \$540A
integrity of the data that once having	9718 A501	LDA \$01	97A4 4150	EDR (\$50,X
left the cassette port is passed to	971A 859D	STA \$9D		
other mechanical devices which	971C 869C	STX \$9C	97A6 4520	EOR \$20
themselves may be suspect for data	971E 68	PLA	97A8 4552	EOR \$52
recording, a badly worn tape head	971F 68	PLA	97AA 52	2??
or a tape dropout may reduce a	9720 4CCB97	JMP \$97CB	97AB 4F	???
valid output from the Oric to a				
useless mess on the tape. Unfor-	9723 2063E5	JSR \$E563	97AC 52	???
tunately the Oric lacks any facility to	9726 A903	LDA #\$03	97AD 202E2E	JSR \$2E2E
replay the newly recorded tape	9728 A0E5	LDY #\$E5	97B0 2E0D0A	ROL \$0A0D
against that original still in the	972A 2076E5	JSR \$E576	97B3 5665	LSR \$65,X
machine, after all, it would be a pity	972D 2096E6	JSR \$E696	97B5 72	???
to power down the machine and then	9730 2030E6	JSR \$E630	97B6 6966	ADC #\$66
later only to find that the program	9733 C924	CMP #\$24	97 B8 6963	ADC #\$63
that you worked so hard for simply	9735 DOF9	BNE \$9730	97BA 6174	ADC (\$74,X
will not reload correctly. The only		2	97BC 696F	ADC #\$6F
real answer to this is to use a Verify	9737 A209	LDX #\$09	97BE 6E2061	RDR \$6120
routine which allows to compare the	9739 2030E6	JSR \$E630		
tape of data to that of the original.			97C1 62	???
2	973C 955D	STA \$5D,X	97C2 6F	???
This program resides between	973E CA	DEX	97C3 72	???
/9700-#97FF which equals about	973F D0F8	BNE \$9739	97C4 74	???
255 bytes. Enter this program and	9741 2030E6	JSR \$E630	97C5 6564	ADC \$64
save it to tape with the filename	9744 F005	BEQ \$974B	97C7 2E0D0A	ROL \$0A0D
'VERIFY' at SLOW speed. At this	9746 9549	STA \$49,X	97CA 00	BRK
point you can in fact use the original	9748 E8	INX	97CB A9D8	LDA #\$D8
still in the machine to VERIFY your	9749 DOF6	BNE \$9741	97CD A097	LDY #\$97
taped copy. If successful, dump off a	974B 9549	STA \$49,X	97CF 20EDCB	JSR \$CBED
fast normal working copy and store	974D 20F0E6	JSR \$E6F0	97D2 2085FA	JSR \$FA85
the slow master in your program library for safe keeping.	9750 BA		7752 2000FH	
When loaded type NEW to adjust the				
pointers back to normal. Now type	9751 DODO	BNE \$9723	97D5 4C6BC9	JMP \$C96B
DOKE#2F5,#9700 The pointers are	9753 2063E5	JSR \$E563	97D8 0D0A54	ORA \$540A
now set and the program is pro-	9756 A992	LDA #\$92	97DB 4150	EOR (\$50,X
tected. It may be prudent to load this	9758 A097	LDY #\$97	97DD 4520	EOR \$20
program before any lengthy pro-	975A 2076E5	JSR \$E576	97DF 2620	ROL \$20
gramming sessions!	975D 206EE5	JSR \$E56E	97E1 4D454D	EOR \$4045
gramming sessions!	9760 A55F	LDA \$5F	97E4 4F	???
The Syntax is as follows:-	9762 A460	LDY \$60	97E5 52	???
The syntax is as follows:	9764 8533	STA \$33	97E6 59204D	EOR \$4020,
!"xxx" OR "xxx",S (Whichever)	9766 8434	STY \$34	97E9 4154	EOR (\$54,X
(Where "xxx" is the program	9768 A000	LDY #\$00	97EB 43	???
filename)	976A 2030E6	JSR \$E630		
	TION ZUSUED	JOV SEOOA	97EC 48	PHA FICIL COLOR
The routine will Verify either Basic			97ED 2E0D0A	ROL \$0A0D
or Machine Code programs in fast or	976D BOOA	BCS \$9779	97F0 5665	LSR \$65,X
slow mode and will return a 'Shoot'	976F D133	CMP (\$33),Y	97F2 72	? ? ?
sound if an error causes an abort or a	9771 D006	BNE \$9779	97F3 6966	ADC #\$66
'Ping' if verified correctly. These	9773 2054E5	JSR \$E554	97F5 6965	ADC #\$65
sounds were included to provide an	9776 90F2	BCC \$976A	97F7 64	? ??
audible warning if you're not in the	9778 60	RTS	97F8 204F4B	JSR \$4B4F
vicinity, as you may know what it	9779 2063E5	JSR \$E563	97FB 2E0D0A	ROL \$0AOD
feels like to load a long program	977C 2019C7	JSR \$C719		
from tape!	977F 2004E8	JSR \$E804	97FE 00	BRK ???
		JOR SEHOA	97FF FF	777

a series. A manual

BARBICAN BARBARIANS

A PERSONAL VIEW OF "THE PERSONAL COMPUTER WORLD SHOW" - BARBICAN 1983 OR DO I REALLY LOOK LIKE A TICKET TOUT??

Our Show Reporter - R. KIMBERLY

The Prologue:-

Dateline Sunday 2nd October, 1983. : 9.00 a.m. : Rugby Station - yes I know I said the Barbican, Time The Place but we have'nt got to that bit yet!

It had started well, Sunday that is, Josh my companion for the day was even out of bed when I called. So here we were standing at the Station waiting for the Choo-choo (not quite the same these Electric things), me with a couple of spare Barbican tickets in my pocket - its always the same, if you try to organise a trip anywhere, there is always someone who backs out at the last minutel So being the nice kind, honest person I am, I thought I'd better try to sell them at the price I paid (£2.00). I also had a voucher for £1.00 through the post.

I espied a neat family unit sitting waiting for the train - Mum, Dad and two young lads both browsing through something looking like the "Daily Arcade" or "Weekly Zap". Ahah! Cus-tomers I thought - WRONG!

"Er No thank you, er I think we'd better pay at the door"

So I wandered off, wondering if maybe I'd chosen the wrong deodorant this morning or if I had two heads!!

Another family unit came into view. Trying a slightly different tack:

"Hello, would you like a free ± 1.00 voucher for the Computer Show at the Barbican?".

Accepted with thanks!

Next Stage:

"Oh by the way, I have two ± 2.00 tickets here, would you be interested?"

Well he was, and was just about to part with his money when along comes a delegate from the first party:

"I wouldn't buy those if I were you, its FREE today!!".

"*?†" I thought "No its not" I said.

But the seeds of doubt had been sown, and so your intrepid reporter plus Josh (who unfortunately suffers badly from Spectrumitus!) board the train still clutching the tickets.

Happily on arrival at the Barbican we managed to dispose of the spare tickets to the first couple we asked. My faith in human nature had been at last restored.

The Show:-

For those who have never been, and for me a first timer, all I can say is that the initial reaction to the show was that it resembled A cross between a Wembley Cup Final and a Sauna! (Crowded, reiou or durary bett) noisy and very hot!!)

There were two halls B and A, Business and Pleasure (oops sorry, personal) respectively and each hall with two floors.

Starting as it happened with hall B, as I'd been asked by the Boss to try to find an IEEE-488 Bus computible micro for use at work, we set off.

(Now you might have thought that this was easy - but past evaluations have made some outstanding discoveries):-

God-like Commodore does a Commodore-488 bus (note the standard connector!!) and doesn't follow the IEEE rules - watch the REN line during handshaking to see what I mean.

A certain large company beginning with 'A' and no it doesn't sell fruit couldn't even get theirs to work!

So wandering along to Stand 404 I thought I would get in on the ACT to see if they had a Sirius contender for me (sorry about all this but it is supposed to be a light-hearted review).

"Excuse me, does this machine have an IEEE-488 interface?"

"Just a moment Sir, I'll go and check for you".

In the meantime I had a quick look to see what was on the back panel - nothing that resembled a 24-way IEEE-488 connector.

"Yes it does Sir"

"Oh I see, it's an option then?".

"Oh no Sir it comes as standard on the Centronics connector".

"Thank-you" and quickly exiting mumbling to myself that IEEE shouldn't have bothered trying because no b*!!tr seems to have taken any notice of their standard 488, I toddled off for a browse around the other stands.

Now, remember I said the two halls B and A, were Business and Personal, well this wasn't quite true, as our good friends Acorn had a large chunk of the venue in hall B. I say friends in the honest belief that any manufacturer using the 6502 is O.K. by me.

My reaction to their stand - very impressive - dominated by a huge Kenneth Kendall picture and associated, Voice Synthesizer plus several 'Beebs' and Monitors linked together providing a multi horizontally scrolled display (how did they do that?).

The reason I wanted to take a look at Acorn was to see their new baby - the Electron, and here's my verdict:

Looks good, feels good, but a pity its so much slower than the 'Beeb', and what ever happened to the Printer Port? Still why should I worry, its still going to sell in its tens of thousands!

Anyway enough of hallB, up the escalator and down the stairs we found ourselves in hall A (noisier, hotter and far more crowded). First port of call - Tansoft

Well, what can one say about this outfit - nice selection of new games and happily on this day in question everything was at half price! - which brought it down to the same sort of price other Software Companies normally sell at (a lesson to be learnt I feel!).

Onwards ever onwards we fought through the seething crowds up to good OI' ORIC'S Stand on 202.

A bit of a disappointment really, as I half expected to see their new disc drives on show - oh well I suppose I can wait another intended 6 months. No information available on a Version 2.0 operating system, but mind you it was a bit pointless asking, because most ORIC Sales staff don't seem to know the difference between a ROM and a hole in the head!

There were, however, some good points about the Stand, and these came in the form of three leggy young ladies in Majorette gear!! (that blonde-one oh boy, the stuff that dreams are made of!!!).

A point I will raise is that both ORIC and Tansoft used monitors rather than T.V.s on their Stands - now if they are that worried about the modular stability on the ORIC-1 then how about improving it??? Don't they realise that 99.9% of Joe Public who buy ORICS can't afford monitors and have to rely on the good ol' telly?

Enough of my bitching and along to some people who really know what they're doing.

Kenema: The highlight of my show. Nice to see you again Bob, Hi Vee, hope the arm's on the mend now. The new Voice Synthesizer module was very impressive - and and just plugs into good old ORICS printer port (or any Cent-ronics Computible Computer!) Using LPRINT you can generate infinite speech using the allophone system (better not get the Mother in Law one of these).

Hell's Temple was on show, and was so impressive I even dipped into my pocket and bought a copy.

After departing Kenema we wandered round, but most of the rest appeared to br Spectrum Software (games) which did keep Josh amused.

There were one or two new computers but nothing I really fancied, or could afford.

Anyway I think I'll stick with my ORIC in the sure fine knowledge that good old Bob and Co are going to keep me happy with all the Software and Hardware add-ons I'm ever likely to need.

A nice day out, but honestly Bob do I really look like a Ticket Tout?

On getting home I immediately loaded in Hell's Temple - really great. It's pretty nasty though especially when you happen to enter an empty room only to find yourself disappearing down a 90' shaft to level 14 only to be attacked by one of the nasty monsters lurking down there! - I don't know about parental guidance being needed - it frightened me and I'm a parent!

Congratulations on an entertaining piece of Software.

Verdict:- A good show - more please.

ORIC ATTRIBUTES IN ACTION by R. Massey

Good demonstration programs showing the facilities of the Oric-1 are hard to find and those which are available are somewhat pathetic in their attempt to display the working ability of the machine. Space Invasion types of demo's are out of the question if the potential User is to gain some insight into the full capabilities of his Oric, and for that reason we insist on starting from scratch and running through most of the capabilities of the machine. Using this method also helps the User to decipher parts of the program which interests him most. This Oric-1 demo comes in several parts, due to the lengths of the programs, so we'll be running them a portion at a time over the next couple of months. If the thought of inputting a program of this size is a little daunting to some, we shall be making a tape copy available, see Oric Software Station for details.

1 PRINTCHR\$(17) 2 CLS: PAPER4: INK7 3 FORX=48000T048039:PDKEX, 32:NEXT 4 PDKE48000, 22: PDKE48001, 4 5 FORX=48011T048027:READA 6 POKEX, A: NEXT 7 DATA79,82~73,67,45,83,67,82,69,69,78 8 DATA32, 68, 69, 77, 79, 46, 32, 80, 65, 82, 84, 32, 49 9 FORX=1T06:PRINTCHR\$(10):NEXT 10 PRINT" THIS DEMONSTRATION EXPLORES SOME OF" 11 PRINT" THE CAPABILITIES OF THE ORIC-1" 12 PLOTO, 12, 17: PLOT3, 13, 17: PLOT35, 13, 20 13 GOSUB9000:CLS 14 PRINT: PRINTSPC (11) "SCREEN MODES" 15 PRINTSPC(11) "--16 PRINT:PR^NT"Oric has three low resolution and one high resolution screen." 17 PRINT"For now we will deal with the three low resolution modes." 18 PRINT:PRINT"The three modes are:-" 19 PRINT: PRINTSPC(11) "1. TEXT" 20 PRINT: PRINTSPC(11) "2. LORESO" 21 PRINT: PRINTSPC(11) "3.LORES1" 22 PRINT:PRINT"All of the~commands that follow can beused with all three modes" 23 PRINT"When Oric is switched on it selects the TEXT mode automatically" 24 PRINT"To access the other modes we simply 25 PRINT"The screen type can be changed from type LORESO or LORES 1" within a program if we desire" 26 GOSUB9000: CLS 27 PRINT:PRINTSPC(7) "SCREEN MODES cont'd" 28 PRINTSPC(7) "-----29 PRINT:PRINT"So what's the difference ?" 30 PRINT:PRINT"1.Text mode is white background, black foreground." 31 PRINT"Both Lores0 and Lores1 are the other way around ie white on black" 32 PRINT:PRINT"2.If the Text screen scrolls the new portion is still a Text screen" 33 PRINT"In either Lores mode, as the screen is allowed to scroll so, it will "; 34 PRINT"graduallybecome 'a Text screen" 35 PRINT:PRINT"3.Both Lores0 and Text select normal ASCII characters (standard"; 36 PRINT" character set)" 37 PRINT"Lores1 selects graphics blocks or the ALTERNATE character set" 38 GDSUB9000:CLS 39 PRINT: PRINTSPC (10) "CHARACTER SETS" 40 PRINTSPC(10) "-----41 PRINT:PRINT"Both sets of characters that Oric uses are identified "; 42 PRINT"by a number" 43 PRINT:PRINT"This is known as the CHARACTER STRING or CHR\$ number" 44 PRINT"Both the character sets use the same character string numbers which"; 45 PRINT" range from 32 to 128 and 160 to 255"

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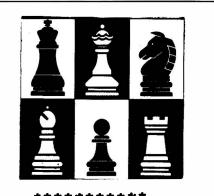
46 PRINT:PRINT"If we tell Oric to PRINTCHR\$(65)then an A would be printed.However "; 47 PRINT"this is with Text or Lores0 selected. Lores1 would print a graphic "; 48 PRINT"character block" 49 PRINT:PRINT"We can mix bot[~] the standard and the alternate characters on the "; 50 PRINT"screen if we wish" 51 GOSUB 9000:CLS 52 PRINTSPC(5) "STANDARD ASCII CHARACTERS" 53 PRINT: FORX=32T055 54 PRINTX" "CHR\$(X), X+24" "CHR\$~X+24), X+48" "CHR\$(X+48), X+72" "CHR\$(X+72) 55 NEXTX: GOSUB9000: CLS 56 PRINTSPC(5) "STANDARD ASCII CHARACTERS" 57 PRINT: FORX=160T0182 58 PRINTX" "CHR\$(X),X+24" "CHR\$(X+24),X+48" "CHR\$(X+48),X+72" "CHR\$(X+72) 59 NEXTX: 60SUB9000: CLS 60 PRINTSPC(4) "THE AL~ERNATE CHARACTER SET" 61 FORX=32T044; PRINTXCHR\$(27)"I"CHR\$(X), CHR\$(27)"H"X+24" "CHR\$(27)"I"CHR\$(X+24) 62 IFX+24=68THEN64 63 PRINT:NEXT 64 60SUB9000: CLS 65 PRINTSPC(4) "THE ALTERNATE CHARACTER SET" 66 FORX=45T057:PRINTXCHR\$(27)"I"CHR\$(X), CHR\$(27)"H"X+24" "CHR\$(27)"I"CHR\$(X+24) 67 IFX+24=81THEN69 68 PRINT:NEXT 69 GOSUB9000:CLS 70 FORX=82T094:PRINTXCHR\$(27)"I"CHR\$(X),CHR\$(27)"H"X+24" "CHR\$(27)"I"CHR\$(X+24) 71 IFX+24=118THEN73 72 PRINT: NEXT: GOSUB9000: CLS 73 GOSUB9000:CLS 74 PRINTSPC (4) "THE ALTERNATE CHARACTER SET" 75 PRINT: FORX=119T0124 76 PRINTXCHR\$ (27) "I"CHR\$ (X), CHR\$ (27) "H"X+4" "CHR\$ (27) "I"CHR\$ (X+4): PRINT: NEXT 77 PRINT:PRINT"The alternate character set repeats itself from 160 to255 the same"; 78 PRINT" as the standard character set" 79 PRINT:PRINT"Now we have seen what can be printed let's add some colour" 80 GOSUB9000:CLS 81 PRINT: PRINTSPC(10) "INK AND PAPER": PRINTSPC(10) "-----82 PRINT: PRINT The INK command allows us to change the foreground or INK colour" 83 PRINT:PRINT"The command is INK(number) eg INK7" 84 PRINT: PRINTSPC (8) "0 = BLACK": PRINTSPC (8) "1 = RED" 85 PRINTSPC(8) "2 = GREEN": PRINTSPC(8) "3 = YELLOW" 86 PRINTSPC(8) "4 = BLUE": PRINTSPC(8) "5 = MAGENTA" 87 PRINTSPC(8) "6 = CYAN": PRINTSPC(8) "7 = WHITE" 88 PRINT:PRINT"The PAPER command is the same as the INK command ie PAPER(number)"; 89 PRINT" and uses the same numbers" 90 PRINT:PRINT"This page is INK 7:PAPER 4" 91 GOSUB9030 92 FORC=1T038: PLOTC, 22, 32: NEXT 93 FORI=0T07: INKI: PLOT13, 22, "INK": PLOT17, 22, STR\$(I) 94 WAIT350:NEXTI:INK7:PAPER4 95 FORC=1T038: PLOTC, 22, 32: NEXT 96 FURP=0T07: PAPERP: PLOT12, 22, "PAPER": PLOT18, 22, STR\$ (P) 97 WAIT350:NEXTP:PAPER4:PLOT18,22,STR\$(4) 98 PLOT1, 22, "HERE ARE ALL THE COMBINATIONS" 99 WAIT500 100 FORI=OTD7:FORP=OTD7:PAPERP:INKI:WAIT100:NEXTP,I:PAPER4 101 GOSLB9000: CLS 102 PRINT: PRINTSPC(7) "THE PRINT COMMAND": PRINTSPC(7) "---103 PRINT:PRINT"The PRINT command allows us to output characters to the screen"; 104 PRINT" or insert special commands that control the colour etc"; 105 PRINT" of the printed character" 106 PRINT: PRINT You may have noticed that the CHR\$ numbers were between:-" 107 PRINT: PRINTSPC(6) "32-128 and 160-255" 108 PLOT1, 12, 2 109 PRINT:PRINT"These are characters that are printed but there are others" 110 PRINT: PRINTSPC(10) "1. CONTROL CODES" 111 PRINT: PRINTSPC (10) "2. ESCAPE CODES"

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112 PRINT:PRINT"These have numbers between:-"
113 PRINT: PRINTSPC(10) "1-32 and 128-160"
114 GOSUB9000:CLS
115 PRINT: PRINTSPC(10) "CONTROL CODES": PRINTSPC(10) "-----
116 PRINT:PRINT"The command is PRINTCHR$(number) if we wish to use them in a program"
117 PRINT:PRINT"Using the formula A=1,B=2,C=3 etc we can use them directly";
118 PRINT" by pressing
                           control(CTRL) key and the appropriate letter"
119 PRINT: PRINTSPC(10) "ESCAPE CODES": PRINTSPC(10) "---
120 PRINT:PRINT"The escape key is CHR$(27).This tells Oric that what follows";
121 PRINT" is an attributeand not an ASCIIor ALTERNATE character"
122 PRINT:PRINT"We can use this to print double size, flashing,coloured ";
123 PRINT"alternate charactersetc"
124 GOSUB9000:CLS
125 PRINTSPC(10) "CONTROL CODES"
126 PRINT: PRINT" CHR$ CTRL EFFECT"
127 PRINT"
            1 =
                   A :USED FOR EDITING"
128 PRINT"
             3 =
                   С
                     : BREAK KEY"
129 PRINT"
             4 = D
                     :DOUBLE CHARACTER ON/OFF"
130 PRINT"
             6 = F
                     :KEY CLICK ON/OFF"
131 PRINT"
             7 = 6
                     :PING"
132 PRINT"
             8 = H : CURSOR MOVES LEFT"
133 PRINT"
             9 =
                     :CURSOR MOVES RIGHT"
                  I
134 PRINT"
           10 =
                     :CURSOR DOWN"
                   J
135 PRINT"
               =
                  K . : CURSOR UP"
           11
           12 =
136 PRINT"
                     :CLEAR SCREEN"
                   L
137 PRINT"
                  Ν
                     :CLEAR LINE"
           14
               =
138 PRINT"
           16 =
                  Ρ
                     :PRINTER ON/OFF"
139 PRINT"
           17 =
                     :CURSOR ON/OFF"
                  Q
140 PRINT"
           19 = S :SCREEN ON/OFF"
141 PRINT"
            20 =
                  Т
                     :UPPER CASE ON/OFF"
142 PRINT"
           24 = X
                     :EDITS LINE FROM MEMORY"
143 PRINT"
                  Z
            26
               =
                     : BACKGROUND BLACK"
144 PRINT"
               = ESC: AFFECTS NEXT CHARACTER"
            27
145 PRINT"
            29 = ] :INVERSE VIDEO ON/OFF
146 PRINT:PRINT"ON/OFF are toggle action ie if it is on using it will turn it off"
147 GOSUB9000:CLS:PAPER7:INK0
148 PRINT: PRINTSPC(11) "ESCAPE CODES"
149 PRINT:PRINT"The ESC key is CHR$(27) and when this is used in a program";
150 PRINT" it is usually followed by another code letter"
151 PRINT:PRINT"Suppose we wanted one line printed in blue ink."
152 PRINT: PRINT" "CHR$(27) "D WELL IT'S EASY"
153 PRINT"Another RED, GREEN"
154 PRINT" "CHR$(27); "A HERE IS OUR RED LINE"
155 PRINT: PRINT" "CHR$(27) "B AND HERE IS OUR GREEN ONE"
156 PRINT:PRINT"We can also change background colour as well."
157 PRINT:PRINTCHR$(27); "V WE COULD CHOOSE CYAN"; CHR$(27) "T OR ANY COLOUR"
158 PRINTCHR$(27); "S THAT WE LIKE"; CHR$(27); "V FROM THOSE AVAILABLE"
159 PRINTCHR$(27); "S"; CHR$(27) "A OR MIX FOREGROUND AND BACKGROUND"
160 PRINT" "CHR$(27); "L AND DO OTHER TRICKS AS WE DESIRE"
161 GOSUB9000: CLS: PAPER4: INK7
162 PRINT: PRINTSPC(11) "ESCAPE CODES": PRINTSPC(11) "---
                                                      ----":PLOT0,3,1
163 PRINT:PRINT"When using escape codes remember:-"
164 PRINT:PRINT"They occupy one character space on the screen"
165 PRINT:PRINT"If you are using the code at the
                                                     beginning of a line to change";
166 PRINT" colour etc then the command is:-"
167 PRINT:PRINT "PRINT SPACE CHR$(27); AND THEN THE CODE AND TEXT IN QOUTES"
168 PRINT:PRINT"It is not necessary to have the space when it is used for background";
169 PRINT" coloursat the beginning of a line or in the middle of a line";
170 PRINT" for either f/bgnd"
171 PRINT"Special care is needed when double
                                                size characters are used"
172 PRINT: PRINT"A LIST OF CODES FOLLOWS ON THE NEXT
                                                      PAGE"
173 GOSUB9000:CLS
174 PRINT:PRINT"CODE EFFECT OBTAINED"
175 PRINT" 2 = FGND BLACK"
176 PRINT" A = FGND RED"
177 PRINT" B = FGND GREEN"
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178 PRINT" C = FGND YELLOW"	
179 PRINT" D = FGND BLUE"	
180 PRINT" E = FGND MAGENTA"	
181 PRINT" $F = FGND$ CYAN"	8 0
182 PRINT" G = FGND WHITE"	
183 PRINT" H = SINGLE HEIGHT/STANDARD"	
184 PRINT" I = SINGLE HEIGHT/ALTERNATE"	
186 PRINT" K = DOUBLE HEIGHT/ALTERNATE"	
187 PRINT" L = SH/FLASHING STANDARD"	
188 PRINT" N = DH/FLASHING STANDARD"	
189 PRINT" 0 = DH/FLASHING ALTERNATE"	000000000000000000000000000000000000000
190 PRINT" P = BGND BLACK"	
191 PRINT" Q = BGND RED"	
192 PRINT" R = BGND GREEN"	
193 PRINT" S = BGND YELLOW"	
194 PRINT" T = BGND BLUE"	
195 PRINT" U = BGND MAGENTA"	
196 PRINT" V = BGND CYAN"	
197 PRINT" W = BEND WHITE"	
198 PRINT" X, Y, Z AFFECT THE SCREEN SYNC"	
199 60SUB9000:CLS	
200 PRINT:PRINT"We can also use the following w	ithout the escape code"
201 PRINT:PRINT"~HR\$ FOREGROUND BACKGROUND"	Tendet the escape code
202 PRINT"128 BLACK	3.4 Vit
204 PRINT"130 GREEN"	
205 PRINT"131 YELLOW"	
206 PRINT"132 BLUE"	
207 PRINT"133 NAGENTA"	X
208 PRINT"134 CYAN"	
209 PRINT"135 WHITE"	
210 PRINT"144 BLACK"	
211 PRINT"145 RED"	
212 PRINT"146 GREEN"	1
213 PRINT"147 YELLOW"	للعين
214 PRINT"148 BLUE"	
215 PRINT"149~- MAGENTA"	
216 PRINT"150	
216 PRINT"150 CYAN" 217 PRINT"151 WHITE"	
217 PRINT"151 WHITE"	ur for the whole line or uptil a new "
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the colo	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the colo 219 PRINT"command is used on the same line"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the colo 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the colo 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT STANDARD"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT STANDARD" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT STANDARD" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT STANDARD" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE"	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT:command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING STANDARD"	ur for the whole line or until a new ";
<pre>217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT:command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz" 231 PRINT"153 TEXT 60hz"; These codes"</pre>	ur for the whole line or until a new ";
217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT:command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING STANDARD" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz"	ur for the whole line or until a new ";
<pre>217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT:command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz" 231 PRINT"153 TEXT 60hz"; These codes"</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT:command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz"; These codes" 231 PRINT"154 TEXT 50hz"; alter the"</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT:command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz"; These codes" 231 PRINT"153 TEXT 60hz"; alter the" 233 PRINT"155 TEXT 50hz"; screen"</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT:command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR* EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz" 231 PRINT"153 TEXT 60hz"; These codes" 232 PRINT"155 TEXT 50hz"; screen" 234 PRINT"156 GRA 60hz"; sync"</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the colo 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz"; These codes" 231 PRINT"153 TEXT 60hz"; alter the" 233 PRINT"154 TEXT 50hz"; screen" 234 PRINT"155 GRA 60hz"; signal" 236 PRINT"158 GRA 50hz"</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the colo 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz" 231 PRINT"153 TEXT 60hz"; These codes" 232 PRINT"154 TEXT 50hz"; alter the" 233 PRINT"155 TEXT 50hz"; screen" 234 PRINT"156 GRA 60hz"; signal" 235 PRINT"157 GRA 60hz"; signal" 236 PRINT"159 GRA 50 hz"</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT:command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz" 231 PRINT"153 TEXT 60hz"; These codes" 232 PRINT"154 TEXT 50hz"; alter the" 233 PRINT"155 TEXT 50hz"; sync" 235 PRINT"157 GRA 60hz"; sync" 235 PRINT"159 GRA 50 hz" 237 PRINT"159 GRA 50 hz" 238 GOSUB9030:CLS:PAPER0:INK7</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151 WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT:command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz"; These codes" 231 PRINT"153 TEXT 60hz"; alter the" 233 PRINT"155 TEXT 50hz"; alter the" 234 PRINT"156 GRA 60hz"; signal" 235 PRINT"159 GRA 50 hz" 237 PRINT"159 GRA 50 hz" 238 GOSUB9030:CLS:PAPERO:INK7 239 PRINT:PRINT:PRINTCHR\$(129)"CHR\$(129)"</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz"; These codes" 231 PRINT"153 TEXT 60hz"; These codes" 232 PRINT"154 TEXT 50hz"; alter the" 233 PRINT"155 TEXT 50hz"; sync" 235 PRINT"156 GRA 60hz"; sync" 235 PRINT"159 GRA 50 hz" 237 PRINT"159 GRA 50 hz" 238 GOSUB9030:CLS:PAPERO:INK7 239 PRINT:PRINT:PRINTCHR\$(129)"CHR\$(129)" 240 PRINTCHR\$(130); "CHR\$(130)"</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz"; These codes" 231 PRINT"153 TEXT 60hz"; alter the" 233 PRINT"154 TEXT 50hz"; sync" 235 PRINT"155 GRA 60hz"; sync" 235 PRINT"159 GRA 50 hz" 237 PRINT"159 GRA 50 hz" 238 GOSUB9030:CLS:PAPERO:INK7 239 PRINT:PRINT:PRINTCHR\$(129)"CHR\$(129)" 240 PRINTCHR\$(130); CHR\$(130)" 241 PRINTCHR\$(131); "CHR\$(131)"</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151</pre>	ur for the whole line or until a new ";
<pre>217 PRINT"151WHITE" 218 PRINT:PRINT"Using these codes sets the color 219 PRINT"command is used on the same line" 220 GOSUB9000:CLS 221 PRINT:PRINT"CHR\$ EFFECT OBTAINED" 222 PRINT:PRINT"136 SINGLE HEIGHT STANDARD" 223 PRINT"137 SINGLE HEIGHT ALTERNATE" 224 PRINT"138 DOUBLE HEIGHT ALTERNATE" 225 PRINT"139 DOUBLE HEIGHT ALTERNATE" 226 PRINT"140 S/HEIGHT FLASHING STANDARD" 227 PRINT"141 S/HEIGHT FLASHING ALTERNATE" 228 PRINT"142 D/HEIGHT FLASHING ALTERNATE" 229 PRINT"143 D/HEIGHT FLASHING ALTERNATE" 230 PRINT"152 TEXT 60hz"; These codes" 231 PRINT"153 TEXT 60hz"; alter the" 233 PRINT"154 TEXT 50hz"; sync" 235 PRINT"155 GRA 60hz"; sync" 235 PRINT"159 GRA 50 hz" 237 PRINT"159 GRA 50 hz" 238 GOSUB9030:CLS:PAPERO:INK7 239 PRINT:PRINT:PRINTCHR\$(129)"CHR\$(129)" 240 PRINTCHR\$(130); CHR\$(130)" 241 PRINTCHR\$(131); "CHR\$(131)"</pre>	ur for the whole line or until a new ";

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244 PRINTCHR$(134);"CHR$(134)"
245 PRINTCHR$(135); "CHR$(135)"
246 PRINTCHR$ (145); "CHR$ (145)"
247 PRINTCHR$ (146); "CHR$ (146)"
248 PRINTCHR$(147); "CHR$(147)"
249 PRINTCHR$(148);"CHR$(148)"
250 PRINTCHR$(149); "CHR$(149)
252 PRINTCHR$(151); "CHR$(151)"
253 PRINTCHR$(140); "CHR$(140)"
254 PRINTCHR$ (141); "CHR$ (141) "; CHR$ (136) "ALTERNATE CHARACTERS": PRINT
255 PRINT: PRINTCHR$ (4); CHR$ (142); "CHR$ (4); CHR$ (142) "; CHR$ (4); CHR$ (142)
256 PRINT:PRINT"CHR$(4) is to toggle double height. Don't forget to turn it off"
257 WAIT200: GDSUB9000: PAPER4: WAIT200: CLS
258 PRINT: PRINTSPC (9) "THE PLOT COMMAND"
259 PRINT:PRINT"The screen is divided into 38 columns (0-37) across and 27 rows";
260 PRINT" down (0-26)"
261 PRINT"These are known as the X and Y axis"
262 PRINT"The point 0,0 or X(0),Y(0) is the top lefthand corner (green)"
263 PLOT0, 0, 18: PLOT1, 0, 20
264 PRINT:PRINT"0,0 is not actually the corner becauseOric reserves the first two";
265 PRINT" columns"
266 PRINT"Also the top line is normally reserved for Oric's messages"
267 PRINT"Therefore the "screen is 40 columns by 28 rows"
268 PRINT:PRINT"The PLOT command a~lows us to plot
                                                        colours or control";
269 PRINT" codes to the screenusing X,Y coordinates"
270 PRINT: PRINT "THE COMMAND IS PLOTX, Y, (number)
271 PRINT:PRINT"A list is given on the next page"
272 GDSUB9000: CLS
273 PRINT: PRINT "NUMBER EFFECT"
274 PRINT" 0
                  FGND BLACK
275 PRINT"
           1
                  FGND RED"
           2
276 PRINT"
                  FGND GREEN"
277. PRINT" 3
                  FGND YELLOW'
278 PRINT" 4
                  FGND BLUE"
           5
279 PRINT"
                  FGND MAGENTA"
280 PRINT"
            7
                  FGND WHITE"
281 PRINT"
           8
                  SINGLE HEIGHT STANDARD"
282 PRINT" 9
                  SINGLE HEIGHT ALTERNATE"
283 PRINT" 10
                   DOUBLE HEIGHT STANDARD"
284 PRINT" 11
                  DOUBLE HEIGHT ALTERNATE"
285 PRINT" 12
                   SH/FLASHING STANDARD"
286 PRINT" 13
                  SH/FLASHING ALTERNATE"
287 PRINT" 14
                  DH/FLASHING STANDARD"
288 PRINT" 15
                  DH/FLASHING ALTERNATE"
289 PRINT" 17
                  BGND RED"
290 PRINT" 18
                   BGND GREEN"
291 PRINT" 19
                   BGND YELLOW"
292 PRINT" 20
                   BGND BLUE"
293 PRINT" 21
                  BGND MAGENTA"
294 PRINT" 22
                   BGND CYAN"
295 PRINT" 23
                   BGND WHITE"
296 GOSUB9000: CLS: PAPER7: INKO
297 PRINT: PRINTSPC(10) "THE PLOT COMMAND"
298 PRINT:PRINT"We have the ability to plot strings to the screen as well"
299 PRINT"These can be joined together and
                                                  contain control codes"
300 PRINT:PRINT"In a games program we can make good
                                                        use of this."
301 PRINT"Firstly, re-define the character and
                                                  then we can plot it anywhere ";
                   screen"
302 PRINT"on the
303 PRINT:PRINT"The only constraint is that when we
                                                        plot anything to the screen";
304 PRINT" it takes one character space even if it is a control code"
                                                        comannd is PLOTX, Y, number"
305 PRINT:PRINT"When plotting Ascii characters the
306 PRINT"If this number is greater than 160 the character will be plotted in";
307 PRINT" inverse video"
3C8 PLDT10,23,204:PLDT11,23,201:PLDT12,23,203:PLDT13,23,197:PLDT14,23,160
309 PL0T15, 23, 212: PL0T16, 23, 200: PL0T17, 23, 201: PL0T18, 23, 211
310 60SUB9030: CLS
```

320 FORX=0T037:A=(23-16) \$RND(1)+16:PL0TX,0,A:NEXT 321 PLOTO, 2, 17: A\$="BACKGROUND RED": PLOT1, 2, 7: PLOT2, 2, A\$ 322 B\$="DOUBLE SIZE CHARACTERS" 323 PLOT1, 5, 10: PLOT1, 6, 10: PLOT3, 5, B\$: PLOT3, 6, B\$: WAIT50 324 PLOT0, 7, 19: PLOT19, 7, 21 325 A\$="BELOW ARE ALTERNATE CHARACTERS":PLOT4, 9, A\$:WAIT50 326 PLOT1, 10, 9: PLOT4, 10, A\$ 327 PLOTO, 12, 16: PLOTO, 13, 17: PLOTO, 14, 18: PLOTO, 15, 19: PLOTO, 16, 20: PLOTO, 17, 21 328 PLOTO, 18, 22: PLOTO, 19, 23 329 A\$="FOREGROUND AND BACKGROUND" 330 PL0T0, 20, 22: PL0T1, 20, 4: PL0T6, 20, A\$: WAIT100 331 PLOTO, 21, 19: PLOT1, 21, 1: PLOT6, 21, A\$: WAIT100 332 PLOTO, 22, 18: PLOT1, 22, 7: PLOT6, 22, A\$: WAIT100 333 PLOTO, 23, 20: PLOT1, 23, 6: PLOT6, 23, A\$ 334 FORX=0T037:A=(23-16) \$RND(1)+16:PL0TX,25,A:NEXT 335 60SUB9000:CLS 336 FORX=0T038:FORY=0T026:A=(23-16) #RND(1)+16:PL0TX, Y, A:NEXTY, X 337 FORX=0T037:PL0TX, 26, 32:NEXT 338 REPEAT: A\$="PRESS SPACE": PLOT1, 26, 1: PLOT13, 26, A\$ 339 UNTILKEY == ":CLS 340 PAPER7: INK1: FORX=1T09: PRINT: NEXT: PRINT "TO LOAD PART 2:-" 341 PRINTSPC(10) "1. TURN TAPE OVER TO SIDE 2" 342 PRINTSPC(10) "2. REWIND TAPE TO BEGINNING" 343 PRINTSPC(10) "3. PRESS KEY L" 344 PRINTSPC(10) "4. PRESS PLAY KEY ON RECORDER" 345 REPEAT: UNTILKEY\$="L":CLS:PLOT13,13,"PLEASE WAIT":PLOT12,13,12 346 WAIT100:INK1:CLOAD"ORIC DEMO PART 2",S 8999 END 9000 A\$="PRESS SPACE TO CONTINUE" 9010 PLOT7, 26, A\$: PLOT6, 26, 12: PLOT5, 26, 2 9020 REPEAT: UNTILKEY S=" ": RETURN 9030 AS="PRESS SPACE FOR DEMO" 9040 PLOT8, 26, A\$: REPEAT: UNTILKEY = " 9050 FORC=1T038:PLOTC, 26, 32:NEXT:RETURN



ray grant

HOW TO BEAT ORIC AT CHESS IN JUST FOUR HOVES (LEVEL ONE ONLY)

E2-E4	
D1-F3	
F1-C4	
F3-F7	

CHECKMATE IN FOUR MOVES. IT WORKS EVERY TIME. TRY IT!. NOW THAT YOU CAN BEAT IT EVERY TIME AT LEVEL ONE, YOU WILL HAVE. TO START PRACTISING AT LEVEL TWO NOW WON'T YOU. SEE IF YOU CAN BEAT IT AT LEVEL TWO IN LESS THAN NINE MOVES. IF YOU CAN THEN LET ME KNOW ABOUT IT!.

SOFTWARE REVIEWS

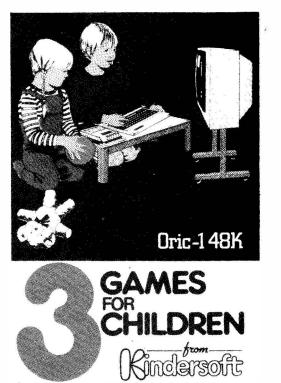
3 GAMES FOR CHILDREN

Kindersoft U.K. Ltd. 48K Oric-1

This is the first of two educational packages, both from Kindersoft, that use the Oric for a more practical purpose than Space Invaders, teaching children in the age range 5-10 years the basics of spelling, mathematics and colour, etc. The games consist of (1) To Count Shapes, (2) To Spell Colours and (3) Typing. The program begins with a boxed menu offering the three choices of games, with the text in double height characters for ease of reading (a thoughtful touch here is the redefinition of the letter 'a' into the traditional curved 'handwriting' shape, more readily recognised by children). I'll break down each game separately, as each is complete within itself:

1 To Count Shapes

A colourful display is shown, three-quarters of the screen yellow, the bottom quarter blue, with a black bar between. A random number of coloured squares, triangles and circles are shown in the yellow section, and the blue part contains the question "How many O SHAPES (or whatever shape it is) are there?". If the input is incorrect, the child is given the chance to try again (incorrect answers 'shoot', correct answers 'ping'). When the right answer is given, the child is prompted to 'Press BAR to continue', enabling him/ her to work at his/her own speed. This sequence is repeated until all three sets of shapes have been counted correctly, and then they flash and disappear, accompanied by three 'zaps'. You then have the option of playing again (BAR) or choosing another game (ESC).



Suitable for children of 4-8 years of age.

2. To Spell Colours

Three numbered coloured shapes are given - a circle, a triangle and a square, and the child is asked to spell the colour of shape 1. Each correct letter is rewarded with a 'ping', and the word appears, letter by letter within the appropriate shape as it is being spelt. Two attempts are allowed for each letter, after which the word is printed below the shape for the child to copy. The program is designed to assess the child's ability, and if he is making too many mistakes, all the spellings of the six colours available (black, blue, green, red, white and yellow) are printed, and the child just has to pick the correct spelling and copy it. When all three colours have been spelt correctly, the choice is offered of another game or a different game.

Normal Keys	 Use as a typewriter (Shift for capitals). 		
DEI.	 Deletes one letter at a time. 		
RETURN	 Clears the screen and sets the cursor to the start position. 		
- + +	- Move the cursor. Can also be used to rub out.		
ESC	- Takes you back to the menu at any time.		
Changing Colour			
CTRE + B	 Changes ink to BLUE for the rest of the line. 		
CIRL + R	- Changes ink to RED for the rest of the line.		
CTRL + G	- Changes ink to GREEN for the rest of the line.		
CTRL + N	- Changes ink to BLACK (normal) for the rest of the line.		
Flashing			
CTRL + F	— Flashes lotters for the rest of the line.		
CTRL + S	- Stops flashing for the rest of the line		
patterns and screen d circle is drawn on the	shows the special shapes that can be used for creative isplays. For example, by pressing SHIPT and @half a screen. If you press SHIPT and it then SHIPT and @ half screen. Other shapes can also be added together in this		
• 🚺			
(i)			

3 Typing

This is definitely typing with a difference! As well as text appearing on the screen, it's a reasonable demonstration of the Oric's teletext display - a list of the controls, taken from the very comprehensive instructions given on the cassette label, is given below:

\$

The three games in this package are presented well: graphics, very clear prompts, that young children will be able to follow, and good use of sound and colour makes learning definitely more exciting than play school

Because all three games are basically the same in presentation, only one set of ratings is applied to the complete package:

GRAPHICS *** ½ SOUND *** COLOUR*** ½ EDUCATION VALUE **** ADDICTIVE VALUE N/A GENERAL ASSESSMENT *** ½

h

%

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SOFTWARE REVIEWS

4 GAMES FOR CHILDREN

Kindersoft U.K. Ltd.

48K Oric-1

The second of the educational packages - and just as good - if not better - than the first! This programme teaches addidion, subtraction, numbers, spelling, the alphabet, and, indirectly, left and right. The games are (1) To Add, (2) To Take Away, (3) Alphabet and (4) Spelling Numbers.

1 To Add

The screen is split into quarters as before (the top three-quarters blue, the bottom quarter green). In the blue area, three coloured boxes are drawn, one containing a random number of boys (up to 10), one a random number of girls, and the third is left empty for the total (the distinction between boys and girls is that girls have 'skirts' on - one hopes that young children can notice the slight difference ...). The prompt then asks how many boys (or girls) there are. An incorrect input offers a 'shoot', a correct answer gives a 'ping', the number appears in the relative box, and the little figures 'wave', obviously encouraging the child to do well. On pressing the space bar, the child is asked to count the figures in the other box, and if done correctly, is asked how many boys and girls there are altogether (appropriate mathematical symbols automatically appear between the boxes). On a correct answer, all the boys and girls appear in the last box, and the figures in all three boxes thrust their hands into the air and wave in unison - I think on the prompt 'press ESC for a different game, press BAR to play again, a youngster wouldn't be able to resist just one more try ... after all, I couldn't!

2. To Take Away

The general presentation is the same as in 'To Add', but more boys and girls appear in the boxes. The child is asked for the amount of figures in each box, and on correct answers is asked 'How many more girls than boys are there?' (or vice versa). On a correct answer, the subtraction is shown graphically in the last box, the largest number of figures being shown first, and then the lesser number being 'ZAPped' away from them, leaving the total waving away again in elation. They never had teaching aids like this when I was at school ...

3.Alphabet

Twenty-seven randomly-coloured squares are drawn onto a blue background (one for each letter of the alphabet, and a spare one to make three rows of nine, making the screen layout look much neater). The aim is to correctly type the letters of the alphabet in order, and to acheive a high score by doing so as quickly as possible. 50-150 points can be obtained for a correct input, depending upon the length of time taken to enter the letter. 50 points are deducted for an incorrect entry, and the score, which is on view at all times, is updated with each answer. If an input has not been made after about three seconds, the flashing marker is replaced with the appropriate letter, so that the child can type it. As well as teaching the alphabet, this game also familiarises the user with the keyboard layout. A wellpresented game, and one of the few that I managed to get a high score out of



4 Spelling Numbers

Two coloured squares are drawn on a blue background, and a number (made up of brightly-coloured squares) is drawn within each. At first, the numbers are chosen at random from 1 - 9, but as the child increases his/her ability, they advance to include 10 - 19 and then 20, 30, 40, 50, 60, 70, 80 and 90 ... a total vocabulary of twentyseven words. Numbers like 80 and 18 and 60 and 6 are often in the boxes, helping children to distinguish between similar sounding numbers. The child is asked to spell the number on the left (it is obviously assumed that he knows his right from his left; if not, the game teaches him this also). If a correct answer is given, the word is spelt letter by letter below the number within the appropriate square, and a 'ping' accompanies each correct letter as it appears. After two incorrect attempts, the word is spelt for the child in the prompt bar, so that the child can copy it. He is then asked to spell the number on the right. After both numbers have been spelt correctly, the child can play again or choose another game if he desires.

The four games on this cassette are presented well, interesting and educationally stimulating - how long will it be before Oric takes over from the blackboard?

GRAPHICS *** ½ SOUND *** COLOUR **** EDUCATION VALUE **** ADDICTIVE VALUE N/A GENERAL ASSESSMENT ****

SOFTWARE REVIEWS

HANGMAN/MATCH TWO

Cirosoft

48K Oric-1

Hangman

I tried the program on one of the newest Orics - three weeks old, in fact - and Hangman only offered Syntax Errors and Undefined Statements. So it was out with the new, and in with our old Oric, one of the early models, and it loaded first time; so much for technology

The on-screen instructions are easily understood, and you are offered the choice of playing the Oric or somebody else. You are asked for your name, and then the text scrolls off the screen, and you are presented with a rather crudely-drawn gallows, accompanied with a tune worthy of an American cars air-horn, with 'This is you, XXXX' written on the base. You then enter your letters. Don't enter the same letter twice - it still counts as a turn, and you only get seven of them. The screen displays the letter you have just entered, the letters used and the dashed where the letter is being written. For each incorrect attempt, as you might expect, parts of your anatomy appear on the gallows. If you use up all seven attempts without guessing the word, the screen flashes through a series of colours, and the gallows scroll off to the top of the screen and the message 'You lose, XXXX. It was (word) all the time' and you are offered another game. If you guess the word correctly before your attempts are used, you are rewarded with a 'whoop', swiftly followed by four 'pings' in rapid succession, and the gallows scroll off towards the bottom of the screen, and gives you 'Superb, XXXX. You were right, it was (word)'. The vocabulary consists of over two hundred words, one of them being 'LOCURMOVNGE' - don't ask me what it means, perhaps someone could tell me If you opt to play a friend, Oric asks for your word - and as you tap it in, it appears in white text on the screen. You obviously have to have a very trustworthy friend - surely black ink on black paper would have prevented any cheating? Ah well, you can't have everything. After the word has been entered, the game proceeds as before.

A relatively entertaining game as long as you like hangman, but once you've learnt all the words contained within the program, what then? Hangman II, I suppose

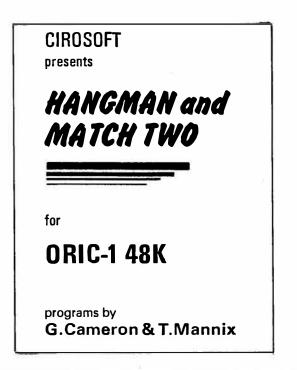
GRAPHICS * ½ SOUND ** ½ COLOUR ** ENTERTAINMENT VALUE ** ADDICTIVE VALUE * GENERAL ASSESSMENT ** Hmmm, Locurmovnge where's the dictionary?

Match Two

This is based on the game where you turn playing cards face down, and then take turns at turning two over and memorising the symbols that are on them and then putting them face down again. The aim is to match up pairs, and the winner is the one who has the most at the end of the game. The program was very difficult to load, but after adjusting the volume on the cassette recorder from very low to very high, Oric accepted one setting in the 'high' range. Up to six people can play at once, and you are asked for the input of their names. After this has been done, 60 'playing cards' are shown on the screen with co-ordinates 1-0 and A-F. You pick the co-ordinates for the first card, which is then turned 'face up'. After you have entered your second choice, both cards are displayed for approximately three seconds, just giving you enough time (or not ...) to memorise them. Each player takes his turn, and on completing a pair the two cards are removed from the screen, and the player can have another turn. The symbols on the cards (which are randomly placed at the start of each game) consist of different combinations of colours and shapes, which make the game quite difficult. When all the cards have been paired, the score for each player is shown, and you are offered another game.

The playing cards are represented quite well, and the combination of the same shape but in a different colour makes the game challenging. It starts off slowly, because no-one knows where the shapes are, but as the game progresses it gets much more interesting.

GRAPHICS *** SOUND * ½ COLOUR *** ½ ENTERTAINMENT VALUE *** ADDICTIVE VALUE ** ½ GENERAL ASSESSMENT ***



CHOOSING (MARNING) A HOME MICRO

Choosing a home micro can be a daunting task to the newcomer, and with an ever increasing number of micros emerging on the market, even up-grading, say, from a ZX81 can be a risky and expensive exercise if the wrong decision is made. It is important to look at the real facts and specifications, and check exactly what you get for your money before choosing your micro-computer system.

THE PITFALLS

"DON'T LET THE ADD ONS ADD UP"

A number of large companies are offering packages that seem to be good value and low cost. These offers usually have a hidden sting inasmuch as the essential accessories such as connection leads, peripherals and software often carry very high cost premiums. e.g. software for low cost hardware usually costs between £29 and £49 for a ROM cartridge!!

CHECK THE QUALITY OF THE PRODUCT.

Raw materials are now an area where corners can be cut, and shoddy workmanship during 'building can effect the 'up-time' of your unit. Areas to watch out for are unreliable edge connectors, corrosion and poor quality PC.B.s. Low quality components and bad design will seriously effect the reliability of the end product, and can lead to false economy.

DON'T BUY A GAMES MACHINE

Unless you want just games and nothing else! With a games computer you are limited. Some computers. however, have the advantage of both games facility plus the whole world of computing to explore, as your interest and skills develop. A real computer system will allow you to expand your knowledge of the Hi-Technology world, and help earn its keep with its added uses in the field of education, communication and home business use.

SOFTWARE

Make sure the system you choose has a growing library of support software, to enable you to realize the full potential of your machine.

KEY POINTS TO LOOK FOR

High Resolution Colour

In general most home computers have a poor graphics resolution (or detail). Check on the vertical and horizontal resolution in graphic mode and multiply the two numbers together. If the result is less than 35,000, then the graphics can hardly be considered high resolution. Without high resolution graphics displays such as those used in games tend to be "Chunky" in appearance. High Quality Sound

Some computers claim to provide a sound channel when in reality all that can be found inside the computer is a small buzzer controlled by electronic pulses. At the very least a sound facility should provide more than one channel and a raise channel as well (for gun shot effects in games for example). The best systems also provide envelope control of the sound channels to produce very sophisticated effects: very important for generating music. Also look for the ability to connect to external amplifiers.

Keyboard

For accurate entry of programs and data into a computer it is important that the keyboard has a good tactile feel in operation. Coupled with acoustic feedback the user is fully aware when the computer has accepted his/her actions. Also of importance in a keyboard is layout. A standard computer keyboard layout will familiarise the user with the vast majority of computers used in the world of business and professional applications: very important if the purpose of purchasing a computer is educational

RAM

One of the most important features of a computer is the amount of RAM, or memory, included. In general the more powerful and exciting a computer program is the more RAM it requires. But take care, all computers are advertised quoting the total RAM used in the system. Computers use up a great deal of their own RAM for storing essential data and particularly in supporting the graphics display and the CPU. If it is less than 32K think again, is it enough?

Computer Language

It is too dificult to program a computer in its own binary language so high level languages are used, the most popular being BASIC. However, there are a number of BASICs, some being very different from the rest. A de facto standard in the computer industry is Microsoft BASIC. Learn this one and you will be able to program in the majority of computer BASICs: such an important point if a home computer is to be used to educate your children to face the technology of the future.

Expansion

As your interest and knowledge of computing grows, you will need a



Choosing the right system carefully will save you from throwing your money away Check (ull specification, plus peripherals and software prices, before you buy. Preferably choose a Real computer system that can expand to meet your needs.

computer system that will grow with you: able to accommodate Printers. Disk-drives, Joysticks, Communications Modern, and Colour Monitor, as well as produce HI-FI sound effects.

The computer you choose should

have a growing selection of utility

Software

software to make the most of its capability.

Remember. computing is here to stay. You can't learn to compute on a toy. or a device which does not behave like a real computer. In short. look out for a computer which offers all the points above, and you will be sure of getting the best value for money.

To find out which company offers you the right choice, with:-

Good value, high specification, quality micros.

• A quality, 4 colour, plain paper printer/ plotter.

- Communications Modem.
- Micro Disk Drives.
- Comprehensive and growing range of software

TURNOVER...



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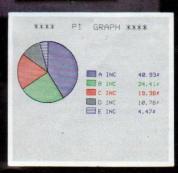
Coming soon the incredible new 3" Oric Micro Drives. Small size, Compact, High precision disks with storage capabilities from 100K Bytes to in excess of 1 Megabyte unformatted. With their own built-in power supply, these easy to use units will add big system capability to your home micro.

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The Oric Colour Printer is quality engineered to provide 4 colour hard copy on plain paper, with superb graphics and text capability, printing either 40 columns or 80 columns.

It prints in red, green, black and blue, onto a 4¹/₂" width standard paper roll. With a print speed of 12 characters a second, the MCP 40 comes with its own power supply and all necessary leads to connect straight into your Oric or to any standard Centronics interface.

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Latest design technology and circuitry	Teletext/Viewdata compatible graphics (28 rows x 40 characters)
Real sound – 8 octaves plus Hi-Fi output	Cassette Port & R.G.B. output.
Centronics printer interface	Fully supported and growing software library
Colour printer / Disk Drives	A fully expandable system for home, education & small business use
Communications Modem	Full range of peripherals to support your system

ORIC-1 Setting todays standard in Quality and Price. ORIC-148K £139.95 inc.VAT ORIC-116K £99.95 inc.VAT

All ORIC computers purchased before 31st December 1983 MCP 40 COLOUR PRINTER £169.95. come with a £40 voucher off the M.R.P. of the MCP 40 Colour OFFER PRICE £129.95 Printer.



The fast growing success of ORIC-1 means that an incredible number of software titles are becoming available for your Oric. With many well known titles from independent software houses, plus exclusive ORIC SOFTWARE from TANSOFT, you can now drive your Oric towards its full potential.

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ULTIMA ZONE, DEFENCE FORCE.

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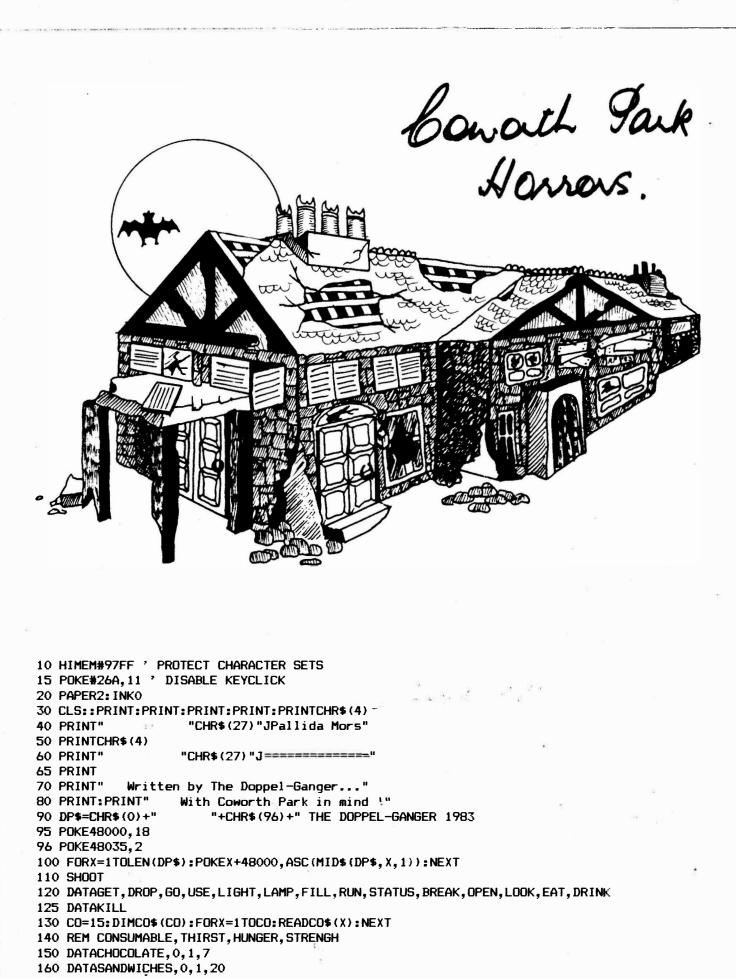


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- 170 DATACOLA, 1, 0, 1
- 180 DATAWATER, 1, 0, 15 190 DATAHAMBURGER, 0, 1, 7
- 200 DATACRISPS, 0, 1, 7

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210 DATASMIRNOFF, 0, 0, 0
220°CM=7:DIMCM$(CM),CT(CM),CH(CM),CS(CM)
230 FORX=1TOCM:READCM$(X),CT(X),CH(X),CS(X):NEXT
240 DATAVampire, Redcap, Mara, Leanhaun Shee, Lamia, Demon, Elemental
250 HZ=7:DIMHZ$(HZ):FORX=1TOHZ:READHZ$(X):NEXT
260 DATABOOK, "a book entitled 'The Dead Zone", 100, 60
270 DATAPHOTO, "A signed photo of The Doppel-Ganger", 400, 50
280 DATABOTTLE, "A small bottle with a wisp of smoke inside", 0, 25
290 DATAMANUAL, "A New Oric Manual", 200, 40
300 DATADOGR, "A Dogrose", 0, 6
310 DATANEWS, "Dric Computing !", 300, 55
320 DATABASKET, "A Wicker Dog Basket", 0,7
330 DATACLOCK, "A Digital Clock", 0, 19
340 DATASHOE, "A Brown Shoe", 0, 20
350 DATAMAG, "A copy of Personal Computer World
                                                      Magazine",0,13
360 DATATYPE, "An old Boots PT400 Typewriter", 0, 41
370 DATAKNIFE, "a Carving Knife", 0, 15
380 DATABIRD, "An old Biro", 0, 16
390 DATATIN, "An old Treacle tin", 0, 17
400 DATASTAKE, "A stake of Whitethorn", 0, 21
410 DATADRYER, "An old Hairdryer", 0, 51
420 DATAROBOT, "A rusting Robot", 0, 10
425 DATACASS, "A cassette tape of K's Filestar", 0, 12
430 DATASUITCASE, "A suitcase", 0, 11
440 DATARECORD, "A Meatloaf record", 0, 13
445 DATALAMP, "An oil Lamp",0,8
450 DATALIGHTER, "A Cigarette Lighter", 0, 10
460 DATADIL, "A can of Oil for the Oil lamp",0,42
470 DATABELL, "An old Handbell.", 0, 18
480 DATAVIDED, "A videotape of Superman IV",0,19
490 DATABIN, "A litter bin", 0, 27
500 DATA42et, "A_desk.",0,20
510 DATAPEPPER, "a Pepper pot", 0, 44
520 DATASALT, "a Salt shaker", 0, 9
540 DATABIBLE, "A copy of The Bible", 0, 13
550 DATACHOC, "A bar of Chocolate", 0, 59
580 DATASAND, "Sandwiches", 0, 60
590 DATACOLA, "a Can of Cola", 0,7
600 DATAWATER, "A Canister of Water", 0, 50
610 DATAHAMBURGER, "A Hamburger", 0, 40
620 DATACRISPS, "A packet of Crisps", 0, 49
630 DATASMIRNOFF, "A Bottle of Smirnoff", 58,0
640 DATAFLIT, "A rusting old Flit-gun", 100, 45
650 DATACHART, "A chart from a Coulter Counter", 0, 18
660 DATAPORT, "A portrait of Princess Diana", 250, 30
670 DATAGOLD, "A bar of Gold", 0, 18
680 DATAVASE, "An old Vase", 0, 22
700 OB=42:DIMOB$(OB),DB$(OB),LO(OB),SO(OB)
710 FORX=1T00B:READOB$(X),DB$(X),SO(X),LO(X):NEXT
730 EXPLODE: PLAY7, 7, 2, 500
750 PRINT:PRINT"Do you Require Instructions ?"
760 REM
761 GETA$: IFA$<>"Y"ANDA$<>"N"THEN761
770 IFA$="N"THEN950
780 CLS:PRINT:PRINTSPC(13) "Instructions":PRINTSPC(13) "-
790 PRINT:PRINT"The Doppel-Ganger gives Welcome to
800 PRINT"Fellow Adventurers."
810 PRINT:PRINT"in Pallida Mors, Your intentions are"
820 PRINT To grab the Boodle, make off with the
830 PRINT"Spondulix and generally this:-"
840 PRINT:PRINT"
                    Find the Six treasures and return"
850 PRINT"them to your starting place."
860 PRINT:PRINT" Sounds easy eh? Well never fear, it"
870 PRINT"is'nt. You see, the Manor is stalked"
880 PRINT"by Several Monsters, whom you must"
890 PRINT"fight off in a manner as close to the"
                                                    . .
```

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900 PRINT"legends as possible, there are also a"
910 PRINT"number of Booby-traps, but you'll"
920 PRINT"probably discover them as you go on"
930 PRINT"your merry way, Good Luck!"
935 PRINT"
                   Yours, The Doppel-Ganger"
940 PLOT12, 26, "PRESS ANY KEY": GETA$
950 ZAP:CLS
960 PRINT:PRINT:PRINT:PRINT:PRINT"Do You wish to have the Objects placed"
970 PRINT"1) As They Are"
980 PRINT"2) Randomly"
990 PRINT"Enter Your Choice"
1000 REM
1001 GETA$:A=VAL(A$):IFA<>1ANDA<>2THEN1001
1002 REM
1010 IFA=1THEN1090
1020 PRINT"Enter a Seed Number, Repeating this
                                                   Number will repeat the Positions"
1030 REM
1031 INPUT"Next time";SD
1040 R=RND(-SD)
1050 FORX=1T020:L0(X)=INT(RND(1)#60)+1:NEXT
1060 FORX=23T042:L0(X)=INT(RND(1)#60)+1:NEXT
1070 PRINT"The Objects have been Randomly Placed"
1080 PRINT"In the Cortex."
1085 WAIT1000
1090 CLS
1100 PRINT: PRINT: PRINT: PRINT: PRINT: PRINT: PRINT: PRINT
1110 PRINT" "CHR$(4)CHR$(27)"JPALE DEATH KNOCKS ON ALL DOORS"CHR$(4)
1112 WAIT500
1113 PLAY2,0,0,0
1114 X=0:REPEAT:X=X+1
1120 MUSIC2,2,1,10:WAIT100:MUSIC2,2,5,10:WAIT100:MUSIC2,2,8,10:WAIT100
1130 MUSIC2,3,1,10:WAIT100:MUSIC2,2,9,10:WAIT200:MUSIC2,2,9,0:WAIT6
1140 MUSIC2, 2, 8, 10: WAIT50: MUSIC2, 2, 6, 10: WAIT50
1150 MUSIC2, 2, 5, 10: WAIT50: MUSIC2, 2, 3, 10: WAIT50
1160 UNTILX=2:MUSIC2,2,1,10:WAIT100:PLAY0,0,0,0
1165 PRINT:PRINT:PRINT
1170 ST=100:TH=100:HU=100:IN=0:PT=0:RM=1:CA=0:SC=0:FU=100:FLAG=0
1180 LAMP=0:DARK=0:LIT=1:OFF=0
1190 REMLAMPO=OFF:DARKO=LIGHT:
1200 REM
1201 INPUT"What is your Name";N$
1202 REM
1210 FORX=1TOLEN(N$)
1220 IFMID$ (N$, X, 1) = "THEN1240
1230 NEXT: X=LEN(N$)+1
                                                    7
1240 N1$=LEFT$ (N$, X-1)/=
1250 N2$=LEFT$(N1$,1)
1260 FORX=2TOLEN(N1$)
1270 A=ASC(MID$(N1$, X, 1)):IFA>64ANDA<91THENA=A+32
1280 N2$=N2$+CHR$(A)
1290 NEXT
1300 PRINT"Thank You, "N2$
1400 WAIT150
1410 X=RND(-DEEK(#276))
1900 WAIT500:CLS
1910 IFDC=1THENST=ST-(INT(RND(1) #5)+5)
1915 IFST<25ANDST>OTHENPRINT"I'm in a Bad Way.":
1916 IFST<=0THEN4060
1917 IFIN>60ANDIN<100THENPRINT"I'm Hurt Badly."
1918 IFIN>99THEN4060
1920 TH=TH-2:HU=HU-1:IFLAMP=LITTHENFU=FU-1
1930 IFTH<50ANDTH>25THENPRINT"I'm a Little Thirsty."
1940 IFTH<25ANDTH>10THENPRINT"I'm very thirsty!"
1950 IFTH<10ANDTH>OTHENPRINT"My throat feels like a desert!!"
1960 IFTH<=0THEN4060
1970 IFHU<50ANDHU>25THENPRINT"I'm Hungry."
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1980 IFHUK25ANDHU>10THENPRINT"I'm Very Hungry." 1990 IFHU<10ANDHU>OTHENPRINT"I'm absolutely Ravening, Gimme Food!" 1991 IFHU<=0THEN4060 1993 IFFU<25ANDFU>OTHENPRINT"The flame is getting very low" 1994 IFFUK=OTHENPRINT"The Lamp is out.":LAMP=OFF 2000 IF LAMP = LIT OR (RM<39ANDRM>47) THEN DARK = 0 2010 IFLAMP=OFFAND (RM>38ANDRM<48) THENDARK=1 2015 IFDARK=OTHEN2100 2020 X=INT (RND(1) #6) +1: DNXGDTD2030, 2040, 2050, 2060, 2070, 2080 2030 PRINT Dark here, Innit :60T02090 2040 PRINT"I'm afraid of the Dark":GOTD2090 2050 PRINT"If I wanted to be in a Black Hole I would've been in a Space game" 2055 GOTD2090 2060 PRINT"Dooperr!I'm scared of the dark..":60T02090 2070 PRINT"It's Dark, No light":GOTD2090 2080 PRINT"It's just Totally Black in here" 2090 GOTO 2710 ' INPUT 2100 ONRMGDTD2110, 2120, 2130, 2140, 2150, 2160, 2170, 2180, 2190, 2200, 2210, 2220, 2230 2101 ONRM-1360T02240, 2250, 2260, 2270, 2280, 2290, 2300, 2310, 2320, 2330, 2340, 2350 2102 0NRM-2560T02360, 2370, 2380, 2390, 2400, 2410, 2420, 2430, 2440, 2450, 2460, 2470 2103 ONRM-3760T02480, 2490, 2500, 2510, 2520, 2530, 2540, 2550, 2560, 2570, 2580, 2590 2104 DNRM-4960TD2600, 2610, 2620, 2630, 2640, 2650, 2660, 2670, 2680, 2690, 2700 2110 PRINT"You are standing at the Gates, over" 2111 PRINT"them is the Motto, which reads:-" 2112 PRINT" 'Non Sum Qualis Eram'" 2113 PRINT"You may go South, or North from here to Quit." 2114 N=-1:S=2:E=0:W=0:U=0:D=0: 2115 SC=0:FORX=1TOOB:IFLO(X)=1THENSC=SC+SO(X) 2116 NEXT: IFSC=1350THEN4300 2117 GOT02710 2120 PRINT"You are halfway on the path between" 2121 PRINT"the front door and the Gates, here " 2122 PRINT"another path crosses it, You may go North, south, East or west." 2123 N=1:S=5:E=4:W=3:U=0:D=0:GOT02710 2130 PRINT"You are on a Path which runs parallel" 2131 PRINT"to the Front of the Manor, you may go East or West." 2132 N=0:S=0:E=2:W=6:U=0:D=0:GOT02710 2140 PRINT"You are on a path which runs along" 2141 PRINT"the front gardens of the house, there" 2142 PRINT"is all kinds of shrubbery here" 2143 PRINT"You may go East or West on this gravelpath." 2144 N=0:S=0:W=2:E=7:U=0:D=0:GOT02710 2150 PRINT"You are in the Porch just outside the Front door of the Manor." 2151 PRINT"The door is South, and the path is North." 2152 N=2:S=14:E=0:W=0:U=0:D=0:GOTD2710 2160 PRINT"You are at a corner of the path which" 2161 PRINT"Goes along the front and the side of" 2162 PRINT"the Manor. The path goes East along" 2163 PRINT"the front and South down the side of" 2164 PRINT"the Manor towards a Garden." 2165 N=0:S=10:E=3:W=0:U=0:D=0:GOT02710 2170 PRINT"You are standing at a corner of the" 2171 PRINT"path. The path runs South through a " 2172 PRINT"Lawn and West along the front of the" 2173 PRINT"house.":N=0:S=8:E=0:W=4:U=0:D=0:GDTD2710 2180 PRINT"You are at the Northern end of a " 2181 PRINT"Large Lawn, a few Croquet hoops stand here.You may go North or South." 2182 N=7:S=9:E=0:W=0:U=0:D=0:GOT02710 2190 PRINT"You are at the southern end of the " 2191 PRINT"Lawn, once this was well kept, now it" 2192 PRINT"is Sadly overgrown.You may go North or west" 2193 N=8:S=0:E=0:W=13:U=0:D=0:GOT02710 2200 PRINT"You are at the Northern end of a Rose garden which lies down the Western 2201 PRINT"side of the Manor, there is an old" 2202 PRINT"iron Bench here, looking at a tangled mess of overgrown roses, which" 2203 PRINT"have'nt been pruned for years...":N=6:S=11:E=0:W=0:U=0:D=0:GOTD2710

2210 PRINT"You are at the southern end of a Rose" 2211 PRINT*Garden, the rosebeds are a tangled " 2212 PRINT mess of Thorns. You may go North or South from this Dismal place." 2213 N=10:S=12:E=0:W=0:D=0:U=0:G0T02710 2220 PRINT"You are at a Corner, A path runs from" 2221 PRINT"here North and East, past the side andRear of the Manor.." 2222 N=11:S=0:E=13:W=0:D=0:U=0:G0T02710 2230 PRINT"You are behind the house on a path " 2231 PRINT"running East and West.":N=0:S=0:E=9:W=12:U=0:D=0:GOT02710 2240 PRINT"You are inside the Manor, A corridor" 2241 PRINT"runs East, west and South. The lamps" 2242 PRINT"are hung with Cobwebs." 2243 N=5:S=23:E=16:W=15:U=0:D=0:GOT02710 2250 PRINT"You are halfway along a Corridor," 2251 PRINT"Here there is a door to South, you may also go East and West." 2252 PRINT" The corridor walls are encased in solid wooden panelling." 2253 N=0:S=22:E=14:W=18:U=0:D=0:G0T02710 2260 PRINT"You are in a corridor. The walls are in solid wooden panelling.You may 2261 PRINT"go South, East or West from here." 2262 N=0:S=24:E=17:W=14:U=0:D=0:G0T02710 2270 PRINT"You are at the Eastern end of the " 2271 PRINT"Corridor, Here you may go North, South or West back the way you came." 2272 N=20:S=25:W=16:E=0:U=0:D=0:G0T02710 2280 PRINT"You are at the Western end of the " 2281 PRINT"corridor, You may go North, South or East back the way you came.." 2282 N=19:S=21:E=15:W=0:U=0:D=0:G0T02710 2290 PRINT"This is a Billiard room, here a dusty" 2291 PRINT"billiard table slowly rots, the baize' 2292 PRINT"torn in places, stained, broken cues" 2293 PRINT"litter the floor.":N=0:S=18:E=0:W=0:U=0:D=0:GOT02710 2300 PRINT"You are in a Sitting room, here there" 2301 PRINT"is a Grand Piano covered in dust, the" 2302 PRINT"legs festooned in Cobwebs, Dustyold chairs rot away." 2303 N=0:S=17:E=0:W=0:U=0:D=0:G0T02710 2310 PRINT"You are in a Large Library." 2311 PRINT"The books on the shelves are covered" 2312 PRINT"in the dust of years, and hung heavy" 2313 PRINT"with Cobwebs, There are chairs here" 2314 N=18:S=0:E=0:W=0:U=0:D=0:G0T02710 2320 PRINT"This is the Dining room of the Manor." 2321 PRINT"Here the family would come to Eat the" 2322 PRINT"food cooked for them by their 2323 PRINT"servants. The table is covered in dust, as are the dining chairs." 2324 N=15:S=0:W=0:E=0:U=0:D=0:GOT02710 2330 PRINT"Here an ornate flight of stairs leads" 2331 PRINT"upwards, whilst an open door reveals a flight leading Downstairs, you 2332 PRINT"may Also go North from here.":N=14:S=0:E=0:W=0:U=36:D=26:GOT02710 2340 PRINT"This room is empty, it is hard to " 2341 PRINT"discern what it used to be, the walls are bare, the floor is uncarpeted, 2342 PRINT"and the ceiling bears no light." 2343 N=16:S=0:W=0:E=0:U=0:D=0:G0T02710 2350 PRINT"This room was the Laboratory of one " 2351 PRINT"of the last of the family who'se 2352 PRINT"manor this was, The test tubes are " 2353 PRINT"empty now, the Van de Graaf generator" 2354 PRINT"and the rest of the usual Mad " 2355 PRINT"scientist gear made known from old 2356 PRINT movies is shrouded in cobwebs.":N=17:S=0:W=0:E=0:D=0:U=0:GOTO2710 2360 PRINT"This is the cellar, here the Servants" 2361 PRINT"used to prepare the meals, but the" 2362 PRINT"Coal range is long gone, and the " 2363 PRINT"shelves around the walls are covered in dust." 2364 PRINT" Over in the corner you can see a way down." 2365 N=0:S=0:W=0:E=0:U=23:D=39:GOT02710 2370 PRINT"You are in a Bedroom. The bed is torn." 2371 PRINT"the curtains covered in the dust of"

2372 PRINT"years, it is cold here.":N=0:S=28:E=0:W=0:U=0:D=0:GOTO2710 2380 PRINT"You are in the West Wing upstairs." 2381 PRINT"This corridor leads East, with doors" 2382 PRINT"to North and South.":N=27:S=29:E=30:W=0:U=0:D=0:G0T02710 2390 PRINT"You are in a Dismal dark Bedroom, but there is no bed here.' 2391 N=28:S=0:E=0:W=0:U=0:D=0:GOT02710 2400 PRINT"You are in a Corridor, you may go " 2401 PRINT"South, east or West.":N=0:S=31:E=32:W=28:U=0:D=0:GDT02710 2410 PRINT"You are in a Bathroom, here there is" 2411 PRINT"a Large bath, with Three taps, Hot, 2412 PRINT"Cold, and Hot soapy, it is full of Dust. The window is broken." 2413 N=30:S=0:E=0:W=0:U=0:D=0:GOT02710 2420 PRINT"You are in a corridor, Looking out " 2421 PRINT"from the windows here you can just" 2422 PRINT"make out the Gate in the Moonlight" 2423 PRINT"From here you may go South, east or West." 2424 N=0:S=36:E=33:W=30:U=0:D=0:G0T02710 2430 PRINT"You are in a corridor, you may go Eastor west or South." 2431 N=0:S=37:E=34:W=32:U=0:D=0:G0T02710 2440 PRINT"You are in the East wing, you can go North, south or West." 2445 N=35:S=38:E=0:W=33:U=0:D=0:G0T02710 2450 PRINT"You are in a Bedroom, here we find a" 2451 PRINT"large Double bed, hung over with " 2452 PRINT"Cobwebs, a Rat gnaws away at the " 2453 PRINT"mattress.":N=0:S=34:E=0:W=0:U=0:D=0:GOT02710 2460 PRINT"Here the ornate staircase leads Down- wards, you can also go north." 2461 N=32: ₩=0: S=0: E=0; U=0: D=23: GOT02710 حكمانا 2470 PRINT"This is a Bathroom and Toilet.The" 2471 PRINT"Cistern is covered in brown stains " 2472 PRINT"and a Dead rat floats in the bowl." 2473 N=33:S=0:E=0:W=0:U=0:D=0:GOT02710 2480 PRINT"This is the Master Bedroom." 2481 PRINT"A Giant-size double bed, hung with " 2482 PRINT"dust, Dominates this room as you " 2483 PRINT"enter. The curtains are torn, and there is blood on the bedsheets.." 2484 N=34:S=0:E=0:W=0:U=0:D=0:G0T02710 2490 PRINT"You are in the subterranean passages." 2491 PRINT"The walls ,floor and ceiling are solidRock, You may go North." 2492 N=40:S=0:E=0:W=0:D=0:U=26:G0T02710 2500 PRINT"You are at a crossing of ways, you " 2501 PRINT"may go North, south east or West from" 2502 PRINT"this Dank, musty place.":N=43:E=42:W=41:S=39:U=0:D=0:GOT02710 2511 PRINT"down a Deep Pit!":FORPT=0T0100:SOUND1,PT,10:NEXT 2512 SOUND1,1,0:MUSIC1,1,1,0:PLAY1,0,1,500 2513 PRINT"At the bottom you lie severely " 2514 PRINT"wounded, then you see Arthur Scargill" 2515 PRINT"coming towards you, and lose your willto Live.":WAIT20:ZAP:GOTO4060 2520 PRINT"Aaaaaaaaaaaaaaaaaahhh!!! You have" 2521 PRINT"fallen down a Bottomless pit, and 2522 PRINT"wound up in Australia, where you were" 2523 PRINT"trampled on by a vicious herd of Kangaroos...":60T04060 2530 PRINT"We are some way along the underground" 2531 PRINT"passage, you may go North or South.":N=44:S=40:E=0:W=0:U=0:D=0:GOT02710 2540 PRINT"You are at a Corner of the passage," 2541 PRINT"Here you may go North, East or South." 2542 PRINT"Do I smell H2SO4??":N=45:S=43:E=46:W=0:U=0:D=0:GOTO2710 2550 PRINT"Aaahh! Gurgle, I told you I smelt " 2551 PRINT"H2SO4, that's Sulphuric Acid, and we" 2552 PRINT"are in it, i mean Really in it!" 2553 PLAY0,1,0,0 2554 FORX=1T0250: SOUND4, RND(1) \$5+25, 7: NEXT 2555 PLAY0,0,0,0: 2556 GOT04060 2560 PRINT"You are in a passage, the rock walls" 2561 PRINT"glisten with the damp, the air is bad,you may go East or West."

2562 N=0:S=0:E=47:W=44:U=0:D=0:G0T02710 2570 PRINT"We are at the end of the Tunnel, here " 2571 PRINT"there is a ladder leading upwards." 2572 N=0:S=0:E=0:W=46:U=48:D=0:GOT02710 2580 PRINT"We are in the Family Crypt, Here we" 2581 PRINT"find Coffins engraved with the Family" 2582 PRINT"Motto, 'Non Sum Qualis Eram' The " 2583 PRINT"crypt gates hang drunkenly open," 2584 PRINT"revealing an Exit into a Churchyard to the North." 2585 N=49: S=0: E=0: W=0: U=0: D=47: GOT02710 2590 PRINT"We are on a path leading around the" 2591 PRINT"church, we can go North, south or East" 2592 N=50: S=48: E=54: W=0: U=0: D=0: GOT02710 2600 PRINT"We are in the churchyard at the back" 2601 PRINT"of the church.around us are graves." 2602 PRINT"We may go North or South.":N=51:S=49:E=0:W=0:U=0:D=0:GOT02710 2610 PRINT"We are at a corner of the path leadingaround the old church." 2611 PRINT"We can go East or South from this place." 2612 N=0:S=50:E=52:W=0:U=0:D=0:GOT02710 2620 PRINT"We are on a path at the northern side" 2621 PRINT"of the church, we can go East or West" 2622 PRINT"Here there is a bed of roses and an" 2623 PRINT"old Wooden seat.":N=0:S=0:E=53:W=51:U=0:D=0:GOT02710 2630 PRINT"You are at a corner of the Churchyard" 2631 PRINT"Looking up you can see the Tower with" 2632 PRINT"its Pinnacles.You may go South or west from here." 2633 N=0:S=56:E=0:W=52:U=0:D=0:GOT02710 2634 N=52:W=0:S=0:E=54:U=0:D=0:G0T02710 2640 PRINT"You are on a path on the South side " 2641 PRINT"of the church, here there are more" 2642 PRINT"graves, and monuments, and a large" 2643 PRINT"white statue of the Fourth horseman " 2644 PRINT"of the Apocalypse." 2645 N=0:S=0:E=55:W=49:U=0:D=0:G0T02710 2650 PRINT"You are at a corner of the path, Going" 2651 PRINT"north will take you to the door of " 2652 PRINT"the church.":N=56:S=0:E=0:W=54:U=0:D=0:GOT02710 2660 PRINT"You are standing outside the Church." 2661 PRINT"Going West will take you inside the" 2662 PRINT"church. The path goes North and South" 2663 PRINT"from here.":N=53:S=55:E=0:W=57:U=0:D=0:GOT02710 2670 PRINT"You are in the Porch of the Church," 2671 PRINT"Here a stairway leads up into the " 2672 PRINT"tower, going West will take you into" 2673 PRINT"the church Proper.":N=0:S=0:E=56:W=58:U=59:D=0:GOTO2710 2680 PRINT"As you walk down the Aisle you can " 2681 PRINT"the Pews covered in Dust and Cobwebs," 2682 PRINT"the Altar used as a table by Rats, the" 2683 PRINT"Crucifix hung upside down, and a hole" 2684 PRINT"in the roof through which the moon" 2685 PRINT"shines.":N=0:S=0:E=57:W=0:U=0:D=0:GOT02710 2690 PRINT"You are in the Balcony, here there is" 2691 PRINT"a decrepit Organ, the tubes now used" 2692 PRINT"as a home by Bats, the spiral stair-" 2693 PRINT"way continues up into the Belfry.":N=0:S=0:E=0:W=0:U=60:D=57:GOTO2710 2700 PRINT"You are here in the Belfry, the bell" 2701 PRINT"is hung with dust, the clapper held" 2702 PRINT"in the grip of Cobwebs, Bats hang 2703 PRINT"from the Rafters, the louvres are" 2704 PRINT"broken revealing a view over the " 2705 PRINT"surrounding countryside.":N=0:S=0:E=0:W=0:U=0:D=59 2709 PRINT"I can see :-":Z=0:IFDARK=1THENPRINT"Blackness.":GOTO2719 2710 PRINT"I can see :-":Z=0:IFDARK=1THENPRINT"Blackness.":GOTO2719 2711 FORX=1TOOB:IFLO(X)<>RMTHENNEXT:GOT02715 2712 IFPOS(0)+LEN(DB\$(X))<35THENPRINTDB\$(X)",";:GOT02714 2713 PRINT: PRINTDB\$(X)",";

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2714 Z=1:NEXT
2715 IFZ=OTHENPRINT"Nothing useful.".
2716 PRINT
2719 X=INT(RND(1) $5)+1:0NXG0T02720,2730,2740,2750,2760
2720 PRINT"Ok "N2$", What now?":GOT02770
2730 PRINT"What do you want to do "N2$"?":GOT02770
2740 PRINT"Any bright ideas "N2$"?":GOT02770
2750 PRINT"What do you want me to do?":GOT02770
                                                  "N2$"??"
2760 PRINT"Well, What do you suggest that we do
2770 REM CHEATER!
2775 IN$="":VB$="":ND$="":PRINT" >";:POKE#26A,3
2776 REM
2777 REM
2778 REM
2780 GETA$: A=ASC(A$): IF (A=130RA=127) AND IN$=""THEN2780
2790 PRINTA$;: IFA=127THENIN$=LEFT$(IN$,LEN(IN$)-1):GOT02776
2800 IFA=13THEN2830
2810 IFA<65ANDA>91ANDA<>32THENZAP:PRINTCHR$(127);:GOT02776
2820 IN$=IN$+A$:GOT02776
2830 POKE#26A,11
2835 PRINT: PRINT
2840 IN$=IN$+"
2850 FORX=1TOLEN(IN$)
2860 IFMID$(IN$,X,1)=" "THEN2880
2870 NEXT: ZAP: GOT02775
2880 VB$=LEFT$(IN$,X-1):NO$=RIGHT$(IN$,LEN(IN$)-X)
2890 FORX=1TOCO
2900 IFVB$=CO$(X)THEN2920
2910 NEXT:PRINT"Sorry "N2$" but "VB$" is not in my
                                                       Vocabulary":PING:GOT02775
2920 DNX6DTD2930, 2990, 3040, 3230, 3500, 3520, 3540, 3600, 3700, 3820, 3820, 1900, 3920
2925 ONX-1360T03920,4020
2930 FORX=1TOOB
2940 IFOB$(X)=LEFT$(NO$,LEN(OB$(X)))THEN2960
2950 NEXT:PRINT"There is no "ND$" Anywhere !!!"
2951 PRINT"You might try putting it differently.":GOT02775
2960 IFLO(X)<>RMTHENPRINT"it isn't here.":GOT02775
2964 IFN0$<>"ROBOT "THEN2970
2965 PRINT"Aiiieee!! As i approached it blades
                                                  shot from its body and impaled me"
2966 PRINT"so I bled to death.....":GOTO4060
2970 IFCA=6THENPRINT"I can't carry any more.!":GOTO2775
2980 LO(X) =-1:CA=CA+1:PRINT"Ok "N2$" I got it!":GOT02775
2990 FORX=1TOOB:
3000 IFOB$(X)=LEFT$(NO$,LEN(OB$(X)))THEN3020
3010 NEXT:PRINT"Drop What?":GOT02951
3020 IFLO(X)<>-1THENPRINT"I'm not carrying it!!":GOT02775
3030 CA=CA-1:LO(X)=RM:PRINT"Ok "N$" I dropped it.":GOT02775
3040 IFAT=1THENPRINT"I'm Being Attacked!":GOTO 3220
3050 LR=RM:DI$=LEFT$(NO$,1)
3060 IFDI$="N"THENRM=N
3070 IFDI$="S"THENRM=S
3080 IFDI$="W"THENRM=W
3090 IFDI$="E"THENRM=E
3100 IFDI$="U"THENRM=U
3110 IFDI$="D"THENRM=D
3120 IFRM=OTHENPRINT"Hey, I can't go that way.":RM=LR:GOT02775
3130 IFRM=-1THEN4210
3135 IFDARK=1THENIN=IN+5:PRINT"OW! I hurt Myself in the Dark."
3136 IFDARK=1ANDRND(1)>.25THENZH=INT(RND(1) #HZ)+1:GOT03220
3137 IFDARK=1THEN3160
3140 IFAT=2THENAT=0:G0T03160
3150 IFAT=0ANDRND(1)>.45ANDRM>15THEN3170
3160 PRINT"Okay "N2$"!":GOT01900
3170 ZH=INT(RND(1)*HZ)+1:X=INT(RND(1)*3)+1:RM=LR
3180 DNXGDT03190, 3200, 3210
3190 PRINT"HELP! It's a "HZ$(ZH)"!!":AT=1:GOT02719
3200 PRINT"Oh my God! it's a "HZ$(ZH)"!":AT=1:GOT02719
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3210 PRINT"Holy Belgium!! it's a "HZ$(ZH)".":AT=1:GOT02719
3220 DNZHGDT03285, 3300, 3340, 3360, 3410, 3440, 3470
3230 IFAT<>1THENPRINT"But I'm not being Attacked!":GOT02719
3231 ONZHGOTO3240, 3290, 3320, 3360, 3390, 3430, 3460
3240 IFL0(15)=-1ANDLEFT$(NO$,5)="STAKE"THEN3260
3250 GOT03270
3260 PRINT"You drove the Stake through it's evil Heart, causing blood to gush from
3261 PRINT"it as it dissoluted into dust...":PT=PT+25:AT=2:LO(15)=0:CA=CA-1
3262 GOT02719
3270 REM
3280 IFL0(5)=-1ANDLEFT$(NO$,4)="DOGR"THEN3282
3281 GOT03285
3282 PT=PT+50:AT=2:PRINT"It ran off "N2$".":GOT02719
3285 PRINT"ARRRRRGH!!IT GOT ME!!!":PT=PT-20:AT=2:ST=ST-50:IN=IN+30:DC=1:GDT02719
3290 IFL0(30)=-1ANDNO$="BIBLE "THENPRINT"It Ran Off..":PT=PT+50:AT=2:60T02719
3300 PRINT"Arrrrrrgh! It cut my throat and.... gurgle...dyed its cap in My Blood!
3310 GOT04060
3320 IFLO(12)=-1ANDNO$="KNIFE "THENPRINT"The Knife scared it away...."
3330 IFL0(12)=-1ANDNO$="KNIFE "THENPT=PT+40:AT=2:GOT02719
3340 PRINT"OH NO! Oooer! Gulp! Hey...that's not nice!....oh..."
3350 ST=ST-30:AT=2:60T02719
3360 PRINT"Oh No!You Can't do that, I have fallenunder the spell of the leanhaun
3370 PRINT"Shee and I am doomed, aye Doomed, to be its Victim......"
3380 DC=1:AT=2:G0T02719
                              "THENPRINT"You sure scared it off with the salt"
3390 IFL0(29)=-1ANDNO$="SALT
3400 IFL0(29)=-1ANDNO$="SALT "THENPT=PT+60:AT=2:G0T02719
3410 PRINT"OH NO! Oocer! Gulp! Hey...that's not nice!....oh..."
3420 WAIT20:PRINT"AAAAAARGHHHH!! IT'S EATING MEEEEEE.....":GDT04060
3430 IFL0(29)=-1ANDNO$="SALT "THEN3390
3440 PRINT"The Thing from Hell came, and blasted our souls into the deepest pits of
3450 PRINT "Hades.....": GOT04060
3460 IFL0(29)=-1ANDNO$="SALT "THEN3390
3470 PRINT"The Psychic Energy of the Hellish
                                                 Elemental blasted us again von"
3480 PRINT"wall, leaving us injured and drained.":IN=IN+50:ST=ST-20:AT=2:GOTO2719
3500 IFLAMP=LITTHENPRINT"It's already lit.":60T02719
3505 IFL0(22)<>-1THENPRINT"Haven't got anything to light it with":60T02716
3510 IFL0(21)=-1ANDNO$="LAMP "THENLAMP=LIT:PRINT"Okay then.":GOT01900
3511 PRINT"Haven't got the lamp.":60T02719
3520 IFNO$="ON "THENNO$="LAMP ":GOT03500
3530 IFLO(21)=-1ANDNO$="OFF "THENLAMP=OFF:PRINT"OK.":GOT02719
3540 IFLO(21)<>-1THENPRINT"I haven't got the Lamp":60T02719
3550 IFLO(23)<>-1THENPRINT"No Fuel to fill it with."
3560 IFNO$<>"LAMP "THENPRINT"Fill What?":GOT02719
3570 IF FI=1THENPRINT"Out of Oil!!!":GOTO2719
3580 FI=1:FU=100:PRINT"Okay.":GOT02716
3600 CLS:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT
              5
3601 PRINT"
                - 14 -
                        "CHR$ (4) CHR$ (27) "NDON' T"
                                - 14
3602 PRINT: PRINT: PRINT: PRINT"
                                           "CHR$(27) "NPANIC": PRINTCHR$(4)
3609 X=INT(RND(1) #6): 0NX60T03610, 3620, 3630, 3640, 3650, 3660
3610 RM=N: GOT03670
3620 RM=S:GOT03670
3630 RM=E:G0T03670
3640 RM=W:GOT03670
3650 RM=U: 60T03670
3660 RM=D
3670 PING: WAIT10: IFRM<1THEN3609
3680 ST=ST-10:AT=0:G0T01900
3700 CLS: PRINT: PRINTCHR$ (4) SPC (15) CHR$ (27) "JSTATUS"CHR$ (4)
3705 PRINT: PRINT
3710 PRINTN$"'S STATUS REPORT .... ": Z=0
3720 PRINT"STRENGH - "ST:PRINT"INJURY -"IN
3730 PRINT"YOU ARE CARRYING:-"
3740 FORX=1T00B:WAIT20
3750 IFLO(X) = -1THENPRINTDB$(X):Z=1
3760 NEXT: IFZ=OTHENPRINT"NOTHING."
3770 PRINT"YOUR SCORE IS - ";:SC=0
```

```
3780 FORX=1TOOB: IFLO(X)=1THENSC=SC+SO(X):
3790 NEXT
3800 SC=SC+PT:PRINTSC
3810 WAIT2000:60T01900
3820 IFNO$<>"BOTTLE "THENPRINTVB$" WHAT??":GOT02719
3830 IFVB$="BREAK"THENSDUND4,100,0:SDUND1,100,0:PLAY1,1,1,1000
3840 WAIT100:PRINT"OW! Something hit me under the ear.":WAIT500
3850 FDRX=1T020:PLAY0,1,1,9:SOUND4,100,0:WAIT5:PLAY0,0,0,0:WAIT5:NEXT
3860 PRINT"HEY!Did I tell you about my Cat,it's a Really neat Pussy you know?"
3870 PRINT"A really clever cat, it watches tv youknow, Tom and Jerry, you know?
3880 PRINT"It's a Really Nice Cat.."
3890 WAIT1000:PRINT"Oh No, I've been infected by the"
3900 PRINT"Polong and Pelesit, and now I am
                                                    doomed!!!!!...."
3910 PRINT"AAAAAAAAaaaaaaahhhhhhhhh!!":GOTO4060
3920 IFNO$="FISH "THENPRINT"The Scarlet Fish is a Red Herring":ZAP:60T02719
3930 FORX=1TOCM
3940 IFLEFT$(ND$, LEN(CM$(X)))=CM$(X)ANDLD(X+30)=-1THEN3960
3950 NEXT: PRINTVB$" WHAT ?? ": GOT02719
3960 IFVB$="EAT"THENPRINT"Yum Yum.!"
3970 IFVB$="DRINK"THENPRINT"Gulp gulp gulp slurp...ahhh."
3980 IFCT(X)=1THENTH=100
3990 IFCH(X)=1THENHU=100
4000 ST=ST+CS(X):CA=CA-1:LO(30+X)=0
4005 IFND$="SMIRNDFF "THENZH=INT(RND(1)*HZ)+1:AT=2:60T04007
4006 G0T04010
4007 PRINT"Well they said anything could happen and we're being attacked by a"
4008 PRINTHZ$(ZH)"!!!":GOTO 3220
4010 G0T02719
4020 IFAT<>1THENPRINT"Kill What clothhead?":GOT02719
4021 PRINT"Kill it? What with dummy?":GDT02719
4060 WAIT1000: PAPERO: INK1
                                   "CHR$(4)CHR$(27)"NYOU ARE DEAD"CHR$(4)
4070 CLS:PRINT:PRINT"
4080 PLAY2,0,0,0
4090 MUSIC2, 3, 10, 10: WAIT25: MUSIC2, 3, 8, 10: WAIT25: MUSIC2, 3, 10, 10: WAIT100
4100 MUSIC2, 3, 8, 10: WAIT25: MUSIC2, 3, 6, 10: WAIT25: MUSIC2, 3, 5, 10: WAIT25
4110 MUSIC2,3,3,10:WAIT25:MUSIC2,3,2,10:WAIT100:MUSIC2,3,3,10:WAIT50
4120 MUSIC2, 3, 3, 0: WAIT20
 4130 MUSIC2, 2, 10, 10: WAIT25: MUSIC2, 2, 8, 10: WAIT25: MUSIC2, 2, 10, 10: WAIT100
4140 MUSIC2,2,5,10:WAIT25:MUSIC2,2,6,10:WAIT25:MUSIC2,2,2,10:WAIT25
 4150 MUSIC2, 2, 3, 10: WAIT99: MUSIC2, 2, 3, 0: WAIT50
 4160 MUSIC2,1,10,10:WAIT25:MUSIC2,1,8,10:WAIT25:MUSIC2,1,10,10:WAIT100
 4170 MUSIC2, 1, 8, 10: WAIT25: MUSIC2, 1, 6, 10: WAIT25: MUSIC2, 1, 5, 10: WAIT25
 4180 MUSIC2, 1, 3, 10: WAIT25: MUSIC2, 1, 2, 10: WAIT100: MUSIC2, 1, 3, 10: WAIT50
4190 MUSIC2, 1, 3, 0: WAIT20
 4200 PRINT: PRINT: PRINT: PRINT:
 4210 PRINT"YOUR SCORE WAS:-":SC=0
 4220 FORX=1T00B: IFL0(X)=1THENSC=SC+S0(X):
 4230 NEXT: PRINTSC+PT
 4240 PRINT WANT TO PLAY AGAIN?"
 4245 REM
4246 GETA$
 4250 IFA$="Y"THENRUN
 4260 CLS:PLOT6, 11, CHR$(14) + "PROGRAM ABORT COLD RESET"
 4270 PLOT6, 12, CHR$ (14) + "PROGRAM ABORT COLD RESET"
 4280 INK1:PAPER0
4290 REMCALLDEEK(#FFFC) ' ERASE THE REM FROM THIS LINE FOR COLD RESET."
 4299 END
 4300 WAIT1000:CLS
 4310 PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT
 4320 PRINT"
                         "CHR$ (4) CHR$ (27) "NSUCCESS! "CHR$ (4)
 4324 PRINT: PRINT
                                                    door...You have Survived...."
 4330 PRINT"Pale Death has not knocked on your
 4340 SC=0:FORX=1T00B:IFL0(X)=1THENSC=SC+S0(X):
 4341 NEXT
 4345 PRINT"You have amassed a score of "SC+PT"
 4350 PRINT"Which is a Treasure score of 1350 plusa Fight score of "PT
 4360 GDT04240
```

DIARY OF AN ORIC OWNER by Kester Cranswick

Sunken, red-rimmed eyes that abhor the daylight; nimble, calloused fingers with liberally chewed nails; a new vocabulary that means nothing to friends and neighbours; a bank balance as red as a London bus such are the symptons of advanced Oricitis. The final stages of bankruptcy, divorce and voluntary confinement to a darkened room are almost inevitable.

If I had known what lay before me when I first turned on Oric number 18345, I might have been more cautious. As I am now trapped in my addiction, these pages from my diary may serve to show how to avoid the pitfalls an innocent Oric owner may encounter.

Today I bought a computer - a 48k Oric-1. Thank God for plastic money, as I can't really afford the £169.95. Why did I spend two weeks wages on an electronic gadget I have managed perfectly well without for a quarter of a century?

Much of it must have been due to the influence of the media. Computers are everywhere. There are more computer magazines than there are days in the month. There are glossy advertisements in all the best places, television programs on the things and even the behemoths of Fleet Street give space to coverage of new developments. There's a revolution going on.

So, computers are going to have a big role in my future. The sooner I learn to cope with them, the better I'll be able to cope with the future. That's a £50 reason.

Then, my job as a writer could probably benefit from the services of a glorified adding machine. A word processing facility, the ability to handle large amounts of data, the means to cut down on paper work and improve accounting would all be valuable. That's a £60 reason.

I've got an Atari video game hiding away under the TV, and cartridges for that cost a small fortune. With a computer I could play games, costing far less and be able to write them myself, from the pages of magazines. I could thus sell the Atari, so that's a £45 reason.

Finally, who knows what other uses a machine could be put to? I won't unless I own one. All in all, it has to be worth the risk.

As for the particular model, that was a less reasoned decision. I'd have liked the BBC computer, but that cost twice what I was willing to spend. I ruled that out. The Spectrum has a lousy keyboard and seemed more for the games/dabbler market. The Vic 20 had too little onboard memory and the Texas seemed to be out of favour with software suppliers.

The Oric-1 had an affordable price. The reviews I'd read had been favourable and the manufacturer was promising plenty in the way of add-ons. It had a reasonable amount of memory, good sound and graphic potential and was backed up by an organization that seemed unlikely to go to the wall.

So, for better or worse, money changed hands and I became an Oric owner.

The little lady didn't seem too concerned by this latest addition to the family: I explained all my reasons, promised I'd do the ironing from then on and that was that.

The first date with the Oric didn't go too well. I plugged it in to the Philips TV and adjusted the tuning to get an acceptable picture. I pulled the HiFi stack apart to get to the cassette recorder and plugged in to that. I was on the road! Or, so I thought.

The Demo tape went in the cassette player. Side One -LOAD ABORTED. SI*t. Try again. Same message. And again. And again. Side Two. That loaded OK and I spent an entertaining half hour pretending to be Stirling Moss. "Well", I thought, "at least it does work". And so must I, tomorrow, so off at the plugs and off to bed, wondering what wonders lay in store for me tomorrow.

I've just turned the very last page of my Oric-1 Basic Programming Manual. My mind's buzzing with the excitement of learning the mastery of a new skill. This plastic box of buttons and bits is really something, and no advertisement or sales person could convey the pleasure of coaxing a response from the Oric. It's going to be fun.

The manual wasn't too bad as manuals go. Some of the demonstration programs were a bit trite - the best were Moire on page 40 and Split Circle on page 93. I could watch them for hours! The sort and character generator programs on pages 84 and 89 seemed to be the most useful programs.

I found a few misprints and errors in the manual - signs of a rush job, methinks.

For the record, here are the corrections:-

- p22 LET N\$ + FP\$ = A\$ should be LET A\$ = N\$ + FP\$
- p27 'Subroutines' needs 35 NEXT X in order to work
- p37 Should be 160 A = INT
- p43 Should be 130 A = ...: IF A>32 AND ...
- p89 'Character Generator' 30 should be PRINT ...

"WISH TO REDEFINE"

I hope the next printing of this manual has these errors corrected.

These were minor problems compared to some of the bugs on the Oric-1. One I couldn't explain was on page 21. Whenever I entered LET JONI =, I got an error response. Using JOMI, JANI. or TONI was OK, but JONI wasn't. It baffles me.

The TAB bug is more annoying. It appears to work in a very random, haphazard fashion. I found that by adding 12 to the TAB required, the function worked. For TAB (3), I'd write TAB (15). However, the SPC function is more reliable and easier to use.

The last major bug is IF ... THEN/ELSE. The command doesn't work. However, I found a short program in Personal Computer News that solves this bug.

- START = #0400: LOC = START 10 20 REPEAT
- 20 REPEAT
- 30 **READ DA**
- 40 CS = CS + DA
- POKE LOC, DA 50
- LOC = LOC + 1UNTIL DA = 255 60
- 70
- IF CS<>2838 THEN? "TYPING ERROR": END 80 90
- DOKE FO, START: END DATA # C9, # C8, # D0, # 05, # 20, # 61, #CA 100
- 110 DATA # DO, #07, # C9,# 27, # FO, # F7, # 4C
- 120 DATA # 4E, # EA, #4C, # 8E, # 00, # FF

Enter this program, run it and the bug is cured.

The appendices in the back of the manual are of varying usefulness to the new Oric owner. The chapter on Oric Basic is essential reading, even if some of the terms (PULL, POP, TRUE, FALSE) aren't mentioned in the most used, while the Control Character listing is far from complete. Here's a pretty comprehensive listing I worked out:-

CTRL	PRINT C	HRI(x) ACTION
Α	1	For editing purposes
С	3	Stops LIST/interupts loop
Ď	4	Double printing on/off
F	6	Key sound on/off
G	7	Sounds PING
н		Cursor left
ï	8 9	Cursor right
·,	10	Cursor down
ĸ	11	Cursor up
	12	Clear screen
м	13	
IVI	13	Carriage return/Error signal if
		character on screen
Ν	14	Hides current line only
0	15	Disables cursor until return
Q	17	Cursor on/off
S	19	Cursor movement on/off
O Q S T X	20	Lower case on/off
x	24	Cancels entered line
ź	26	Line black on black or green
-	20	characters
ESC	27	Enables attribution
1	29	Inverse video on/off
-		

BOOK REVIEW by Rob Kimberly

Birthdays when you get to my age are usually best for-gotten, but not this year. My missus - bless her - really excelled herself by buying me two goodies for my Oric, or as she calls it "THE TOY!!" these were:-

THE ORIC-1 COMPANION by Bob Maunder which I'll give a review of below, and "EXTENSION MONITOR" by Kenema, which I hope to review possibly if time permits!

As a relative newcomer to the computing bug, I've been looking around for a good source of reference for the ORIC. The ORIC manual supplied with the machine is O.K., but lacking in much detail. Until my birthday I had to rely on good ol' User Group (don't worry lads - I still will!), and what I could glean from the many mags on sale these days (which come expensive when you start totting it all up!!).

For £6.95 Bob Maunder comes up with a nice - a very nice book. Before going into details, I have only one real criticism - why wasn't it ring bound instead of the standard paperback package, it makes for easier reading when your hands are elsewhere (on keyboard), and ultimately reduces wear!

Onto the book itself:-

It comes in five sections plus obligatory appendices, and these are as follows:-

Section One

Here we have a brief summary of the ORIC basic, but in only 16 pages, it seems to impart as much detail as the whole ORIC manual.

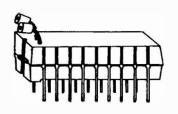
Section Two

This spends nearly 70 pages discussing each ORIC command word in detail - looking at format, storage codes, an explanation of how, why and where plus examples so refreshing!

Armed with a basic knowledge of programming, I was ready to start using the Oric. My set-up of domestic colour TV, HiFi cassette recorder and plugs trailing everywhere was less than entirely satisfactory. The first thing was a cheap cassette recorder, found in a sale at Dixons for £20. It had no pause control and no tape counter, but is otherwise useful.

Then, using a large board from the garage, masking tape and so on, I mounted the Oric-1 and cassette recorder so that trailing wires could be stuck down and the whole package made fairly mobile. By drilling a hole in the board and arranging a small screw to that it was held loosely against the reset button in the hole by tape across the head, I also had a RESET button that could be operated quickly and easily.

Now, I think, I'm ready to undergo the transformation from an Oric-owner to an Oric-user. I'm going to make this machine do what it's meant to.



Section Three

The author now tackles the screen display, and unfortunately this is the weakest part of the book, (some might argue that this section should be the most important), as only 6 pages are spent on the subject, which left yours truly still puzzled about one or two details. (However, the "Robots" example program is much enjoyed by my 4 year old daughter - so perhaps I'm being a little harsh in my criticism!!)

Section Four

Program and Data Organisation - now I liked this bit - how all yer bits and pieces of basic program are bunged into memory, with some good examples. Using this section in conjunction with Kenema's "Extension Monitor" things suddenly clicked into place - its not all as mysterious as I first thought! (I wish I was 15 again - learning wouldn't be such an up-hill task.)

Section Five

Fifty pages well spent on such things as the goings on in Pages 0, 1, 2 of RAM plus a full disassembly of the ROM, with special reference to:-

/#COEA - C2AA - Basic keywords C2AC - C3C8 - System Messages FC70 - FF70 - Character Definition

Using the above, I spent the first night hunting for handy sub-routines hidde in ROM, although some of these are listed on pages 117 and 118.

The Appendices give handy lists like:-

(a) All keyboards plus storage code (whatever happened to "GO" and "INVERSE"?)
(b) ASCii codes from 0 to 127

(c) 6502 mnemonics

(d) A review of the MCP-40 with a list of commands included.

Conclusion

Altogether a very handy book, giving the ORIC user a useful reference source. Thanks Mr Maunder (and thanks Mrs K!!)

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E.H.T.	Minimum 19.5kv Maximum 22.5kv	Minimum 19.5kv Maximum 22.5kv
VIDEO BAND WIDTH	6MHz.	10MHz.
DISPLAY	80 characters by 25 lines	80 characters by 25 lines
SLOT PITCH	0.63mm	0.41mm
INPUT: VIDEO	R.G.B. Analogue TTL Input	R.G.B. Analogue/ TTL Input
SYNC	Separate Sync on R.G.B. Positive or Negative	Separate Sync on R.G.B. Positive or Negative
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