

# C16 / C116 + 4

COMPUTING-MONTHLY

ISSUE 11 & 12

FEBRUARY & MARCH 1990

VOLUME 1

HINTS &  
TIPS

Little  
Basic Progs  
Scattered  
About

C16/14  
ONLY

SOFT/HARDWARE  
REVIEWS  
S/WARE  
GUIDE  
PART 5

Bleeping Bug Parts 2 & 3  
Big Underground Prog Part  
Members list Part 1  
& HOAS MORE, look INSIDE

||||| PLUS/4

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## Editorial

Hello dear member

Welcome to the bumper issue 11 & 12. I hope you like it, its full of this and that for your Hungary C16/+4 to digest. Well its been an eventful two months, because I've been very busy with work and College etc, and this mag is to go into printing on the 4 April 1990, today is the 29 March.

Well whats in this issue then I'll do a quick contents here: -

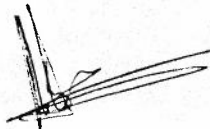
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20	Software review and short graphic prog
21	Software review and Gavin Friday Picture Prog corrections
22	Hardware review and missing TRAP THE KING prog lines (sorry)
23	Software review
24	Software review
25	Software review
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35	More Tape to Disk saves
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39 & 40	For sale & wanted pages

Well thats quite an issue if you ask me quite a good issue, I hope you like it. Well I'll sign of now cause I've run out of the usual gabble that I'm normally full of.

Oh yeh by the way I've borrowed a 1541 D/D from my college so if you want to send me PD other software then please do, I'm waiting. David Brighton, could you please send all the PD that you have, many thanks for any help.

Well goodbye for now, don't forget contact me if you want to chat: -  
Roy Robinson, 112 Cliff Road, HORNSEA, N. Humberside, HU18 1JE.  
Tel (0964) 534611

Bye,



P.S Basic course starts  
April 1990  
competition as well.  
Watch this space.

UNDERGROUND PROGS PART 4

2110 IFF#="8" THENF#=#(118) : PRINTCL#;F#  
G0T04050

2120 IFF#="9" THENF#=#(119) : PRINTCL#;F#  
G0T04150

2130 IFF#="A" THENF#=#(120) : PRINTCL#;F#  
G0T04210

2140 IFF#="B" THENF#=#(121) : PRINTCL#;F#  
G0T04050

2150 IFF#="C" THENF#=#(122) : PRINTCL#;F#  
G0T04070

2160 IFF#="D" THENF#=#(123) : PRINTCL#;F#  
G0T04080

2170 IFF#="E" THENF#=#(124) : PRINTCL#;F#  
G0T04050

2180 IFF#="F" THENF#=#(125) : PRINTCL#;F#  
G0T04080

2190 IFF#="G" THENF#=#(126) : PRINTCL#;F#  
G0T04470

2200 IFF#="H" THENF#=#(127) : PRINTCL#;F#  
G0T04110

2210 IFF#="I" THENF#=#(128) : PRINTCL#;F#  
G0T04090

2220 IFF#="J" THENF#=#(129) : PRINTCL#;F#  
G0T04050

2230 IFF#="K" THENF#=#(130) : PRINTCL#;F#  
G0T04060

2240 IFF#="L" THENF#=#(131) : PRINTCL#;F#  
G0T04090

2250 G0T0290

2260 G0S0E4020

2270 FOR#=132T0153 : PRINTSPC(2);S#(4) : NEX  
T

2280 PRINTLL#

2290 GETI# : IF#=" " THEN2290

2300 IF#="0" THENG#=#(132) : PRINTCL#;G#  
G0T04520

OVER  
COPY

2310 IF#="1" THENG#=#(133) : PRINTCL#;G#  
G0T04060

2320 IF#="2" THENG#=#(134) : PRINTCL#;G#  
G0T04060

2330 IF#="3" THENG#=#(135) : PRINTCL#;G#  
G0T04090

2340 IF#="4" THENG#=#(136) : PRINTCL#;G#  
G0T04210

2350 IF#="5" THENG#=#(137) : PRINTCL#;G#  
G0T04060

2360 IF#="6" THENG#=#(138) : PRINTCL#;G#  
G0T04050

2370 IF#="7" THENG#=#(139) : PRINTCL#;G#  
G0T04110

2380 IF#="8" THENG#=#(140) : PRINTCL#;G#  
G0T04400

2390 IF#="9" THENG#=#(141) : PRINTCL#;G#  
G0T04060

U/G PRG CONIT

```

2400 IFG#="A" THENG#=#(142) : PRINTCL#;G#
G0T04160
2410 IFG#="B" THENG#=#(143) : PRINTCL#;G#
G0T04370
2420 IFG#="C" THENG#=#(144) : PRINTCL#;G#
G0T04180
2430 IFG#="D" THENG#=#(145) : PRINTCL#;G#
G0T04480
2440 IFG#="E" THENG#=#(146) : PRINTCL#;G#
G0T04460
2450 IFG#="F" THENG#=#(147) : PRINTCL#;G#
G0T04300
2460 IFG#="G" THENG#=#(148) : PRINTCL#;G#
G0T04100
2470 IFG#="H" THENG#=#(149) : PRINTCL#;G#
G0T04180
2480 IFG#="I" THENG#=#(150) : PRINTCL#;G#
G0T04880
2490 IFG#="J" THENG#=#(151) : PRINTCL#;G#
G0T04860
2500 IFG#="K" THENG#=#(152) : PRINTCL#;G#
G0T04570
2510 IFG#="L" THENG#=#(153) : PRINTCL#;G#
G0T04570
2520 G0T0290
2530 G0S0E4020
2540 FORY=154T0175:PRINTSPC(2);S#(Y);NEK
T
2550 PRINTLL#

```

```

2560 GETH#;IFH#="" THEN2560
2570 IFH#="0" THENH#=#(154) : PRINTCL#;H#
G0T04060
2580 IFH#="1" THENH#=#(155) : PRINTCL#;H#
G0T04110
2590 IFH#="2" THENH#=#(156) : PRINTCL#;H#
G0T04110
2600 IFH#="3" THENH#=#(157) : PRINTCL#;H#
G0T04090
2610 IFH#="4" THENH#=#(158) : PRINTCL#;H#
G0T04060
2620 IFH#="5" THENH#=#(159) : PRINTCL#;H#
G0T04060
2630 IFH#="6" THENH#=#(160) : PRINTCL#;H#
G0T04050
2640 IFH#="7" THENH#=#(161) : PRINTCL#;H#
G0T04090
2650 IFH#="8" THENH#=#(162) : PRINTCL#;H#
G0T04090
2660 IFH#="9" THENH#=#(163) : PRINTCL#;H#
G0T04090
2670 IFH#="A" THENH#=#(164) : PRINTCL#;H#
G0T04090
2680 IFH#="E" THENH#=#(165) : PRINTCL#;H#
G0T04110
2690 IFH#="C" THENH#=#(166) : PRINTCL#;H#
G0T04510
2700 IFH#="D" THENH#=#(167) : PRINTCL#;H#
G0T04060

```

CONIT OVER

2710 IFH#="E" THENH#=#\$(168) : PRINTCL#;H#  
 60104110

2720 IFH#="F" THENH#=#\$(169) : PRINTCL#;H#  
 60104100

2730 IFH#="G" THENH#=#\$(170) : PRINTCL#;H#  
 60104240

2740 IFH#="H" THENH#=#\$(171) : PRINTCL#;H#  
 60104300

2750 IFH#="I" THENH#=#\$(172) : PRINTCL#;H#  
 60104110

2760 IFH#="J" THENH#=#\$(173) : PRINTCL#;H#  
 60104070

2770 IFH#="K" THENH#=#\$(174) : PRINTCL#;H#  
 60104060

2780 IFH#="L" THENH#=#\$(175) : PRINTCL#;H#  
 60104230

2790 60102590

2800 6030E4020

2810 FORV=176TO197 : PRINTSPC(2);#\$(V);#EX  
 1

2820 PRINTLL#

2830 GETI#;IFI#="" THEN2830

2840 IFI#="0" THENI#=#\$(176) : PRINTCL#;I#  
 60104120

2850 IFI#="1" THENI#=#\$(177) : PRINTCL#;I#  
 60104090

2860 IFI#="2" THENI#=#\$(178) : PRINTCL#;I#  
 60104480

2870 IFI#="3" THENI#=#\$(179) : PRINTCL#;I#  
 60104090

2880 IFI#="4" THENI#=#\$(180) : PRINTCL#;I#  
 60104070

2890 IFI#="5" THENI#=#\$(181) : PRINTCL#;I#  
 60104080

2900 IFI#="6" THENI#=#\$(182) : PRINTCL#;I#  
 60104160

2910 IFI#="7" THENI#=#\$(183) : PRINTCL#;I#  
 60104060

2920 IFI#="8" THENI#=#\$(184) : PRINTCL#;I#  
 60104070

2930 IFI#="9" THENI#=#\$(185) : PRINTCL#;I#  
 60104560

2940 IFI#="A" THENI#=#\$(186) : PRINTCL#;I#  
 60104060

2950 IFI#="B" THENI#=#\$(187) : PRINTCL#;I#  
 60104050

2960 IFI#="C" THENI#=#\$(188) : PRINTCL#;I#  
 60104180

2970 IFI#="D" THENI#=#\$(189) : PRINTCL#;I#  
 60104090

2980 IFI#="E" THENI#=#\$(190) : PRINTCL#;I#  
 60104060

XPA

EST

ULA

YPE

2990 IFJ#="F" THENJ#=#\$(191) : PRINTCL#,J#  
GOTO4130

3000 IFJ#="G" THENJ#=#\$(192) : PRINTCL#,J#  
GOTO4090

3010 IFJ#="H" THENJ#=#\$(193) : PRINTCL#,J#  
GOTO4560

3020 IFJ#="I" THENJ#=#\$(194) : PRINTCL#,J#  
GOTO4060

3030 IFJ#="J" THENJ#=#\$(195) : PRINTCL#,J#  
GOTO4560

3040 IFJ#="K" THENJ#=#\$(196) : PRINTCL#,J#  
GOTO4110

3050 IFJ#="L" THENJ#=#\$(197) : PRINTCL#,J#  
GOTO4220

3060 GOTO2990

3070 GOCUB4020

3080 FORV=198TO219 : PRINTSPC(2) ; #\$(V) : NEX  
T

3090 PRINTLL#

3100 GETJ# : IFJ#="" THENJ#3100

3110 IFJ#="0" THENJ#=#\$(198) : PRINTCL#,J#  
GOTO4130

3120 IFJ#="1" THENJ#=#\$(199) : PRINTCL#,J#  
GOTO4320

3130 IFJ#="2" THENJ#=#\$(200) : PRINTCL#,J#  
GOTO4130

3150 IFJ#="4" THENJ#=#\$(202) : PRINTCL#,J#  
GOTO4060

3160 IFJ#="5" THENJ#=#\$(203) : PRINTCL#,J#  
GOTO4110

3170 IFJ#="6" THENJ#=#\$(204) : PRINTCL#,J#  
GOTO4070

3180 IFJ#="7" THENJ#=#\$(205) : PRINTCL#,J#  
GOTO4110

3190 IFJ#="8" THENJ#=#\$(206) : PRINTCL#,J#  
GOTO4110

3200 IFJ#="9" THENJ#=#\$(207) : PRINTCL#,J#  
GOTO4440

3210 IFJ#="A" THENJ#=#\$(208) : PRINTCL#,J#  
GOTO4050

3220 IFJ#="B" THENJ#=#\$(209) : PRINTCL#,J#  
GOTO4170

3230 IFJ#="C" THENJ#=#\$(210) : PRINTCL#,J#  
GOTO4100

3240 IFJ#="D" THENJ#=#\$(211) : PRINTCL#,J#  
GOTO4060

3250 IFJ#="E" THENJ#=#\$(212) : PRINTCL#,J#  
GOTO4070

3260 IFJ#="F" THENJ#=#\$(213) : PRINTCL#,J#  
GOTO4080

3270 IFJ#="G" THENJ#=#\$(214) : PRINTCL#,J#  
GOTO4480

3280 IFJ#="H" THENJ#=#\$(215) : PRINTCL#,J#  
GOTO4480

3290 IFJ#="I" THENJ#=#\$(216) : PRINTCL#,J#  
GOTO4080

3300 IFJ#="J" THENJ#=#\$(217) : PRINTCL#,J#  
GOTO4590

\* By Peter and Melanie Crack.

\* Last month the scenario and instructions were dealt with, this month the  
\* first part of the screen will be displayed on screen, again watch the  
\* address numbers as they will chop about a bit.

\* Now for an explanation of the programme lines (in running order).

5000-500E Set frequency for voice 2 and jump to \$4000

4000-400B Disable interrupts set interrupt pointers to my joystick wedge and  
\* clear interrupt disable.

400C-4015 Set mcm mode and switch on hi-res graphics

4015-401F Does nothing!!!!.

4022-4029 Set bit map at normal position \$2000-\$3FFF.

402C-4033 Do the same for for the colour table set from \$1000-\$1FFF

4036-403C Set screen size, 'A' reg contains screen width, 'X' reg contains  
\* screen depth.

403E-4045 Set screen colour and border colour.

404B-4051 Set MCM colours 2 and three, these are eventually stored in the  
\* area \$1000-\$1FFF as 8\*8 blocks this is why if you try to use more  
\* than 3 colours on the screen colour clashes will occur, to explain,  
\* if you print into one of the screens 8\*8 blocks the whole block  
\* will take that colour if you then print into the same block with  
\* another shape the whole block will take the new colour, to prevent  
\* this I have only used 3 colours and the screen of course

4053-.... Set these colours into \$1000-\$1FFF

4056-4058 Allows the ram under rom from \$0000-\$FFFF to be viewed

405B-4067 Clear (fill with \$00) all locations from \$4000 to \$47FF

4068-4071 Transfer \$4900-\$49FF to \$4780-\$47FF these consist of movement  
\* delays and various registers and pointers which I will explain  
\* fully when I submit them for publication.

4073-4075 Set MCM colour 1 this is the 'magic' colour that changes all  
\* points on the screen (where it is used of course), whenever this  
\* register is itself changed, this, I think, is because only one  
\* location is used and it is checked (as are all the others) every *time*  
\* the screen is reprinted and that's about 50 times per second!!!.

4078-4079 Disable interrupts, and switch out rom (STA \$FF0F).

407C-4091 Increase 'Y' reg to zero (the last routine set it to \$FF or-1, BPL  
\* \$406A at \$4071, and store it in \$12, set 'X' and 'Y' registers  
\* and transfer data from \$BB10 and \$BB90 to \$1F00 and \$1E00.

4093-40B5 Set \$D1 to \$D5 to the correct addresses to allow data from \$BC00  
\* to be transferred to \$3B00 on 'X' register contains the no of  
\* pages to be transferred (blocks of 256 bytes), the 'Y' register  
\* acts as a counter to ensure this, and the \$D1 and \$D3 registers are  
\* increased every time the 'Y' register passes zero, the BRK command  
\* at \$40B6 is temporary and must be removed next month, it only  
\* serves to stop the programme.....

BB18-C00F Data for title printed across bottom of screen this includes  
\* colour data.....

5000-5033 This is a straight copy of Commodore's RJOY(X) routine I have put  
\* in a loop at \$5003 with a branch instruction at \$5031 in an  
\* attempt to make it more accurate I have found out since that  
\* it is more likely to be my joysticks which are at fault, as this  
\* routine is interrupt controlled the instruction at \$5033

\* (JMP \$CE0E) allows a normal interrupt to be serviced.....  
\* Well that's it for this month.....PETER CRACK.....

. 5000	EA	NOF	
. 5001	EA	NOF	
. 5002	EA	NOF	
. 5003	A0 01	LDY	##01
. 5005	98	TYA	
. 5006	48	FHA	
. 5007	A2 01	LDX	##01
. 5009	BD FB BF	LDA	\$BFFB,X
. 500C	AA	TAX	
. 500D	8E 00 FF	STX	\$FF00
. 5010	AD 00 FF	LDA	\$FF00
. 5013	8E 00 FF	STX	\$FF00
. 5016	CD 00 FF	CMF	\$FF00
. 5019	D0 F2	BNE	\$500D
. 501B	49 FF	EOR	##FF
. 501D	A8	TAY	
. 501E	29 0F	AND	##0F
. 5020	AA	TAX	
. 5021	BD F0 BF	LDA	\$BFF0,X
. 5024	C0 0F	CFY	##0F
. 5026	90 02	BCC	\$502A
. 5028	09 F0	ORA	##80
. 502A	F0 02	BEQ	\$502E
. 502C	85 E8	STA	\$E8
. 502E	68	FLA	
. 502F	A8	TAY	
. 5030	88	DEY	
. 5031	D0 D2	BNE	\$5005
. 5033	4C 0E CE	JMF	\$CE0E
. 5036	EA	NOF	
?			
?			
. 5000	A0 00	LDY	##00
. 5002	8C 0E FF	STY	\$FF0E
. 5005	88	DEY	
. 5006	8C 0F FF	STY	\$FF0F
. 5009	A9 7F	LDA	##7F
. 500B	8D 10 FF	STA	\$FF10
. 500E	4C 00 40	JMF	\$4000
. 4000	78	SEI	
. 4001	A9 50	LDA	##50
. 4003	8D 15 03	STA	\$0315
. 4006	A9 00	LDA	##00
. 4009	8D 14 03	STA	\$0314
. 400B	58	CLI	
. 400C	A9 A0	LDA	##A0
. 400E	85 83	STA	\$83
. 4010	AD 06 FF	LDA	\$FF06
. 4013	09 20	ORA	##20
. 4015	8D 06 FF	STA	\$FF06
. 4018	2D 07 FF	AND	\$FF07
. 401B	29 EF	AND	##EF
. 401D	09 10	ORA	##10
. 401F	8D 07 FF	STA	\$FF07
. 4022	AD 12 FF	LDA	\$FF12
. 4025	29 C3	AND	##C3
. 4027	09 8F	ORA	##8F
. 4029	8D 12 FF	STA	\$FF12
. 402C	AD 14 FF	LDA	\$FF14
. 402F	29 C3	AND	##C3
. 4031	09 18	ORA	##18
. 4033	8D 14 FF	STA	\$FF14
. 4036	A9 14	LDA	##14
. 4038	A2 19	LDX	##19
. 403A	85 87	STA	\$87
. 403C	86 88	STX	\$88
. 403E	A9 90	LDA	##90
. 4040	8D 15 FF	STA	\$FF15
. 4043	A9 11	LDA	##11
. 4045	8D 19 FF	STA	\$FF19
. 4048	EA	NOF	
. 4049	EA	NOF	
. 404A	EA	NOF	
. 404B	A9 62	LDA	##62
. 404D	85 85	STA	\$85
. 404F	A9 22	LDA	##22
. 4051	85 86	STA	\$86
. 4053	20 67 C5	JSR	\$C567
. 4056	A9 80	LDA	##80
. 4058	8D F8 07	STA	\$07F8
. 405B	A0 00	LDY	##00
. 405D	98	TYA	
. 405E	99 00 46	STA	\$4600,Y
. 4061	99 00 47	STA	\$4700,Y
. 4064	C8	INY	
. 4065	D0 F7	BNE	\$405E
. 4067	EA	NOF	
. 4068	A0 7F	LDY	##7F
. 406A	B9 80 49	LDA	\$4980,Y
. 406D	99 00 47	STA	\$4780,Y
. 4070	88	DEY	
. 4071	10 F7	BFL	\$406A
. 4073	A9 42	LDA	##42
. 4075	8D 16 FF	STA	\$FF16
. 4078	78	SEI	
. 4079	8D 3F FF	STA	\$FF3F
. 407C	C8	INY	
. 407D	84 12	STY	\$12
. 407F	A0 70	LDY	##70
. 4081	A2 00	LDX	##00
. 4083	BD 18 8B	LDA	\$8B18,X
. 4086	99 00 1F	STA	\$1F00,Y
. 4089	BD 90 8B	LDA	\$8B90,X
. 408C	99 00 1B	STA	\$1B00,Y
. 408F	E8	INX	
. 4090	C8	INY	
. 4091	D0 F0	BNE	\$4083
. 4093	A9 3B	LDA	##3B
. 4095	85 D1	STA	\$D1
. 4097	A9 80	LDA	##80
. 4099	85 D0	STA	\$D0
. 409B	A9 BC	LDA	##BC
. 409D	85 D3	STA	\$D3
. 409F	A9 0B	LDA	##0B
. 40A1	85 D2	STA	\$D2
. 40A3	A2 04	LDX	##04
. 40A5	A0 00	LDY	##00
. 40A7	B1 D2	LDA	(\$D2),Y
. 40A9	91 D0	STA	(\$D0),Y
. 40AB	C8	INY	
. 40AC	D0 F9	BNE	\$40A7
. 40AE	E6 D1	INC	\$D1
. 40B0	E6 D3	INC	\$D3
. 40B2	CA	DEX	
. 40B3	D0 F0	BNE	\$40A5
. 40B5	EA	NOF	
. 40B6	88	BRK	



>BB18 98 98 98 98 98 98 98 98 :.....  
>BB20 98 98 98 98 98 98 98 98 :.....  
>BB28 98 98 98 98 98 98 98 98 :.....  
>BB30 98 98 98 98 98 98 98 98 :.....  
>BB38 98 98 98 98 98 98 98 98 :.....  
>BB40 98 98 98 98 98 98 98 98 :.....  
>BB48 98 98 98 98 98 98 98 98 :.....  
>BB50 98 98 98 98 98 98 98 98 :.....  
>BB58 98 98 98 98 98 98 98 98 :.....  
>BB60 98 98 98 98 98 98 98 98 :.....  
>BB68 98 98 98 98 98 98 98 98 :.....  
>BB70 98 98 98 98 98 98 98 98 :.....  
>BB78 98 98 98 98 98 98 98 98 :.....  
>BB80 98 98 98 98 98 98 98 98 :.....  
>BB88 98 98 98 98 98 98 98 98 :.....  
>BB90 30 30 30 30 30 30 30 30 :00000000  
>BB98 30 30 30 30 30 30 30 30 :00000000  
>BBA0 30 30 30 30 30 30 30 30 :00000000  
>BBA8 30 30 30 30 30 30 30 30 :00000000  
>BBE0 30 30 30 30 30 30 30 30 :00000000  
>BBE8 30 30 30 30 30 30 30 30 :00000000  
>BFC0 30 30 30 30 30 30 30 30 :00000000  
>BFC8 30 30 30 30 30 30 30 30 :00000000  
>BFD0 30 30 30 30 30 30 30 30 :00000000  
>BFD8 30 30 30 30 30 30 30 30 :00000000  
>BBE0 30 30 30 30 30 30 30 30 :00000000  
>BBF0 30 30 30 30 30 30 30 30 :00000000  
>BFC0 30 30 30 30 30 30 30 30 :00000000  
>BFC8 00 00 00 01 01 01 05 05 :.....  
>BC10 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BC18 55 55 5A 5A 59 59 59 59 :UUZZYYYY  
>BC20 55 55 A9 AA 55 55 55 55 :UU)\*UUUU  
>BC28 55 55 55 55 95 95 95 95 :UUUU....  
>BC30 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BC38 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BC40 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BC48 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BC50 55 55 55 55 55 55 55 5A :UUUUUUUV  
>BC58 55 55 55 55 55 55 55 A9 :UUUUUUUU  
>BC60 55 55 55 55 55 55 65 65 :UUUUUUUee  
>BC68 55 55 55 55 55 95 95 95 :UUUUU...Z  
>BC70 55 55 55 55 96 96 99 99 :UUUU....  
>BC78 55 55 55 A9 AA 56 56 55 :UUU)\*VVUU  
>BC80 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BC88 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BC90 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BC98 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BCA0 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BCA8 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BCB0 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BCB8 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BCC0 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BCC8 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BCD0 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BCD8 55 55 55 55 55 55 55 55 :UUUUUUUU  
>BCE0 55 55 55 55 55 55 56 5A :UUUUUUUVZ  
>BCE8 55 55 55 55 55 55 55 95 :UUUUUUUU.  
>BCF0 55 55 55 55 55 55 55 55 :UUUUUUUU

>BCF8 55 55 55 55 55 55 55 65 :UUUUUUUe  
>BD00 55 55 56 5A 59 65 65 65 :UUVZYeee  
>BD08 55 55 95 A5 65 59 59 55 :UU.XeYU  
>BD10 55 55 55 55 55 55 55 :UUUUUUUU  
>BD18 55 55 55 55 55 55 55 :UUUUUUUU  
>BD20 55 55 55 55 55 55 55 :UUUUUUUU  
>BD28 55 55 55 55 55 55 55 :UUUUUUUU  
>BD30 55 55 55 55 55 55 55 :UUUUUUUU  
>BD38 55 55 55 55 55 55 55 :UUUUUUUU  
>BD40 00 00 00 40 40 40 50 50 :...@eFF  
>BD48 05 15 15 15 55 55 55 :....UUUU  
>BD50 56 56 5A 5A 5A 6A 6A :VVVZZZJj  
>BD58 A6 95 95 9A 9A 9A 9A :&.....  
>BD60 A9 56 5A A6 A9 A9 AA AA :UVZ))\*\*  
>BD68 AA AA AA AA AA AA 6A 69 :\*\*\*\*\*ji  
>BD70 AA AA AA 6A 6A 6A 6A AA :\*\*\*jjj\*  
>BD78 AA A9 A5 A6 A6 9A 9A 9A :\*)Z&&...  
>BD80 AA 6A 6A 9A 99 99 99 :\*jj.....  
>BD88 96 56 69 69 A9 A9 A9 A9 :.Vii)))  
>BD90 A5 A6 A6 A6 9A 9A 9A 95 :Z&&&...  
>BD98 56 A6 A6 A6 A6 9A 59 69 :V&&&&.Yi  
>BDA0 9A 99 69 69 66 A6 A6 A6 :.iiif&&  
>BDA8 59 95 A5 A5 A6 A6 A6 A6 :Y.XZ&&&&  
>BDB0 A6 A6 9A 9A 9A 9A 9A 9A :&&.....  
>BDB8 AA AA AA AA AA AA 56 56 :\*\*\*\*\*UV  
>BDC0 A5 A5 A5 A5 A5 A5 A5 A5 :ZZZZZZZZ  
>BDC8 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BDD0 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BDD8 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BDE0 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BDE8 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BDF0 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BDF8 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BE00 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BE08 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BE10 5A 5A 5A 5A 5A 5A 5A 5A :ZZZZZZZZ  
>BE18 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BE20 96 5A 6A 6A 6A 69 55 56 :ZJJjUU  
>BE28 6A 9A 9A 9A 9A 6A 6A 9A :j.....j  
>BE30 AA 6A 6A 6A 6A 6A 6A 6A :\*jjjjjj  
>BE38 9A 9A 9A 9A 9A 9A 9A 9A :.....  
>BE40 9A 9A 9A 9A 9A 9A 95 55 :.....U  
>BE48 AA AA AA A6 9A 9A 59 56 :\*\*\*&..YV  
>BE50 AA AA AA A6 9A 6A AA AA :\*\*\*&.j\*\*  
>BE58 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BE60 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BE68 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BE70 AA AA AA AA AA AA AA AA :\*\*\*\*\*  
>BE78 95 A5 A5 A5 A9 A9 A9 AA :.ZZZ)))\*  
>BE80 50 54 54 54 55 55 55 55 :PTTTUUUU  
>BE88 55 55 55 56 56 5A 5A :UUUUUVVZ  
>BE90 6A AA AA AA AA AA AA AA :j\*\*\*\*\*  
>BE98 6A 6A 6A 6A 6A 55 55 AA :jjjjjUU\*  
>BEA0 AA AA AA AA A9 55 56 AA :\*\*\*\*)UV\*  
>BEA8 69 69 66 65 A5 AA AA :iiifeZ\*\*  
>BEB0 AA AA AA AA 55 56 AA AA :\*\*\*\*UV\*\*  
>BEB8 9A 9A 9A 95 A5 AA AA :...Z\*\*\*  
>BEC0 99 69 69 6A AA AA AA :.ijj\*\*\*\*  
>BEC8 A6 A6 56 5A AA AA AA :&VZ\*\*\*  
>BED0 9A 9A 6A AA AA AA AA :..j\*\*\*\*\*

```

>BEDB A9 A9 AA AA AA AA AA AA :))*****
>BEE0 A6 AA AA AA AA AA AA AA :8*****
>BEEB AA AA AA AA AA AA AA AA :*****
>BEF0 9A 9A 9A 9A 9A 9A 9A 9A :.....Z**
>BEF8 A6 A6 A6 A6 56 5A AA AA :2&2&VZ**
>BF00 A5 A5 A5 A5 A5 A5 A5 A5 :ZZZZZZZZ
>BF08 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BF10 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BF18 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BF20 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BF28 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BF30 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BF38 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BF40 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BF48 5A 5A 5A 5A 5A 5A 5A :ZZZZZZZZ
>BF50 5A 5A 5A 5A 5A 5A 5A :ZZZZZZZZ
>BF58 AA AA AA AA AA AA AA AA :*****
>BF60 6A 6A 6A 6A 69 55 56 AA :jjjjjUV*
>BF68 9A 9A 9A 99 56 6A AA AA :....Uj**
>BF70 6A 69 55 56 AA AA AA AA :jiUV****
>BF78 99 56 5A AA AA AA AA AA :.VZ*****
>BF80 AA A9 A6 9A 6A 69 96 AA :*)&.ji.*
>BF88 5A 9A 9A 6A 6A AA AA AA :Z..jj***
>BF90 AA AA AA AA AA AA AA AA :*****
>BF98 AA AA AA AA AA AA AA AA :*****
>BFA0 AA AA AA AA AA AA AA AA :*****
>BFA8 AA AA AA AA AA AA AA AA :*****
>BFB0 AA AA AA AA AA AA AA AA :*****
>BFB8 AA AA AA AA AA AA AA AA :*****
>BFC0 55 55 95 95 95 A5 A5 A5 :UU...ZZX

```

```

>BFCB 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BFDB 00 00 00 00 00 00 00 :.....
>BFDB 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BFEB 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BFEB 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BFF0 10 EF 10 EF 10 EF 10 EF :.o.o.o.o
>BFF8 10 EF 10 EF 10 EF 10 00 :.o.o.o..
>C000 00 3F FF FC 00 0F FF F0 :.?!.p
>C000 00 00 00 00 00 00 00 :.....

```

COMIT  
NEXT

MONTH PAGE

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By Peter and Melanie Crack.

\* This month I will fill in the hole left in the bottom of the screen by  
\* last months article, again watch the memory addresses (the first number to  
\* appear on the left of the listings). First enter MONITOR, load the prog.  
\* then enter D40B5, press return, move the cursor over the 'B' of the BRK  
\* command in location \$40B5 and replace it with the NOP command and press  
\* enter, the cursor will be automatically placed on the next location ready  
\* to enter the programme. This section will enter three large zeros, the  
\* start position of the score counter, these numbers will roll rather like  
\* the reels of a fruit machine only going up instead of down, this is how  
\* the programme runs.....

```
40B5-40B9 A series of NOP commands.
40BA-40C6 Load 'X' register, store it in $D4 (this is the offset from the
* beginning of each data page where the number bytes are stored),
* also store 'A' register in the data area where all the number
* pointers are stored.
40C8-40D3 Load 'A' register with $BB and store it in all locations where
* this value is required (these routines will be explained later).
40D6 Gosub $4F3B.
40D9-40DD Switch in rom, allow interrupts, and jump to next part of programme.
4F38-4F45 Gosub $4E90 process first number on screen, that is the number on
* the right, load offset for middle number into 'A' register and
* gosub process that number, do the same for the number on the left.
4E90 Load offset for righthand number in 'A' register (the next two
* calls to this routine miss out this command and go directly to...)
4E92-4E96 And store it in $D0, low address of screen area to which this data
* is to be written, do the same for high part and store it in $D1.
4E98-4E9D Load 'X' register with value stored in $D4, load 'Y' register with
* the number of lines of bytes to be printed on screen (dec 24, that
* is 00 to 17 hex inclusive), transfer 'Y' register to 'A' register
* and push a copy onto the stack to save it for later use (only the
* 'A' register can be pushed onto the stack).
4E9E Gosub $4E88, print a line.
4EA1-4EA7 Pull 'A' register off the stack, transfer it to 'Y' register,
* decrease it, then check to see if it still plus, is it still in the
* range 00-7F hex?, if yes then branch to $4EC9 else return from sub.
4EA8-4EC1 Print a line subroutine.
4EAB Load 'Y' register with zero.
4EAA Load 'A' register with byte to be printed, 'X' register holds
* offset from start of page.
4EAD Store byte in screen address pointed to by $D0 and $D1 and offset
* by value in 'Y' register, this is called indirect indexed addressing.
4EAF-4EB2 Increase 'X' register and check if it has reached zero if yes then
* increase page number at $4EAC else branch to $4EB5.
4EB5-4EBC Transfer 'Y' to 'A' registers, clear the carry flag ready for
* addition, add $08 and transfer 'A' to 'Y' registers, this is neater
* then adding one to 'Y' register eight times, now check to see if 'Y'
* register has equalled $18 (have we printed three bytes one at 00,
* one at 08 and one at 10 offsets) if no then branch to $4EAA else..
4EBE-4EC1 Gosub increase address to point to next line and return from sub.
45C0-45C5 Add $01 to the screen address pointer $D0 and save copy on stack.
45C6-45CC Mask out the four leftmost bits and compare it to zero, branch if
* equal to $45D2, else compare it to $08 an again branch if equal to
* $45D2, else.....
45CE-45D1 If the above two tests fail then pull original $D0 value off stack
* store it in $D0 and return from subroutine, the first check at
* $45C0 automatically checks to see if $D0 has been increased from
* $FF to $00, this is important because if this check were omitted
* then the printing would end at, say, $21FF and start again at $2100
* instead of, say, $2200 where we want it to print.
```

```

*****
45D2-45E0 This routine only comes into use when we have reached the bottom
* of a screen line (for an explanation of the screen layout see
* below) pull the original (that is the value of $D0 after having
* added #$01 to it in $45C0-$45C5) value of $D0 off the stack,add
* #$39 to it and store it back into $D0,load $D1,the screen address
* high byte,and add #$01 plus the carry bit in case the previous
* addition has set it to one,then return from subroutine.
* Before I end I would like to explain the screen layout and
* numbering system,the screen data is stored in one long string from
* $2000-$3FFF when in its normal position,the screen display is made
* up of 1000 character squares,each one byte wide and eight bytes
* deep,arranged in 25 lines of 40 squares,the first byte of the top
* left hand square is numbered $2000,the last byte of the same
* square is numbered $2007,the next square starts at $2008 and ends
* at $200F,the third square starts at $2010 and ends at $2017 and so
* on until the end of that line,the first square of line two starts
* at $2140 and ends at $2147 the second square is from $2148 to
* $214F and so on,these numbers are usually referred to as addresses
* we can break down each address,for example,the address of the
* first byte of the screen is $2000,the left two numbers refer to
* the page in which the data is to be found, (a page equals a block
* of 255 bytes) the last two numbers refer to the position within
* that page,now you can see that to print a line ,one byte deep
* across the screen we have to add #$08 to the address for each
* print so that all the bytes printed do stay in one line,see the
* routine at $4EA88-$4EC1. And if we want to print a thin line going
* down the screen (one to eight pixels wide) we first have to print
* eight bytes to get to the bottom of the screen line,then add #$39
* to the low half of the address and #$01 to the high half of the
* address to get us to the top of the next screen line,on top of
* this you have to remember that the address is a sixteen bit number
* so two bytes have to be used and a two byte addition routine
* devised. (see routine at $45C0-$45E0).
* Now for this months data,if you make a mistake in typing do not
* worry as only the display will look a bit odd and you can put it
* right later.
4E36-4E43 This data will be created by the programme as it runs so I have No7.
* sent it in,this is the data pointers for the three numbers printed
* at the base of the screen,in three groups of four,each group is
* dealt with in turn,the first group is for the righthand number,
* the second for the middle number and the third for the lefthand
B800-BB17 This is the data for the numbers starting with 0 then 1,2,3,4,5,6,
* 7,8,9 and ending with 0 again I will explain the use of both these
* blocks of data fully when I submit the score processing part of
* the programme.
* The programme as now assembled can be run but first save it,and I suggest
* you save it in two parts,the first from $4000 to $57FF and the second from
* $B800 to $C00F,having done that type in A4112 BRK and press return then
* type in G5100 and press return,press the reset button when you have
* run the programme and seen the result.....
* And thats it for this month remember as always I am waiting to read about
* your comments or hints.....PETER CRACK.
*****
*.....CONTINUED.....

```

```

>B800 55 55 55 40 00 01 40 55 :UUU@..@U
>B800 01 41 55 41 46 00 61 46 :.AUAF.aF
>B810 00 61 46 06 61 46 06 61 :.aF.aF.a
>B818 46 06 61 86 06 62 86 18 :F.a..b..
>B820 62 86 18 62 86 18 62 86 :b..b..b..
>B820 18 62 86 60 62 86 60 62 :.b.'b.'b
>B830 06 60 62 86 60 62 86 00 :.'b.'b..
>B838 62 86 00 62 81 55 42 80 :b..b..UB.
>B840 55 02 80 00 02 AA AA AA :U....***
>B840 55 55 55 40 00 01 40 04 :UUU@..@.
>B850 01 40 18 01 40 58 01 41 :.@..@X.A
>B850 58 01 41 58 01 40 18 01 :X.AX.@..
>B860 40 18 01 80 18 02 80 18 :@.....
>B868 02 80 18 02 80 18 02 80 :.....
>B870 18 02 80 18 02 80 18 02 :.....
>B878 80 18 02 80 18 02 80 18 :.....
>B880 02 80 5A 02 81 5A 82 81 :..Z..Z..
>B888 5A 82 80 00 02 AA AA AA :Z....***
>B890 55 55 55 40 00 01 40 58 :UUU@..@X
>B898 01 41 66 01 41 09 01 46 :.AF.A..F
>B9A0 01 81 46 01 81 40 01 81 :.F..@..
>B8A0 40 01 81 80 06 02 80 06 :.....
>B8B0 02 80 06 02 80 18 02 80 :.....
>B8B8 18 02 80 18 02 80 00 02 :.....'
>B8C0 80 60 02 80 60 02 81 80 :.....'
>B8C8 02 86 00 02 85 56 82 85 :.....V..
>B8D0 56 82 80 00 02 AA AA AA :V....***
>B8D8 55 55 55 40 00 01 41 55 :UUU@..AU
>B8E0 61 41 55 61 41 80 61 41 :aAUaA.aA
>B8E8 80 61 40 01 81 40 01 81 :.a@..@..
>B8F0 40 06 01 80 06 02 80 16 :@.....
>B8F8 02 80 16 02 80 05 82 80 :.....
>B900 00 62 80 00 62 80 00 62 :.b..b..b
>B908 80 00 62 81 80 62 81 80 :.b..b..b
>B910 62 80 61 82 80 55 82 80 :b.a..U..
>B918 18 02 80 00 02 AA AA AA :.....***
>B920 55 55 55 40 00 01 40 06 :UUU@..@.
>B928 01 40 06 01 40 06 01 40 :.@..@..@
>B930 18 01 40 18 01 40 18 01 :.@..@..@
>B938 40 60 01 80 60 02 80 60 :@.'.'.'
>B940 02 81 80 02 81 80 02 81 :.....
>B948 86 02 86 06 02 86 06 02 :.....
>B950 85 55 62 85 55 62 85 55 :.Ub..Ub.U
>B958 62 80 06 02 80 06 02 80 :b.....
>B960 06 02 80 00 02 AA AA AA :.....***
>B968 55 55 55 40 00 01 45 55 :UUU@..EU
>B970 61 45 55 61 46 80 01 46 :aEUaF..F
>B978 00 01 46 00 01 46 80 01 :.F..F..F
>B980 45 55 81 85 55 82 85 55 :EU..U..U
>B988 62 80 00 62 80 00 62 80 :b..b..b..
>B990 00 62 80 00 62 80 00 62 :.b..b..b..
>B998 86 00 62 86 00 62 86 00 :.b..b..b..
>B9A0 62 81 81 82 81 55 82 80 :b.....U..
>B9A8 56 02 80 00 02 AA AA AA :V....***
>B9B0 55 55 55 40 00 01 41 55 :UUU@..AU
>B9B8 81 45 55 61 45 55 61 45 :.EUaEUaE
>B9C0 55 61 46 00 61 46 00 01 :UaF.aF..
>B9C8 46 00 01 86 00 02 85 55 :F.....U
>B9D0 82 85 55 62 85 55 62 85 :.Ub..Ub..
>B9D8 55 62 86 00 62 86 00 62 :Ub..b..b
>B9E0 86 00 62 86 00 62 85 55 :.b..b..b.U
>B9E8 62 85 55 62 85 55 62 81 :b..Ub..Ub.
>B9F0 55 82 80 00 02 AA AA AA :U....***
>B9F8 55 55 55 40 00 01 41 55 :UUU@..AU

```

```

. 4F38 20 90 4E JSR $4E90
. 4F3B A9 18 LDA #18
. 4F3D 20 92 4E JSR $4E92
. 4F40 A9 00 LDA #00
. 4F42 20 92 4E JSR $4E92
. 4F45 60 RTS
. 4F46 EA NOP

```

. 45C0 A5 D0 LDA \$D0  
 . 45C2 18 CLC  
 . 45C3 69 01 ADC ##01  
 . 45C5 48 FHA  
 . 45C6 29 0F AND ##0F  
 . 45C8 F0 08 BEQ \$45D2  
 . 45CA C9 08 CMP ##08  
 . 45CC F0 04 BEQ \$45D2  
 . 45CE 68 PLA  
 . 45CF 85 D0 STA \$D0  
 . 45D1 60 RTS  
 . 45D2 68 PLA  
 . 45D3 A5 D0 LDA \$D0  
 . 45D5 18 CLC  
 . 45D6 69 39 ADC ##39  
 . 45D8 85 D0 STA \$D0  
 . 45DA A5 D1 LDA \$D1  
 . 45DC 69 01 ADC ##01  
 . 45DE 85 D1 STA \$D1  
 . 45E0 60 RTS

. 40B5 EA NOP  
 . 40B6 EA NOP  
 . 40B7 EA NOP  
 . 40B8 EA NOP  
 . 40B9 EA NOP  
 . 40BA A2 00 LDX ##00  
 . 40BC 86 D4 STX \$D4  
 . 40BE A9 00 LDA ##00  
 . 40C0 9D 36 4E STA \$4E36.X  
 . 40C3 EB INX  
 . 40C4 E0 0C CPX ##0C  
 . 40C6 D0 F8 BNE \$40C0  
 . 40C8 A9 B8 LDA ##B8  
 . 40CA 8D 39 4E STA \$4E39  
 . 40CD 8D 43 4E STA \$4E43  
 . 40D0 8D 3D 4E STA \$4E3D  
 . 40D3 8D AC 4E STA \$4EAC  
 . 40D6 20 38 4F JSR \$4F38  
 . 40D9 8D 3E FF STA \$FF3E  
 . 40DC 58 CLI  
 . 40DD 4C 12 41 JMP \$4112

. 4E90 A9 30 LDA ##30  
 . 4E92 85 D0 STA \$D0  
 . 4E94 A9 3C LDA ##3C  
 . 4E96 85 D1 STA \$D1  
 . 4E98 A6 D4 LDX \$D4  
 . 4E9A A0 17 LDY ##17  
 . 4E9C 98 TYA  
 . 4E9D 48 PHA  
 . 4E9E 20 AB 4E JSR \$4EAB  
 . 4EA1 68 PLA  
 . 4EA2 AB TAY  
 . 4EA3 88 DEY  
 . 4EA4 10 F6 BPL \$4E9C  
 . 4EA6 60 RTS  
 . 4EA7 EA NOP  
 . 4EAB A0 00 LDY ##00  
 . 4EAA BD 00 B9 LDA \$B900,X  
 . 4EAD 91 D0 STA (\$D0),Y  
 . 4EAF E8 INX  
 . 4EB0 D0 03 BNE \$4EB5  
 . 4EB2 EE AC 4E INC \$4EAC  
 . 4EB5 98 TYA  
 . 4EB6 18 CLC  
 . 4EB7 69 08 ADC ##08  
 . 4EB9 A8 TAY  
 . 4EBA C0 18 CFY ##18  
 . 4EBC D0 EC BNE \$4EAA  
 . 4EBE 20 C0 45 JSR \$45C0  
 . 4EC1 60 RTS  
 . 4EC2 EA NOP

COM'T  
 NEXT  
 MONTH

# RASTA HI-RES PICTURE

```

2 REM *****
3 REM * RASTA *
4 REM * HI-RES PICTURE *
5 REM *****
6 REM * BY KEVIN WHEALS*
7 REM * *
8 REM * (C) 1990 *
9 REM *****
10 COLOR0,2:COLOR1,1:COLOR4,2
20 POKE55,0:POKE56,60:CLR:POKE1177,62
30 FORI=0TO1023:POKE15360+I,PEEK(53248+I):NEXTI
40 POKE1177,63:POKE65299,60:POKE65298,192:SCNCLR
50 FORL=0TO77:CX=0:FORD=0TO7:READCH:CX=CX+CH:POKE15640+L*8+D,CH:NEXTD
60 READCH:IFCH<>CXTHENPOKE65299,208:POKE65298,196:PRINT"ERROR IN LINE";100
+(L*10):STOP
70 NEXTL
100 PRINT"CURSOR DOWN 5"
110 PRINTTAB(17)::PRINT"#$%&'()"
120 PRINTTAB(16)::PRINT"*+,-./01"
130 PRINTTAB(16)::PRINT"234567"
140 PRINTTAB(16)::PRINT"89:;<"
150 PRINTTAB(16)::PRINT"=>?[SFT *][SPACE][SFT B][SFT C]"
160 PRINTTAB(15)::PRINT"[SFT D][SFT E][SFT F][SFT G][SFT H][SFT I][SFT J]
F T K][SFT L]"
170 PRINTTAB(16)::PRINT"[SFT M][SFT N][SFT O][SFT P][SFT Q]"
180 PRINTTAB(16)::PRINT"[SFT R][SFT S][SFT T][SFT U]"
190 PRINTTAB(17)::PRINT"[SFT V][SFT W][SFT X][SFT Y]"
200 PRINTTAB(16)::PRINT"[SFT Z][SFT +][2 SPACES][CBM -][SFT -]"
210 PRINTTAB(16)::PRINT"[CBM =][CBM *][SFT SPACE][CBM K][CBM I][CBM T]"
220 PRINTTAB(17)::PRINT"[CBM @][CBM G][CBM +][CBM M]"
230 PRINTTAB(17)::PRINT"[CBM £][SFT £][CBM N]"
240 PRINTTAB(17)::PRINT"[CBM Q][CBM D][CBM Z][CBM S]"
250 PRINTTAB(19)::PRINT"[CBM P][CBM A]"
300 GOTO300
500 REM *** UDG DATA FOLLOWS ***
1000 DATA 000,000,000,000,000,000,007,008,017, 0032
1010 DATA 000,000,007,031,096,128,000,255, 0517
1020 DATA 000,000,248,252,014,002,001,193, 0710
1030 DATA 000,000,000,007,014,126,252,248, 0647
1040 DATA 000,007,004,007,004,004,004,012, 0042
1050 DATA 000,227,034,227,034,034,098,226, 0880
1060 DATA 000,254,034,254,034,034,038,110, 0758
1070 DATA 000,000,000,000,000,000,000,001, 0001
1080 DATA 038,120,064,128,192,191,128,128, 0989
1090 DATA 000,000,000,000,000,248,007,000, 0255
1100 DATA 035,023,007,012,009,008,209,048, 0351

```

1110 DATA 240,224,064,240,022,105,001,014, 0910  
1120 DATA 028,024,000,000,000,000,000,000, 0052  
1130 DATA 198,014,012,000,000,000,000,000, 0224  
1140 DATA 236,192,000,000,000,000,000,000, 0428  
1150 DATA 001,001,002,002,003,002,004,004, 0019  
1160 DATA 128,064,032,016,012,132,131,064, 0579  
1170 DATA 000,000,000,000,000,000,255,000, 0255  
1180 DATA 048,072,128,064,080,104,167,032, 0695  
1190 DATA 003,004,008,031,016,008,007,193, 0270  
1200 DATA 000,128,128,000,128,128,000,000, 0512  
1210 DATA 004,004,004,004,004,130,130,066, 0346  
1220 DATA 064,064,032,016,012,003,000,000, 0191  
1230 DATA 000,000,000,000,000,000,049,202,076, 0327  
1240 DATA 032,065,066,130,132,004,005,131, 0565  
1250 DATA 191,014,000,000,000,000,192,064, 0461  
1260 DATA 033,032,016,056,120,048,003,002, 0310  
1270 DATA 000,128,064,032,017,015,224,145, 0625  
1280 DATA 140,140,140,140,012,012,142,015, 0741  
1290 DATA 067,035,003,003,002,006,014,030, 0160  
1300 DATA 032,032,032,032,160,144,144,144, 0720  
1310 DATA 000,000,000,000,000,008,020,019,020, 0067  
1320 DATA 000,000,000,000,000,000,000,000,128, 0128  
1330 DATA 000,000,000,000,000,000,005,000,000, 0005  
1340 DATA 004,007,012,053,226,129,000,003, 0434  
1350 DATA 081,145,010,164,080,208,009,005, 0702  
1360 DATA 015,015,015,031,127,191,063,127, 0584  
1370 DATA 254,254,252,252,248,248,240,240, 1988  
1380 DATA 144,080,080,080,083,076,035,028, 0606  
1390 DATA 000,000,007,123,140,112,128,000, 0510  
1400 DATA 020,122,232,009,006,000,001,000, 0390  
1410 DATA 064,128,128,000,000,128,000,000, 0448  
1420 DATA 000,000,000,000,000,000,000,001, 0001  
1430 DATA 002,000,001,001,002,007,167,078, 0258  
1440 DATA 127,255,255,127,030,000,225,223, 1242  
1450 DATA 240,240,225,224,032,224,240,240, 1665  
1460 DATA 128,120,000,192,000,000,000,000, 0440  
1470 DATA 002,004,001,001,000,000,000,000, 0008  
1480 DATA 079,155,043,050,087,167,175,175, 0931  
1490 DATA 215,187,251,059,211,239,249,241, 1652  
1500 DATA 176,176,216,184,108,222,255,255, 1592  
1510 DATA 079,095,095,063,062,126,126,125, 0771  
1520 DATA 176,096,064,064,192,128,128,128, 0976  
1530 DATA 223,111,055,027,013,006,003,001, 0439  
1540 DATA 128,192,192,224,240,248,124,180, 1528  
1550 DATA 000,000,000,001,001,001,001,002, 0006  
1560 DATA 253,253,253,186,020,012,016,032, 1025  
1570 DATA 226,065,032,018,009,010,008,017, 0385  
1580 DATA 000,000,128,064,080,144,160,040, 0616  
1590 DATA 010,010,009,036,018,009,004,000, 0096  
1600 DATA 144,136,004,130,065,032,144,008, 0663  
1610 DATA 000,000,000,000,000,000,128,064,064, 0256  
1620 DATA 000,000,000,000,000,001,001,001, 0003  
1630 DATA 033,066,068,132,136,008,016,032, 0491  
1640 DATA 072,080,144,000,000,000,000,000, 0296  
1650 DATA 004,002,001,000,000,000,000,000, 0007  
1660 DATA 032,016,016,146,073,041,036,030, 0390

16



## SOFTWARE GUIDE PART 5

BY DAVID CAMPBELL

### 19) INTELLECT SOFTWARE, 17 COLLINGWOOD ROAD, REDLAND, BRISTOL, BS6 6PD

The Psyclone (tape - Novaloads only - to disk back-up) £2.95  
RAP4 (sound sampler) £8.95

### 20) KINGSWAY COMPUTER SERVICES, 72 GLENCOE ROAD, SHEFFIELD, S2 2SR. Telephone (0742) 750623.

Kingsway have added 10 more disks to their catalogue. Prices are still £4.00 each for 1-4 disks, £3.75 each for 5 or more disks and a free disk of your choice when you buy 10.

NOTE Kingsways new address.

#### PLUS 30 Maths & History

The Programs on this disk are mainly concerned with mathematical & historical subjects. There are games, drills & Quizzes.

#### PLUS 31 Educational Mixture

A good mixture of educational Programs dealing with many different subjects. Subjects covered include: spelling, Geography, typing & more.

#### PLUS 32 Disk Utilities & Games

Includes utilities to Print out disk contents for disk sleeves, file management, alignment, change name & id of disks etc. Games include card games & others.

#### PLUS 33 Business & Productivity

Contains more Programs to help get you organised. With them you can do such things as organise your data, create names & addresses lists, and store details of your belongings for insurance purposes. Or how about a computerized Phone book?

#### PLUS 34 Business & Productivity

Yet another disk full of useful Programs. Areas covered include chequebook Programs, home budget management, appointment organisation, car mileage etc etc.

#### PLUS 35 Maths Education

Programs cover addition, multiplication, subtraction and division. There are also Programs dealing with Percentages, bases, fractions and more.

#### PLUS 36 Assorted

A collection of many different types of Programs including: Games, utilities educational, and Personal Productivity.

PLUS 27 Games & Others

This disk contains largely games, but with one or two others thrown in for good measure.

PLUS 28 Education - Mathematics

This disk contains Programs that will help children learn maths! Some have a Games element to help make learning fun. Others are of the "drill" type.

PLUS 29 Bible Quiz, Utilities & Home Organization

The Bible Quiz includes books of the Bible & and verse memorization. The Utilities are mainly disk utilities. Other Programs are concerned with data management.

21) ELITE SYSTEMS LIMITED, ANCHOR HOUSE, ANCHOR ROAD, ALDRIDGE, WALSALL, WGB 8PW, TELEPHONE 0922 55952.

Elite have re-released the following Games on Encore.

AIRWOLF 2	£1.99
GHOSTS 'N' GOBLINS	£2.99
INARI WARRIORS	£2.99

---

HIRE'S RASTA PICCY CONT FROM PAGE 16

```
1670 DATA 002,002,130,068,005,009,138,018, 0372
1680 DATA 064,064,144,160,032,064,000,000, 0528
1690 DATA 000,000,000,000,001,031,096,129, 0257
1700 DATA 017,056,068,240,009,129,071,159, 0749
1710 DATA 020,164,232,176,008,056,068,028, 0752
1720 DATA 254,128,128,127,063,000,000,000, 0700
1730 DATA 029,057,096,192,000,000,000,000, 0374
1740 DATA 162,199,132,097,050,025,012,014, 0691
1750 DATA 000,000,192,248,004,014,242,006, 0706
1760 DATA 007,003,000,000,000,000,000,000, 0010
1770 DATA 252,248,000,000,000,000,000,000, 0500
1800 REM *** END ***
```

## Hardware review

=====

Review subject: Joysticks

Reviewer : Matthew Newton-Lewis, West Sussex

All the the joysticks reviewed need C16 joystick adaptors and all can be obtained from major WHSMITH stores.

Cheetah Star Probe (Star Fighter):

=====

The Cheetah Star Probe is quite a good joystick. It costs around £16. It has a cobra style shaft with two red fire buttons on the top and base. It only has one special function, the auto-fire, which unfortunately doesn't work with an adaptor. It has four very high powered suction pads on the under side. The shaft is specially moulded for the hand which makes this incredibly comfortable. Also it has micro-switch, which means that it clicks when you move the joystick or press the fire buttons. Finally it is very sensitive that can be a disability at times. Be careful with these joysticks as they break very easily.

Cheetah 125+:

=====

This joystick is quite basic with the normal eight directional idea, like most joysticks. It has tried to be moulded for the hand but pretty unsuccessfully. It has four fire buttons, two on the top and two on the base. It isn't very sensitive and it doesn't have micro-switch. The only good thing is the auto fire, which like all Cheetah joysticks, doesn't work with an adaptor. This is a nippy little joystick and only costs around £9.

Quickjoy V Superboard:

=====

This is an amazingly good joystick. It has six red fire buttons which you can choose which ones you want to use with an option whether to use top, bottom, left or right. It has a three speed auto fire option which actually does work for the C16. It is fully micro switched. To add to the brilliance there is a timer to time your self with a loud alarm when it finishes. The auto fire is sensibly placed next to the very top fire button that makes life a lot easier. The only draw backs are the tacky look and the not so powerful suction pads for the massive size. This joystick is amazing but it should be for the £20 you pay for it.

General Quickshots:

=====

All Quickshots are generally the same with only a different casing and maybe some different functions. Quickshot have a good reputation and are a very big company. This is normally a good guarantee but they have a reputation for breaking. Some Quickshots do not work on the C16, but most do. All of them have auto fire, well to my knowledge anyway, which does work on the C16. Some have micro switch but this normally makes it cost more. They have a good value for money from £8 to £11. They own Quickjoy but don't have the quality of them.

Game Review

=====

Game reviewed: Auto Zone  
Publisher : Players  
Price : £1.99  
Reviewer : Matthew Newton-Lewis, West Sussex

Auto Zone is quite an old game produced in 1987 and very rarely heard of. You control a two speed highly versatile buggy. The story line says that you are exploring a dead moon when your sensors tell you you have found signs of life you go down and get tripped there.

I think this game is faultless it has amazing sound, amazing graphics, amazing scrolling and amazing coding. It is very colourful but each level is a set colour so everything turns that colour. The scrolling is uncanny for all the sprites and also the far away clouds scroll slower than the near ones and the same for the ground.

It is not very competitive as all you want to do is play the game. The game is funny and aggravating. It is incredibly hard but this just adds to the brilliance.

If you have this game I'm sure you will agree with me and if you don't have this game then I advise anybody to buy it and buy it quickly.

atings out of 10:

GRAPHICS : 10  
SOUND : 10  
PLAYABILITY : 10  
C.F.M. : 10  
OVERALL : 10

```
1 REM *****
2 REM * GRAPHIC IDEA FOR C15/+4 *
3 REM * AIRCRAFT COCKPIT DESIGN *
4 REM *****
5 REM * BY KEVIN WHEELS *
6 REM *****
10 GRAPHIC1,1,COLOR4,1,COLOR0,2
20 BOX1,0,110,320,200,,1
30 CHAR1,1,15,"[SPO]AIRSPEED[2SPO]HORIZ:
NC[2SPO]ALTITUDE[4SPO]RPM[2SPO]"
40 FORZ=0T03:CIRCLE9,40+Z*80,150,15,15
50 FORC=0T09:DRAW0,(40+Z*80)+17*SIN(C*-
5),150-19*COS(C*/5):NEXTC,Z
60 DRAW0,115,150T0125,150
70 DRAW0,0,171T0320,171
80 CHAR1,1,22,"[SPO]BEARING[3SPO]RUNWAY:
[2SPO]DRIFT[2SPO]DISTANCE[SPO]"
90 DRAW1,0,47T0320,47
100 CHAR1,1,23,"[3SPO]E[3SPO]E[3SPO]I7:
[2SPO]19997[2SPO]"
110 GOTO110
```

Game Review

=====

Game reviewed: Finders Keepers  
Publisher : Mastertronic  
Price : £1.99  
Reviewer : Matthew Newton-Lewis

Finders Keepers is a conversion of the C64 version. You control a knight who has been sent on a mission by the king to find a birthday present and a birthday card for his daughter the beautiful princess.

It is quite an intellectual game and you have to use your brain a lot i.e. MOUSE + CHEESE = FAT MOUSE, SALT PETRE + CHARCOAL + SULPHUR = GUNPOWDER + MAGIC FLAME = BOMB, GLUE + BROKEN SWORD = EXCALIBUR, etc.

The graphics are really good and with the smooth scrolling as well this game is brilliant. The sound is not so good but for the game you don't need much sound. The title screen is non-existent but this doesn't matter.

There are hundreds of rooms and quite a few meanies and as all this fits into 16K then this game is outstanding. If they had made a Plus/4 version then I couldn't think how totally amazing this game would be.

There are many different controls apart from using the joystick: T=Trade, D=Drop, E=Examine, G=Get, etc. You need an eight directional joystick but you can get away with a four directional one.

You will enjoy this game thoroughly even though it is very hard. If this game was a £9.99 game I still would have bought it.

Ratings out of 10:

GRAPHICS : 10  
SOUND : 4  
PLAYABILITY : 10  
V.F.M. : 10  
OVERALL : 9

```
1 REM *****
2 REM * GAVIN FRIDAY AMENDMENT *
3 REM *****
4 REM * DATA LINE CORRECTIONS *
5 REM *****
6 REM * RE-TYPE THESE LINES *
7 REM * AND THE PROGRAM WILL *
8 REM * THEN RUN PROPERLY *
9 REM *****
10 REM
1120 DATA 197,201,242,229,207,223,156,19
1,0,0,0,192,239,7,255,248
1140 DATA 7,15,31,135,199,125,0,0,127,15
8,124,248,228,195,128,67
1200 DATA 7,127,255,255,255,255,255,255
240,224,248,255,255,255,255,255
1330 DATA 7,7,5,4,2,128,128,192,31,30,15
1,254,31,31,15,7
1380 DATA 247,255,255,255,247,258,248,43
,255,255,255,127,255,207,143,143
6300 DATA 1,1,77,78,79,80,81,82,83,1,1
```

Hardware review

=====

Hardware reviewed: Light Pen

Manufacturer : Trojan

Price : £19.95

Reviewer : Matthew Newton-Lewis, West Sussex

With the pen you get a paint program free. One for the C16 or Plus/4 and one for the Plus/4 only. These programs are stored on tape but you can get a disk version with the coupon inside.

If you are planning to use the pen on the C16 then forget it, its not very good at all. However the Plus/4 version is really good therefore this review is for the Plus/4 only version

There are lots of different options on the title screen (menu screen). The options include: box, banding, rays, line, triangle, circle, fill, text, freehand, brush, copy, wash, brightness and pen size.

You can use all the colours the Plus/4 has and including the different shades, etc. If you have a printer you can have the option of printing your drawing. You can save you picture on either tape or disk if you think it is worth saving.

If you have just drawn something amazing and you want to do it again then you can with the aid of the brilliant copy option which reproduces your last comand.

All the instructions are easy to follow and explain everything in grave deatail. The light pen has been made easy to use, all you do is just plug the lead into joystick port one.

If you have a Plus/4 it is well worth buying even if it does cost around £20. If you have a printer and a Plus/4 you should definatly buy it.

If you have a C16 then forget the idea of buying a Trojan light pen.

'TRAP THE KING'; MISSING LINES FROM NOV189,15H

. 15C0 A9 23 LDA #23  
 . 15C2 85 E7 STA #E7  
 . 15C4 A0 11 LDY #11  
 . 15C6 98 TYA  
 . 15C7 48 PHA  
 . 15C8 20 A2 20 JSR \$20A2  
 . 15CB F0 09 BEQ \$15D6  
 . 15CD 20 B2 20 JSR \$20B2  
 . 15D0 A4 CA LDY #CA  
 . 15D2 A9 5A LDA #5A  
 . 15D4 91 EA STA (#EA),Y  
 . 15D6 C6 E7 DEC #E7  
 . 15D8 68 PLA  
 . 15D9 A8 TAY  
 . 15DA 88 DEY  
 . 15DB 10 E9 BPL \$15C6  
 . 15DD 20 6F 1F JSR \$1F6F  
 . 15E0 EA NOP  
 . 15E1 A9 55 LDA #55  
 . 15E3 8D 3B 05 STA \$053B  
 . 15E6 60 RTS  
 . 15E7 EA NOP  
 . 15E8 20 80 1D JSR \$1D80  
 . 15EB 20 CB 1E JSR \$1ECB  
 . 15EE 20 8E 1D JSR \$1D8E  
 . 15F1 EA NOP

TO ALL CLUB MEMBERS,  
 PLEASE ACCEPT MY APOLOGIES  
 FOR NOT CHECKING MY ARTICLES  
 MORE THOROUGHLY, HERE IS  
 THE MISSING SECTION:

*Peter Cook*

REVIEW:

=====

Game reviewed: ACE2  
Publisher : GAME-BUSTERS  
Price : £2.99  
Reviewer : Matthew Newton-Lewis, West Sussex  
2nd reviewer : Gregory Carter, West Sussex

There are two different versions of Ace2, one for the C16/Plus/4 and another one for the Plus/4 only. This is a review for the Plus/4 only version.

The first thing after loading is the simply amazing title screen, with each section scrolling out from the centre.

It doesn't feel like a flight simulation but more like a normal flying game. However this is still an excellent game. You can either play against the computer or, if you have another joystick and a friend to spare, you can play in two player mode. In the two player mode you play with or against your colleague at the same time. The computer has 20 different skill levels and is a very good player.

The sound on the other hand is not as good as it could be with only a altering crackle and a buzz for when you are in trouble.

You have various enemies including ships, planes, tanks, etc. You have four types of weapon e.g. heat seeking missiles, cannons, air to ground missiles, etc.

Choose between two different missions of either shooting down ships or shooting down each other.

Altogether this is a pretty good game and well worth buying.

Ratings out of 10:

GRAPHICS : 9  
SOUND : 7  
PLAYABILITY : 10  
V.F.M. : 10  
OVERALL : 9

REVIEW:

=====

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Publisher : GAME-BUSTERS  
Price : £2.99  
Reviewer : Matthew Newton-Lewis, West Sussex  
2nd reviewer : Gregory Carter, West Sussex

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Ratings out of 10:

GRAPHICS : 9  
SOUND : 7  
PLAYABILITY : 10  
V.F.M. : 10  
OVERALL : 9



REVIEW:

=====

Game reviewed : ARTHUR NOID  
Publisher : ALTERNATIVE  
Price : £1.99  
Reviewer : Matthew Newton-Lewis, West Sussex

Arthur Noid is a 'Bat 'n' Ball' game. There are 48 action packed levels each with its own different shape or pattern to dismantle brick by brick.

The screen is well divided, roughly into thirds. The third on the right is occupied with the score, level, etc. leaving the rest for play area.

It is not an ordinary Bat 'n' Ball game because whilst playing various meanings spin across the screen and also you can collect six different types of boni (bonuses) which include giving you a larger bat, shooting ability, extra lives, stickyness, treble vision, ect. which randomly fall from the brick after hitting it.

The graphics are amazing and with the sound this all adds upto a really good game. The sounds include title screen music and varying play-a-long tunes.

The scrolling is ultra-smooth for both the ball and the bat. The coding is totally faultless. Although this game is very hard at first this doesn't affect the addictiveness

This is a very good game and very reasonable at £1.99. I advise anybody to buy this game even if you have a Bat 'n' Ball game already.

Ratings as a percentage:

GRAPHICS : 85  
SOUND : 80  
PLAYABILITY : 95  
V.F.M. : 90  
OVERALL : 87

---

Please send me Vol 2 Issue 1 of 'C16/C116/+4 COMPUTING MONTHLY'.

I enclose a PO/CHEQUE for the value of £1.00.

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The above form should only be filled in by those who order the mag monthly, not by those who subscribe yearly. Monthly subscribers can photocopy the form so you don't chop up the mag, but please send it when ordering the issue required as it saves me a lot of time and you will get your mag much more quickly.

25

## Game Review

=====

Game reviewed: Ghosts 'n' Goblins  
Publisher : Encore/Elite  
Price : £2.99  
Reviewer : Matthew Newton-Lewis, West Sussex

Ghosts 'n' Goblins is a save the girl coin-op conversion. You are a medieval knight in a suit of armour and only armed with limitless and very throwable lances. It isn't as good as other versions but it passes as a good game easily. You need an eight directional joystick and you can't play it on the keyboard.

The first of the two levels is set in a graveyard from which you have to escape. The second level you have to jump from platform to platform avoiding falling off.

You have about half a dozen different enemies to shoot. On the first level you have to shoot down: two different types of zombies, death angels and mysterious clouds before encountering the huge end of level guardian who tries to crush you by jumping on you. On the second level the only meanies I have seen are vicious birds who kill you by quickly flying into you, I expect there are many more meanies and probably another nasty end of level guardian.

If you lose a life or die completely it is not spectacular as all that happens is the screen pauses and then then screen changes and you appear at the restarting point or it changes to the quite good title screen.

The title screen is really good with you at the bottom along with credits, etc. it has brilliant writing saying is bold characters: ' Ghosts 'n' Goblins '.

The graphics are poor and when you go past another sprite a border appears around you. The sound quality isn't good at all with only a beep when you fire or kill something. I think all this does not matter as the playability and the addictiveness is amazing. The scrolling is unnaturally good but the coding leaves a lot to be desired.

The game is well worth buying but it should have been priced as a £1.99 title.

Ratings out of 10:

GRAPHICS : 6  
SOUND : 2  
PLAYABILITY : 10  
V.F.M. : 8  
OVERALL : 8

Record number :

1) SURENAME: : WHEALS  
2) FORENAME/S: : KEVIN BARRY  
3) ADDRESS: : 12 HILLDOWN ROAD, GADEBRIDGE, HEMEL HEMPSTEAD, HERTS  
4) POSTCODE: : HP1 3JE  
5) TEL NUMBER/S: :  
6) COMPUTER OWNED: : 2 X C16'S + (VIC 20, CBM 64, CBM 64C), +4  
7) HARDWARE: : OCEANIC 118N D/D, ALPHACOM 42 PRINTER  
8) INTEREST/S: :  
9) TALENT/S: : M/C PROGRAMMING, ART, MUSIC  
10) SUBMISSIONS: : GAMES PROGRAMS, UTILITIES PROGRAMS, CHEAT POKES, HINTS  
& TIPS, MAYBE SOME CONVERTED PROGRAMS FROM OTHER COMPUTERS  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : BRIGHTON  
2) FORENAME/S: : WILLIAM DAVID  
3) ADDRESS: : 55B OCCUPATION LANE, SHEFFIELD, S. YORKSHIRE  
4) POSTCODE: : S12 4PS  
5) TEL NUMBER/S: : 0742-641046  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : 1541 & 1551 D/D'S  
8) INTEREST/S: : VIDEO TITLING, MUSIC DEMO'S, GRAPHIC SCREEN DEMO'S, 50'  
S R & R AKIN MUSIC  
9) TALENT/S: :  
10) SUBMISSIONS: :  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : BERZINS  
2) FORENAME/S: : VILNIS  
3) ADDRESS: : 193 GORSEMOOR ROAD, HEATH HAYES, CANNOCK  
4) POSTCODE: : WS12 5HR  
5) TEL NUMBER/S: : 0543-77121  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : 1531 D/S, 1551 D/D, STAR NL-10 PRINTER, CITIZEN 2 COLOUR  
R PRINTER  
8) INTEREST/S: : BASIC PROGRAMMING, PROGRAM CONVERSIONS, PRINTING  
9) TALENT/S: :  
10) SUBMISSIONS: :  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :  
1) SURENAME: : MCBRIDE  
2) FORENAME/S: : JAMES  
3) ADDRESS: : 76 WARREN ROAD, WHITTON, MIDDX  
4) POSTCODE: : TW2 7DL  
5) TEL NUMBER/S: :  
6) COMPUTER OWNED: : C16/+4  
7) HARDWARE: : 1551 D/D, JOYSTICK  
8) INTEREST/S: : GRAPHICS  
9) TALENT/S: :  
10) SUBMISSIONS: :  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :  
1) SURENAME: : CRACK  
2) FORENAME/S: : PETER FRANK  
3) ADDRESS: : 88 BURLEIGH ROAD, ENFIELD, MIDDLESEX  
4) POSTCODE: : EN1 1NX  
5) TEL NUMBER/S: : HOME 01-367-3152/WORK 01-367-5888/01-367-5752  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : 1551 D/D  
8) INTEREST/S: : PROGRAMMING IN M/C USING +4 'TEDMON' ONLY  
9) TALENT/S: :  
10) SUBMISSIONS: : M/C HINTS & TIPS, M/C PROGRAMS  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :  
1) SURENAME: : KENZITT  
2) FORENAME/S: : WAYNE  
3) ADDRESS: : 58 WESTWOOD CRES, WINTON, ECCLES, MANCHESTER  
4) POSTCODE: : M30 8DZ  
5) TEL NUMBER/S: : 061-789-2893  
6) COMPUTER OWNED: : +4  
7) HARDWARE: :  
8) INTEREST/S: :  
9) TALENT/S: :  
10) SUBMISSIONS: :  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : POLLARD  
2) FORENAME/S: : SIMON JOHN  
3) ADDRESS: : 7 SEAVY ROAD, GOOLE, NORTH HUMBERSIDE  
4) POSTCODE: : DN14 6TA  
5) TEL NUMBER/S: : 0405-768898  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : NONE AT THE MOMENT (I AM HOPING FOR A DISK DRIVE!!)  
8) INTEREST/S: : PROGRAMMING OF ANY SORT ESPECIALLY ON GRAPHICS, WOULD LIKE TO LEARN M/C PROGRAMMING. VERY DESPERATE TO LEARN TO TEACH MY COMPUTER TO TALK  
9) TALENT/S: : USER DEFINED GRAPHICS, SOUND AND MUSIC, REASONABLY GOOD AT ANY PROGRAMMING EXCEPT M/C ROUTINES  
10) SUBMISSIONS: : YES, I WOULD LIKE TO SUBMIT MY OWN PROGRAMS CONTAINING GRAPHICS, SOUND AND JOYSTICK ROUTINES. I HAVE ABOUT 200 POKES THAT I'LL SUBMIT 40 AT A TIME)  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : LOWE  
2) FORENAME/S: : DAVID  
3) ADDRESS: : 30 ST ANNES DRIVES, WORKSOP, NOTTS  
4) POSTCODE: : S80 3QD  
5) TEL NUMBER/S: : 0909-474960  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : 1551 DISK DRIVE, MPS 803 PRINTER  
8) INTEREST/S: : BASIC PROGRAMMING, M/C PROGRAMMING  
9) TALENT/S: : BASIC PROGRAMMING  
10) SUBMISSIONS: : YES, LETTERS, PROGRAMS, REVIEWS, ARTICLES  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : DAVIES  
2) FORENAME/S: : ROBERT TURNER  
3) ADDRESS: : 70 LEVER STREET, LITTLE LEVER, BOLTON  
4) POSTCODE: : BL3 1BH  
5) TEL NUMBER/S: : 0204-75283  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : DATASETTE  
8) INTEREST/S: : PROGRAMMING IN BASIC  
9) TALENT/S: :  
10) SUBMISSIONS: : MSX CONVERTED PROGRAMS TO +4  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : CAMPBELL  
2) FORENAME/S: : DAVID ALEXANDER  
3) ADDRESS: : 12 HERIOT AVENUE, FOXBAR, PAISLEY, SCOTLAND  
4) POSTCODE: : PA2 0DW  
5) TEL NUMBER/S: :  
6) COMPUTER OWNED: : C16 + 64K RAM BOARD  
7) HARDWARE: : MPS 801 PRINTER, TURBO PLUS CARTRIDGE, 1570 D/D  
8) INTEREST/S: : BASIC PROGRAMMING, GAMES, ATTEMPTING M/C  
9) TALENT/S: : A GOOD BASIC PROGRAMMER, A REASONABLE GAMES PLAYER, M/C  
NOT THAT PERFECT YET, ALSO WRITE ARTICLES ETC  
10) SUBMISSIONS: : A REVIEW OF A TAPE HEAD ALIGNMENT KIT, A REVIEW OF THE  
TURBO PLUS, GAMES REVIEWS, A AM ALSO WRITING TO VARIOUS SOFTWARE HOUSES AND MARK  
ETING CO'S ETC TO COMPILE A LIST OF USEFUL ADDRESSES FOR C16/C116/+4 USERS  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : TERRY  
2) FORENAME/S: : GRAHAM  
3) ADDRESS: : 72 WHITESTONE ROAD, SCUNTHORPE, S. HUMBERSIDE  
4) POSTCODE: : DN17 1RE  
5) TEL NUMBER/S: : 0724-865961  
6) COMPUTER OWNED: : C16  
7) HARDWARE: : 1551 D/D, 1520 PRINTER/PLOTTER  
8) INTEREST/S: : BASIC PROGRAMMING  
9) TALENT/S: :  
10) SUBMISSIONS: : I HAVE FOUND A WAY OF TRANSFERING C16 GAMES TAPES ONTO  
DISK AND ALSO I KNOW A FEW POKES FOR SOME GAMES, ALSO IF ANYONE ELSE HAS A 1520  
PLOTTER I KNOW A FEW BITS AND PIECES THAT MIGHT BE OF INTEREST  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : GILBERT  
2) FORENAME/S: : NEIL  
3) ADDRESS: : 24 ST NICHOLAS DRIVE, BANCHORY, KINCARDINESHIRE, SCOTLA  
ND  
4) POSTCODE: : AB3 3YG  
5) TEL NUMBER/S: : 03302-3026  
6) COMPUTER OWNED: : +4  
7) HARDWARE: :  
8) INTEREST/S: : THINKING ABOUT USING +4 FOR SMALL BUSINESS  
9) TALENT/S: :  
10) SUBMISSIONS: :  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

# REVIEW OF THE PSYCLONE

BY DAVID CAMPBELL

The PSYCLONE is a tape to disk back-up Program for Novaloads written by Mark Everingham in April - June 1989.

INTELLECT Software claim that the Psyclone is compatible with 1541 type disk drives such as the 1551, Excelerator, Oceanic OC-118 or Blue CHIP drives. They also claim a 90% success rate (they actually state that of 50 Programs that they tested, the Psyclone only failed to back-up 4 i.e. a 92% success rate).

So what do you get when you buy your copy of the Psyclone - you get a disk containing 2 copies of Psyclone each taking up 2 blocks on the disk and 'The Official Psyclone Users Guide' also written by Mark Everingham, which is printed on computer paper held together by a plastic spine.

The Psyclone is a no frills Program (Just like it's Users Guide!) there are no title screens, loading screens or menu screens, so in order to operate the Program you must follow the 'Users Guide' at first.

I found the Psyclone very easy to use because control of the Program is through the function keys and the Return key. The Psyclone copied single loaders, multi-loaders and Plus4 games with reasonable ease. A little trial and error is all that is needed (i.e. if a Program won't work as a single loader, try to copy it as a multi-loader and if that doesn't work archive the whole 16K or 64K of Memory).

The 'Users Guide' was easy to follow and once I had read it I set about backing-up games. Of the 80 games I tried only four wouldn't copy (95% success rate), so the Psyclone is certainly compatible with my 1570 disk drive.

At £2.95 I found this an handy utility and well worth the price.

D.A.C.

Record number :  
1) SURENAME: : STOKES  
2) FORENAME/S: : DANIEL C  
3) ADDRESS: : 35 BURLEIGH WAY, CUFFLEY, HERTS  
4) POSTCODE: : EN6 4LG  
5) TEL NUMBER/S: : 0707-874877  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : 1551 D/D, TAPE PLAYER, MPS 803 PRINTER, TRACTOR FEED  
8) INTEREST/S: : PROGRAMMING AND GAMES  
9) TALENT/S: : POKING !  
10) SUBMISSIONS: : YES. GAME POKES. IF YOU NEED ANYTHING PRINTED SEND IT T  
O ME  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :  
1) SURENAME: : STEBULITIS  
2) FORENAME/S: : TERRY  
3) ADDRESS: : 13 ULLSWATER CLOSE, GRANGETOWN, MIDDLESBROUGH, CLEVELAN  
D  
4) POSTCODE: : TS6 7PU  
5) TEL NUMBER/S: : NONE  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : 2 CASS RECORDERS  
8) INTEREST/S: : ALL  
9) TALENT/S: : NONE  
10) SUBMISSIONS: :  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :  
1) SURENAME: : WILLIAMS  
2) FORENAME/S: : KEVIN JAMES  
3) ADDRESS: : 10 HICKLING WAY, ORMESBY ST MARGARET, GT YARMOUTH, NORF  
OLK  
4) POSTCODE: : NR29 3SE  
5) TEL NUMBER/S: : 0493-730963  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : NONE AS YET  
8) INTEREST/S: : INTERESTED IN ANY THING TO DO WITH THE C16/+4  
9) TALENT/S: :  
10) SUBMISSIONS: :  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :



## TUBE INFO PROGRAM INSTRUCTIONS (PLUS/4 ONLY)

What the program does is save you looking at a map of the Tube System for finding out what Tube Lines pass through stations.

PRESUMING EVERYONE HAS THE COMPLETE PROGRAM TYPED IN, BUG FREE, AND SAVED ON EITHER TAPE OR DISK.

LOAD IN THE PROGRAM AND RUN IT. THE GRAPHIC SCREEN (TUBE LOGO) WILL THEN START TAKING SHAPE. ONCE COMPLETED, PRESS ANY KEY TO CONTINUE.

A PROMPT TO WAIT FOR DATA TO BE READ WILL APPEAR.

A FEW SECONDS LATER A SCREEN CONTAINING A LIST WILL THE APPEAR.

TAKING THE TOP LINE OF THE LIST AS AN EXAMPLE,

I.E. O - STATIONS A - B

THE SINGLE COLUMN ON THE LEFT HAND SIDE WITH NUMBERS (AND LETTERS AS IT GOES DOWN THE LIST) I.E. O IS WHAT NUMBER (OR LETTER) TO PRESS FOR DESIRED STATIONS.

I.E. STATIONS BEGINNING WITH A AND B AS IN OUR EXAMPLE LINE OR FOR OTHERS, SO ON DOWN THE LIST.

SO ON, PRESSING THE O KEY, A LIST OF STATIONS BEGINNING WITH THE LETTER A AND B WILL APPEAR.

FOLLOW THE PROMPT AT THE BOTTOM OF THE SCREEN, AND CHOOSE YOUR DESIRED STATION:

I.E. A - BAKER STREET OR WHATEVER

ON PRESSING KEY A, A SCREEN SHOWING BAKER STREET AND ITS TUBE LINES THAT PASS THROUGH IT WILL APPEAR.

(SOME STATIONS ALSO INDICATE WHETHER THEY CONNECT WITH MAIN LINE BRITISH RAIL STATIONS ASWELL).

ONCE YOU'VE FINISHED LOOKING AT THE STATION FOLLOW THE PROMPT AT THE BOTTOM OF THE SCREEN, TO RETURN TO THE MAIN MENU, AND START AGAIN IF NEED BE.

AND THAT ALL THERE IS TO IT.

IT BEATS GAWPING AT A TUBE MAY ANYWAY (ED, dead right there Kevin).

BY Kevin Wheals. HERTS

Letters Page

Dear Roy ('ED')

I'm, having a problem with the 'Blooming Bug' program (JAN 1990 ISH) Page 13. In the 'INTRO' it says; Enter Monitor, type F4000 57BF EA <RETURN>, which I do, like that then the screen goes haywire. 'Trap The King' (NOV 1989 ISH) Page 6, is Line 145D DO 03 BNE \$1462. It seems to run OK, but I'm not sure about it yet, so I'll check the listing again, also when I try to S"TRAP THE KING G1200", 1,1200,22FF, it won't save until I delete the 'G1200' in the title, so what you ask, but I like to know these title details for the future, anyway, thanks for any help.

Peter Appleby, NOTTS.

*Peter, many thanks for the letter, well here goes, I tried the F4000 57BF EA <RETURN> and it work OK, the only thing I can think of is that you are typing in 7BF instead of 57BF, which cause the screen to go haywire, and the other thing could be that one of the 8 RAM chips has blown, but should imagine that this would take down the rest of the RAM, keep trying, if no luck contact Peter Crack, Phone Number & Address in this ish. Second problem, YES, 145D DO 03 BNE \$1462 is correct, it seems apparent that some copies had been printed badly, sorry about that. And for your third question, you where trying S"TRAP THE KING G1200", 1,1200,12FF, you cannot do this because you can only have a (filename) of 16 characters or less, and yours is 19 characters, that is the reason why it will not save, try S"TRAP KING G1200", 1,1200,12FF, this saves perfectly because it only uses 14 characters, anyway I hope that has been of some help, if not contact me again.*

Dear Editor

Is there a member of the club that can help me with the joystick command, I am not sure whether my +4 or my joystick or even the operating system is at fault, but I have noticed that the command JOY(X) is very haphazard, try the following:- 10 A=JOY(2) 20 PRINT A 30 GOTO 10 and RUN it, move the joystick if nothing happens try:- 10 A=JOY(1) and RUN it again, a colu7mn of zeros will scroll up the screen, now move the joystick up, down, left and right, you will get 1 then 5 then 7 then 3 OK so far, now try the diagonals it should print 2,4,6 and 8 and only those numbers, now try pressing the FIRE BIUTTON with the joystick in the centre, 128 is what you now see and only 128, thats OK, but try moving the joystick at the same time, now see what you get, I bet its not the same num all the time!! This is not the end of the world but it makes programming a bit hard. My solution is to press the FIRE BUTTON only with the joystick central and leave it at that, has anybody a better solution????

Peter Crack, Address & Phone No in this ish.

Well Peter I tried the above and it work fine, because pressing the FIRE BUTTON and in any direction should result in a value of 128 + the direction value, so fire and up should be 129 etc, but you joystick could be at fault, thats all can suggest at the moment, sorry, but if anybody else has more help please contact Peter, thanks.

Record number :

1) SURENAME: : TANG  
2) FORENAME/S: : ANDY  
3) ADDRESS: : 155 PACKINGTON SQUARE, LONDON  
4) POSTCODE: : N1 7UB  
5) TEL NUMBER/S: : 01-354-0494  
6) COMPUTER OWNED: : 1 X C16 - 1 X PLUS 4  
7) HARDWARE: : 1531 CASSETTE RECORDER  
8) INTEREST/S: : DUNGEONS AND DRAGONS ROLE-PLAY, COMPUTER GAMES, READING  
, WRITING, DRAWING, PAINTING  
9) TALENT/S: :  
10) SUBMISSIONS: : YES - GAMES REVIEWS - MAPS, GAMES HELP (HINTS, POKE, T  
PS)  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : de BRUIN  
2) FORENAME/S: : RONALD  
3) ADDRESS: : HYACINTHSTRAAT 8, NL-3261 XD OUD-BEYERLAND, THE NETHER  
LANDS  
4) POSTCODE: :  
5) TEL NUMBER/S: : (FROM ENGLAND) 01031-186014574 - (IN HOLLAND) 01860-14  
74  
6) COMPUTER OWNED: : PLUS/4 (ENGLISH)  
7) HARDWARE: : D/D 1551, REC 1531, PRINTER: SEIKOSHA SP180 VC, COLOR  
V 4 MONOCHROME MONITOR  
8) INTEREST/S: : DIGI/GRAPHICS/SOUND/DEMOS/GAMES, UTILITIES  
9) TALENT/S: :  
10) SUBMISSIONS: : DO NOT KNOW YET  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : MARSHALL  
2) FORENAME/S: : ROBERT WILLIAM (ROB)  
3) ADDRESS: : 89 OLD ROAD, EAST PECKHAM, TONBRIDGE, KENT  
4) POSTCODE: : TN12 5EN  
5) TEL NUMBER/S: : EAST PECKHAM (0622) 871066  
6) COMPUTER OWNED: : PLUS 4  
7) HARDWARE: : STAR LC 10 COLOUR PRINTER  
8) INTEREST/S: : BASIC PROGRAMMING, DIY HARDWARE, M/C PROGRAMMING, \*LEA  
NING ABOUT THE +4, would like to correspond with/talk to other C16/+4 users  
9) TALENT/S: : VERY INTERESTED IN DEVELOPPING EXISTING IDEAS AND SOLV  
ING COMPUTING PROBLEMS  
10) SUBMISSIONS: : YES. PROGRAMS ON DRAWING ON GRAPHIC 1 AND GRAPHIC 3 AN  
MODIFYING THOSE DRAWINGS USING BASIC  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : NICHOL  
2) FORENAME/S: : JAMES  
3) ADDRESS: : 18 BLERIOT ROAD, HESTON HOUNSLOW, MIDDLESEX  
4) POSTCODE: : TW5 9LG  
5) TEL NUMBER/S: : 01-897-0809  
6) COMPUTER OWNED: : +4  
7) HARDWARE: : 1551 D/D, MPS 801 PRINTER  
8) INTEREST/S: :  
9) TALENT/S: :  
10) SUBMISSIONS: :  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : CHRISTY  
2) FORENAME/S: : GARY JOHN  
3) ADDRESS: : 10 HIGH DELLS, HATFIELD, HERTS  
4) POSTCODE: : AL10 9HU  
5) TEL NUMBER/S: : 0707-261672  
6) COMPUTER OWNED: : +4 AND C16  
7) HARDWARE: : MPS803 PRINTER, 1551 D/D  
8) INTEREST/S: : ASSEMBLER PROGRAMMING (MOSTLY UTILITIES), HARDWARE E  
NSIONS (MAINLY INTERFACES. MIDID ETC.)  
9) TALENT/S: : BASIC, ASSEMBLER, MACHINE CODE  
10) SUBMISSIONS: : SOME USEFUL SMALL UTILITY PROGRAMS  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : LENNON  
2) FORENAME/S: : MARK  
3) ADDRESS: : DEVONIA, HOOK LANE, ALDINGBOURNE, NEAR CHICHESTER, W  
SUSSEX  
4) POSTCODE: : PO20 6TE  
5) TEL NUMBER/S: : 0243-543878  
6) COMPUTER OWNED: : COMMODORE 16 AND COMMODORE +4  
7) HARDWARE: : CHEETAH 125+ JOYSTICK, CBM 1531 (CASSETTE)  
8) INTEREST/S: : PLAYING COMPUTER GAMES, ESPECIALLY STRATEGY, AND SIM  
TIONS  
9) TALENT/S: : NONE ON A COMPUTER BECAUSE I MOSTLY PLAY GAMES AND T  
IN TYPE-INS  
10) SUBMISSIONS: : I WOULD LIKE TO SUBMIT, REVIEWS OF GAMES THAT I OWN.  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : SAUNDERS  
2) FORENAME/S: : PHILIP  
3) ADDRESS: : 90 OAKBANK, FIELDWAY, NEW ADDINGTON, CROYDON, SURREY  
4) POSTCODE: : CR0 9EF  
5) TEL NUMBER/S: : N/A  
6) COMPUTER OWNED: : COMMODORE 16  
7) HARDWARE: : 2 X TAPE DECKS (1531), TROJAN C16/+4 LIGHT PEN  
8) INTEREST/S: : ANYTHING TO DO WITH COMPUTERS  
9) TALENT/S: : PROGRAMMING, POKES ON THE C16  
10) SUBMISSIONS: :  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : NEWTON-LEWIS  
2) FORENAME/S: : MATTHEW  
3) ADDRESS: : 'CROSSWAYS', 24 JUBILEE ROAD, CHICHESTER, WEST SUSSEX  
4) POSTCODE: : PO19 1XJ  
5) TEL NUMBER/S: : CHICHESTER (0243) 782176  
6) COMPUTER OWNED: : COMMODORE PLUS/4  
7) HARDWARE: : 1531 DATARECORDER, COMMODORE GREEN-SCREEN, 2 CHEETAH JOYSTICKS  
8) INTEREST/S: : PROGRAMMING SOUND  
9) TALENT/S: : PROGRAMMING  
10) SUBMISSIONS: : YES, REVIEWS  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

Record number :

1) SURENAME: : SULLIVAN  
2) FORENAME/S: : MARTIN DANIEL  
3) ADDRESS: : 8 ABBOTSBURY ROAD, BURY ST. EDMUNDS, SUFFOLK  
4) POSTCODE: : IP33 2HG  
5) TEL NUMBER/S: : (0284) 702737  
6) COMPUTER OWNED: : C-PLUS/4  
7) HARDWARE: : 1531 DATASETTE  
8) INTEREST/S: : GAMES, BASIC PROGRAMMING  
9) TALENT/S: : A LITTLE BASIC PROGRAMMING  
10) SUBMISSIONS: : NOT AT THIS POINT!  
11) YEARLY: :  
12) MONTHLY: :  
13) MEMBERSHIP £: :

TAPE - DISKS SAVES  
USING GRAHAM TERRY'S METHOD  
PRINTED IN ISSUE FOUR

<u>GAME NAME</u>	<u>START ADDRESS</u>	<u>END ADDRESS</u>	<u>START CODE(HEX)</u>
MYRIAD	1000	4000	2A03
MUSHROOM MANIA	1000	4000	2000
XZAP	1000	4000	2000
PUNCHY	1000	4000	1010
FORM 1 SIMULATOR	1000	4000	3A8C
FRENEISIS	1000	4000	1200
GNASHER	1000	4000	1500
SWORD OF DESTINY	1000	4000	3E0E

THE ABOVE WERE SENT BY KEVIN WHEALS, THNAXS KEV.

BOMBJACK II	1000	4000	249F
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THE BOMBJACK II WAS SENT BY DAVID CAMPBELL, THANKS DAVE.

HERE ARE SOME START CODES, SENT IN BY KEVIN WHEALS, CHEERS KEV.

BIG MAC			2BC8
ROCKMAN 2			1010
SHARK			2000
WOLFPACK	1000	5000	44D1

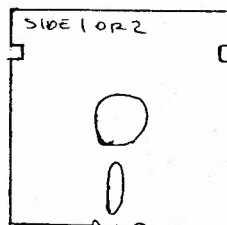
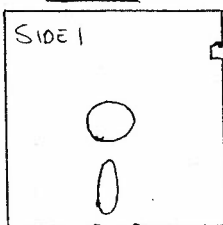
Disk Tip

I TAKE NO RESPONSIBILITY  
 FOR ANY ERRORS THAT MAY  
 OCCUR FROM THIS TIP!

Most disk users will only be using one side of there disk, but I have maximized this to enable me to use both sides, ie, giving me over 1200 Blocks Free on a single DS/DD disk just follow the instructions and piccy's:-

Take one Blank New Disk and a long ruler, line up the notch on the right side of the disk and mark of a notch of the left of the disk and the with a sharp knife, cut out an equal sized notch on the left, the notch must be the same length down the disk, and the gap must be the same, and when you've cut out the notch you will be able to use the other side of the disk. After doing the above put the disk in the drive the wrong way round, ie, the disk lable is on the underneath, then format the disk on both sides, you now have a useable double sided disk. If you don't understand any of the above the call me, or send a disk with return postage, and I'll do one for you, but if you don't send return postage, then I cannot return disks, sorry, but it gets a bit expensive. Piccy's below:-

BEFORE



← Good eh?  
 I thought  
 So!

FOR SALE & WANTED PAGE

WANTED: -

Would like to buy, DISK DRIVE, Model 1551, Any-Offers ?  
Ring 0493-730963, and ask for Kevin or write to Kevin at:-  
Kevin Williams, 10 Hickling Way, Ormesby St Margaret, Gt Yarmouth, NORFOLK,  
NR29 3SE. (Kevin, do you still want this ad in, call me please, THANKS!!)

WANTED: -

Any old Broken/Working C16/+4 hardware, ie, Joysticks, tape decks, D/D etc. must be cheap, please contact:  
Roy Robinson, 112 Cliff Road, HORNSEA, N. Humberside, HU18 1JE.  
Tel (0964) 534611

FOR SALE: -

C16/Plus/4 Printer Service.

Have you got Programs, Letters etc you want printing, but cannot afford a printer?

Well worry no more because C16/Plus/4 Printer Service is here! We can print out Basic Files from tape or disk, Basic programs saved with Turbo-Plus. Wordprocessor programs from 3+1 or Script-Plus. We can also print high/low res Graphic dumps from your programs (NOT PROTECTED COMMERCIAL ONES).

This service is exclusive to members of this Club and it costs only 60p for the first copy and 15p for any other copies there after. This price INCLUDES return postage and packing.

Please send your tape/disk in a jiffy bag/disk mailer along with money and amount required to:-

Plus/4 Printer Service, Daniel Stokes, 35 Burleigh Way, CUFFLEY, Herts, EN6 4LG.

FOR SALE: -

C64, Datarecorder, PSU, Loads of games too many to mention here. Contact:  
Mr W.D. Brighton, 55B Occupation Lane, SHEFFIELD, S12 4PS.  
Telephone 0742-641046

SERVICE: -

I have several programs (TYPE IN'S),  
GAMES, UTILITIES, etc  
for the C16/C116/+4, for tape and disc users  
all programs are **FREE!!!!**

Send S.A.E. for full details and list, to:-

Kevin Wheals  
12 Hilldown Road  
Gadebridge  
Hemel Hempstead  
HERTS  
HP1 3JE

FOR SALE & WANTED CON'T

WANTED: -

Cheap Power Supply Unit, must work, please write with prices etc to:  
David Campbell; 12 Heriot Ave, Foxbar, PAISLEY, SCOTLAND, PA2 ODW.

FOR SALE:

Commodore 16/+4 Pokes. For latest list write to:  
Mr Philip Saunders, C16 Pokes, 90 Oakbank, Fieldway, New Addington,  
Croydon, SURREY, CRO 9EF.

Free game to orders over £2.00 while stocks last.

WANTED: -

The C16 - PLUS/4 version of 'Nigel Mansell's Grand Prix'.  
Please write to:-  
Ronald de Bruin, Hyacinthstraat 8, NL 3261 XD Oud-Beyerland, HOLLAND.

For Sale: -

Selection of C16/+4 software, mostly games, please send an S. A. E for  
a list and details of prices to:-  
Roy Robinson, 112 Cliff Road, HORNSEA, N. Humberside, HU18 1JE.  
Tel (0964) 534511.

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FOR SALE

Commodore 16 and Commodore +4  
Software

All New Stock

Prices Start From £1.85 a tape  
Special Discounts To Members.

Please send a S. A. E  
For Price List To: -

DAC Software  
David Campbell  
12 Heriot Avenue  
Foxbar  
PAISLEY  
Scotland  
PA2 ODW

Please State Member Number

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