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COMPUTING WITH THE AMSTRAD CPC

INCORPORATING AMTIX!

The independent magazine for Amstrad CPC users

EXCLUSIVE PREVIEW!
GET DEXTER 2

AMTIX! Accolade
GALACTIC GAMES
STAR WARS
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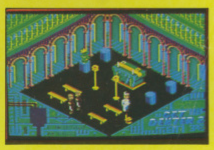

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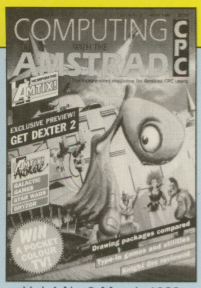

Vol 4 No 3 March 1988

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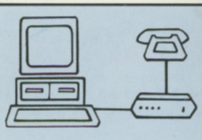

Typical comms packages	
A	*Cirkit: Acoustic V23 modem + RS232 interface + tape or disc comms software (£35.40)*
B	*KDS: Minimax V21, V23 autodial modem + RS232 interface + comms rom (£99)*
C	*Pace: Nightingale V21, V23 manual dial modem + RS232 interface + Commstar rom (£159)*
D	*Pace: Linnet V21, V23 autodial modem + RS232 interface + Commstar rom (£213)*

All you need – apart from your Amstrad – is a modem, which plugs into your telephone wall socket, an RS232 interface and suitable communications software.

We have provided a list of possible combinations (left), ranging from the very cheapest to ones which can automatically dial the MicroLink telephone number and connect you directly to the service – all you have to do is type in your personal security password.

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CPC NEWS UPDATE

Taking a bus to fame?

UNEMPLOYED Danny Kishon took a bus ride to discovery – and what he hopes is computer games fame and fortune.

Riding around the back roads of America on a Greyhound bus he thought up the basic idea of the strategy game September, just released by Activision (01-431 1101) for the CPC.

Danny wrote the final version after spending eight hours a day on London buses following his return to this country.

September lets you challenge the CPC or up to three other players to endless rounds of route plotting.

The aim is to construct a line from one side of the playing board to the other.

Numerous shaped and straight pieces are used and the game continues until there is a winner. Price £9.99 on cassette, £14.99 on disc.

GARGOYLE'S BEST GET NEW AIRING

By CHRISTINA ERSKINE

A JOINT venture by Hewson and Mastertronic has led to the creation of a new budget label – Rack-It – which has to be excellent news for CPC gamers.

February sees the first releases on the label – a batch of titles acquired from Gargoyle which are well worth a second airing.

And at just £2.99 each, it certainly won't be money wasted.

At the time of going to press, it wasn't possible to ascertain the exact order in which Rack-It planned to launch the titles.

However, lined up for the label between now and the end of the year are Ad Astra, the shoot-'em-up which was Gargoyle's first ever title, Tir Na Nog and Dun Darach, which introduced the gloomily loping Celtic hero Cuchulain, Marsport, and Sweevo's World, a wonderful parody on the Knight Lore genre.

As Gargoyle's Greg Follis points out, the nature of software hits is to be short-lived, and those who didn't have a CPC two or three years ago may well have never come across the titles. This is your chance to catch up.

Of course any re-release will look a bit dated compared to today's programs, but I reckon these will have dated less than most.

The graphics and animation of Gargoyle's games when they were new was quite stunning: Tir Na Nog and Dun Darach are steeped in atmosphere, and Sweevo's World is a delight to play.

The re-issue of oldies-but-goodies, preferably at a budget price, is in vogue at the moment, and very welcome it is too.

CPC owners can now buy all the old Ultimate classics – including the mould-breaking Knight Lore, and its follow-up Alien 8 – and Way of the Exploding Fist for £1.99, while Hewson's Uridium, when it finally appeared on the machine, came in at £2.99.

Anyone who came to CPC computing after the original shelf-life of these titles, or who was half asleep at the time and never got round to buying them can now find out what all the fuss was about.

I can think of a few more "standard bearers" that could well be dusted down and given a new lease of life.

How about Virgin's Sorcery, which was everybody's favourite Amstrad game in 1985?

Then there's Elite, which was a classic on every machine format it appeared on. With £9–£10 a pretty hefty starting point for full-price games these days, the chance to play some slices of software history without breaking the bank is an attractive one.

I-APL for the 6128

DEVELOPERS of the first all-machine truly portable language I-APL are currently working on a version for CP/M machines including the Amstrad CPC6128.

The international I-APL project was formed in 1986 to write and issue a free international APL interpreter for home and school users.

Its supporters believe such comprehesive coverage will be of great benefit in education because more can be done using less commands with APL than any other computer language.

European I-APL project chairman Mr Anthony Comacho said: "There is no better way to do mathematics on a computer than by using APL".

He says I-APL is now "running in less than 26,000 bytes of code in an IBM PC clone". The smallest previous complete APL interpreter was more than 75,000 bytes, and typical mainframe APLs are more than 400,000 bytes.

All I-APL software will be free – the only charge being for the disc, copying, and the books and manuals. Comacho promises these will be "cheaper than photocopies".

Super CPCs

THE Amstrad CPC6128 has been accorded a Best Buy accolade by the Consumers' Association magazine Which?

The special report on home computing said the machine was ideal "for fun and a bit more – for playing games, finding out what computing is about, learning about programming, keeping household records, doing word processing and accounts, or as an aid to learning non-computer subjects".

In the same report the CPC464 was described as "cheap and fun if you want a budget-priced computer to work with a cassette player".

ARTIST DIES

COMPUTER gamers were stunned by the death of talented Code Masters artist James Wilson.

Only 20 years old, James drowned in an accident at Lyme Regis. He was responsible for the graphics of several Code Masters hits.

Turn to Page 29 for the Gallup Top 20

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Sounds exciting

THE musical capabilities of the CPC have been greatly expanded with the release of a new editing package for the Yamaha FBO1 multi-timbral midi module.

DHCP Electronics (0440 61207) says that the FBO1 toolkit offers an editor for saving and loading up to 16 configurations, catalogue of disc/tape, send or receive from 1 to 16 configurations, and enables the user to hear instruments from the computer.

The package also has a voice editor which permits single key functions, move 48 voices into a data bank, list voices within a data bank, save/load voices to tape or disc, and to send/receive voices from the FBO1. Price £29.95 on tape and £34.95 on disc.

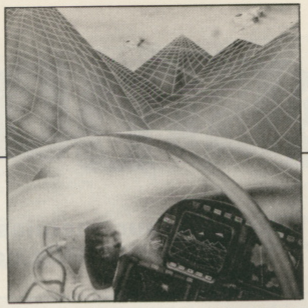
★ ★ ★

TEN new titles for the CPC have been announced by The Power House (01-879 7266).

They are Street Machine, Dervish, Stairway to Hell, Dambusters, Killapede, Desert Fox, International Bowls, Metropolis, Astroball, and Endurance.

★ ★ ★

THE spring release schedule announced by Gremlin Graphics (0742 753423) includes Alternative World Games, Tour De Force, Blood Valley and Northstar for the CPC.



A LEAP into the next century is how Digital Integration (0276 684044) describes its latest CPC release Advanced Tactical Fighter.

The 3D arcade action simulation features relief landscapes, in-flight computer, mission strategy, weapon selection and automatic landing.

Price £8.95 on cassette, £13.95 on disc.

CPC to the rescue

RELIEF workers in Africa are using Amstrad CPC6128s for a variety of monitoring exercises in communities at risk from poverty and malnutrition.

Special programs analysing children's body measurements warn of areas where emergency food supplements are needed in Ethiopia and Sudan, according to a report in The Guardian.

Also supported by Amstrad machines employed by Oxfam and the Save the Children Fund are food distribution administration in Sudan, an immunisation programme in Mozambique, and a disablement register in Zimbabwe.

AFTER Colossus Chess and Colossus Bridge, it's time for Colossus Mah-Jong – CDS Software's version of the ancient oriental walls and tiles game.

Four tutorial sessions are provided for beginners, while experienced players can use any of nine intelligence levels or full tournament mode.

Colossus Mah-Jong costs £9.99 on cassette and £14.99 on disc from CDS Software (0302 21134).

Join the fleet

TORPEDOES, guided missiles, radar and sonar are just some of the factors to contend with in Ocean Conqueror from Hewson on the Rack-It label.

The game puts the player in charge of a submarine on a mission to seek out and destroy four convoys.

Another Rack-It title for the CPC is Anarchy which features 16 maze-like carpets of blastable blocks, unstoppable aliens, and manic manoeuvering tanks.

The object of the game is to blast away all the blocks from each level while dodging aliens whose sole task is to destroy you. Both games are priced £2.99 from Hewson (0235 832939).

Arcade action

A NEW release developed by System 3 for Activision (01-431 1101) is based on the film Predator.

You play the part of Major Dutch Schaeffer, leader of a commando unit assigned to rescue prisoners. But the hunters become the hunted after a fierce battle and mere survival is now the aim.

The game features hi-res graphics, dual speed sideways scrolling and many screens of pure arcade action. Price £9.99 on cassette, £14.99 on disc.

Comms rom for CPCs

WHAT is claimed to be the most powerful viewdata communications program for the CPC has been released by Amster's Cage.

The Cage Comms Rom is designed as a replacement rom for four of the main packages currently available.

Producer and co-author Ian Hoare said: "The program was written out of frustration. I found no existing package had the facilities I needed for my CPC6128, and had become used to on professional viewdata editing terminals.

"I asked expert comms programmer David Gorski to help produce a top class editing package and The Cage Comms Rom is the result.

"It's taken 18 months hard work by both of us and incorporates features previously only available on editing terminals used by large organisations such as Telemap".

Frames may be captured to memory, redisplayed, printed in either text or graphics mode, edited and uploaded or copied intelligently, whole or in part. Up to 94 frames can be stored at a time on a CPC6128, 26 on a CPC464.

Any type of response frame currently used by Prestel may be turned into a template for offline message preparation and subsequent automated sending.

Up to 26 pages may be tagged and accessed later at the press of a key, and the program fully supports Micronet's compacted protocols, decoding them automatically.

The Cage Comms Rom costs £30 from Amster's Cage (01-965 8957).

MELTDOWN

Wipe out your enemies — and your friends — in ROBIN NIXON's novel strategy game

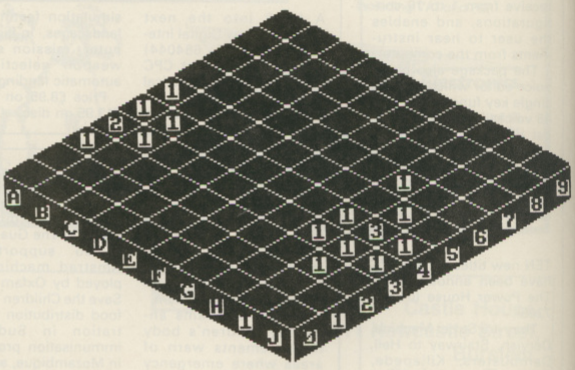
MELTDOWN is a game for two players. It is played on a 10x10 board with each player taking it in turn to place a counter on either an empty square or one he has already occupied. The object is to wipe all your opponent's counters from the board.

You can put up to three counters on a square. If you place a fourth, the square becomes overloaded and explodes. When this happens the counters are blown on to the four adjacent squares.

If the opponent occupies any of these, the counters in those squares are removed leaving them empty. After an explosion, an extra counter of the player's colour is left in the exploded square.

If, in the process of a square exploding, a fourth counter is added to an adjacent square, that explodes too. In this way chain reactions can occur which will increase the player's number of counters, and often leave the opponent rather worse off.

However, if more than four counters end up on a square, it becomes too heavy and implodes, leaving nothing.




```
100 REM ******************
110 REM *                *
120 REM *    MELTDOWN    *
130 REM *                *
140 REM * By Robin Nixon *
150 REM *                *
160 REM * (c) Computing  *
170 REM *      with the  *
180 REM *      Amstrad   *
190 REM *                *
200 REM ******************
210 REM
220 MODE 1
230 DEFINT a-z
240 DIM a(9,9):tt=32:x=0:y=0:bflag=0
250 savescr=&8000:restscr=&800C:gcol=&80
18
260 INK 0,10:INK 1,26:INK 2,0:INK 3,2:BO
RDER 10
270 IF HIMEM=&3FFF THEN GOTO 290
280 MEMORY &3FFF
290 GOSUB 770
300 IF PEEK(&8024)=1 THEN GOTO 330
310 GOSUB 460
320 CALL savescr
330 IF PEEK(&8024)=1 THEN INK 1,10:INK 2
,10:INK 3,10:CALL restscr:INK 1,26:INK 2
,0:INK 3,2
340 POKE &8024,1
350 p=1:LOCATE 1,1:PEN 1:PAPER 2:PRINT"W
HITE TO PLAY"
360 PAPER 0:LOCATE 1,3:PRINT "  ":LOCAT
E 1,3
370 GOSUB 1360
380 IF SGN(a(x,y))<>SGN(p) AND a(x,y)<>0
 THEN GOTO 350
390 GOSUB 1140
400 p=-1:LOCATE 1,1:PEN 3:PAPER 2:PRINT"
BLUE TO PLAY"
410 PAPER 0:LOCATE 1,3:PRINT STRING$(3,"
"):LOCATE 1,3
420 GOSUB 1360
430 IF SGN(a(x,y))<>SGN(p) AND a(x,y)<>0
 THEN GOTO 400
440 GOSUB 1140
450 GOTO 350
460 PEN 2:PAPER 3:LOCATE 31,1:PRINT" MEL
TDOWN ";
470 LOCATE 31,2:PRINT"By R.Nixon";
480 PLOT 1000,1000,2
490 FOR x=2 TO 320 STEP 2
500 MOVE x,198+x*0.5:DRAW x,200-x*0.5
510 MOVE 638-x,198+x*0.5:DRAW 638-x,200-
x*0.5
520 NEXT
530 PLOT 1000,1000,1
540 y=0
550 FOR x=0 TO 320 STEP tt
560 MOVE x,200-y:DRAW x+318,358-y
570 MOVE 638-x,200-y:DRAW 320-x,358-y
580 y=y+16
590 NEXT
600 FOR y=196 TO 166 STEP -2
610 PLOT 0,y,3:DRAW 318,y-158
620 PLOT 638,y,2:DRAW 320,y-158
630 NEXT
640 PLOT 0,196,1:DRAW 0,164:DRAW 318,6
650 MOVE 320,6:DRAW 638,164:DRAW 638,196
660 MOVE 318,6:DRAW 318,38
670 MOVE 320,6:DRAW 320,38
680 y=0
690 FOR x=0 TO 288 STEP tt
700 PEN 1:PAPER 3:CALL gcol
710 MOVE x+4,182-y:TAG:PRINT CHR$(x/tt+6
5);:TAGOFF
720 PEN 3:PAPER 2:CALL gcol
730 MOVE x+332,y+38:TAG:PRINT CHR$(x/tt+
48);:TAGOFF
740 y=y+16
750 NEXT
760 RETURN
770 RESTORE 830
780 FOR x=&8000 TO &8023
790 READ a:POKE x,a:NEXT
800 REM
810 REM ** Save screen
820 REM
830 DATA &01,&00,&40
840 DATA &11,&00,&40
850 DATA &21,&00,&c0
```

MAJOR VARIABLES

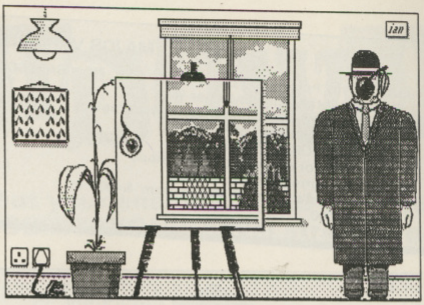
A(9,9)	Array holding the board
BW	Set if the blue player has won
GCOL	Machine code subroutine to set graphics paper and pen colours
J,K	Main FOR...NEXT variables
N	Used for controlling sound loops
P	The current player
RESTSCR	Copies the saved screen from &4000 to &C000
SAVESCR	Saves the screen (at &C000) to &4000
TT	Constant equalling 32
WW	Set if the white player has won
X,Y	X and Y coordinates on the board
X1,Y1	Temporary X and Y coordinates on the board
A$	Character to be printed at the present position on the board
I$	String returned by INKEY$

```
860 DATA &ED,&B0
870 DATA &C9
880 REM
890 REM ** Restore screen
900 REM
910 DATA &01,&00,&40
920 DATA &11,&00,&c0
930 DATA &21,&00,&40
940 DATA &ED,&B0
950 DATA &C9
960 REM
970 REM ** Set graphic pen & paper
980 REM
990 DATA &CD,&93,&BB
1000 DATA &CD,&DE,&BB
1010 DATA &CD,&99,&BB
1020 DATA &C3,&E4,&BB
1030 RETURN
1040 PAPER 2
1050 IF a(x1,y1)<0 THEN PEN 3
1060 IF a(x1,y1)>0 THEN PEN 1
1070 IF a(x1,y1)=0 THEN PEN 2
1080 CALL gcol
1090 MOVE x1*tt+y1*tt+24,y1*16-x1*16+206
1100 a$=CHR$(ABS(a(x1,y1))+48):IF a$="4"
 THEN a$=CHR$(231):GOTO 1120
1110 IF a$>"4" THEN a$=CHR$(238)
1120 TAG:PRINT a$;:TAGOFF
1130 RETURN
1140 PAPER 0:LOCATE 1,1:PRINT STRING$(13
,"")
1150 LOCATE 1,3:PRINT STRING$(3," ")
1160 a(x,y)=a(x,y)+p:x1=x:y1=y:SOUND 4,(
p+1)*300+100,5:GOSUB 1040
1170 IF ABS(a(x,y))<4 THEN GOTO 1270
1180 ww=0:bw=0
1190 FOR j=0 TO 9:FOR k=0 TO 9
1200 ab=ABS(a(j,k)):IF ab>4 THEN a(j,k)=
0:ab=0:x1=j:y1=k:GOSUB 1470:GOSUB 1040
1210 IF ab>3 THEN bflag=1:GOSUB 1280
1220 IF a(j,k)>0 THEN ww=1
1230 IF a(j,k)<0 THEN bw=1
1240 NEXT k,j
1250 IF ww+bw<2 THEN GOSUB 1500
1260 IF bflag=1 THEN bflag=0:GOTO 1180
1270 RETURN
1280 a(j,k)=p:x1=j:y1=k:GOSUB 1040
1290 FOR n=30 TO 70 STEP 21
1300 SOUND 4,n,2:NEXT
1310 IF j-1>=0 THEN a(j-1,k)=a(j-1,k)+p:
x1=j-1:y1=k:GOSUB 1040:IF a(j-1,k)*p<0 T
HEN a(j-1,k)=0:GOSUB 1040
1320 IF j+1<=9 THEN a(j+1,k)=a(j+1,k)+p:
x1=j+1:y1=k:GOSUB 1040:IF a(j+1,k)*p<0 T
HEN a(j+1,k)=0:GOSUB 1040
1330 IF k-1>=0 THEN a(j,k-1)=a(j,k-1)+p:
x1=j:y1=k-1:GOSUB 1040:IF a(j,k-1)*p<0 T
HEN a(j,k-1)=0:GOSUB 1040
1340 IF k+1<=9 THEN a(j,k+1)=a(j,k+1)+p:
x1=j:y1=k+1:GOSUB 1040:IF a(j,k+1)*p<0 T
HEN a(j,k+1)=0:GOSUB 1040
1350 RETURN
1360 dd=0:aa=0:PRINT CHR$(143);CHR$(8);
1370 i$=UPPER$(INKEY$):IF i$<"0" OR i$>"
9" AND i$<"A" OR i$>"J" AND i$<CHR$(127)
 OR i$>CHR$(127) THEN GOTO 1370
1380 IF dd+aa<1 AND i$=CHR$(127) THEN GO
TO 1370
1390 IF i$=CHR$(127) THEN PRINT " ";CHR$
(8);CHR$(8);CHR$(143);CHR$(8);:aa=0:dd=0
:GOTO 1370
1400 IF aa=1 AND i$>="A" AND i$<="J" THE
N GOTO 1370
1410 IF dd=1 AND i$>="0" AND i$<="9" THE
N GOTO 1370
1420 IF aa=0 AND i$>="A" AND i$<="J" THE
N aa=1:x=ASC(i$)-65
1430 IF dd=0 AND i$>="0" AND i$<="9" THE
N dd=1:y=VAL(i$)
1440 PRINT i$;CHR$(143);CHR$(8);
1450 IF dd+aa<2 THEN GOTO 1370
1460 RETURN
1470 FOR n=50 TO 15 STEP -7:SOUND 4,n,2:
NEXT
1480 FOR n=30 TO 70 STEP 7:SOUND 4,n,2:N
EXT
1490 RETURN
1500 PAPER 2:LOCATE 1,1:IF ww=1 THEN PEN
 1:PRINT"WHITE WINS!" ELSE PEN 3:PRINT"B
LUE  WINS!"
1510 PEN 2:PAPER 1:LOCATE 1,3:PRINT "Pre
ss SPACE"
1520 PRINT "  to play "
1530 FOR j=500 TO 0 STEP -17:SOUND 4,j,3
:NEXT
1540 WHILE INKEY$<>":WEND:WHILE INKEY$<
>" ":WEND
1550 RUN
```

Get it right!

LINE CHSUM	LINE CHSUM	LINE CHSUM	LINE CHSUM	LINE CHSUM
100 = 42048	390 = 55616	680 = 62688	970 = 22720	1260 = 63392
110 = 58592	400 = 21856	690 = 41792	980 = 08224	1270 = 27008
120 = 30432	410 = 65216	700 = 13280	990 = 45152	1280 = 28448
130 = 58592	420 = 38688	710 = 44896	1000 = 63936	1290 = 03168
140 = 36672	430 = 30720	720 = 25248	1010 = 30784	1300 = 27520
150 = 58592	440 = 55616	730 = 60960	1020 = 41408	1310 = 16576
160 = 65056	450 = 28960	740 = 40416	1030 = 27008	1320 = 55168
170 = 20128	460 = 48992	750 = 42400	1040 = 09888	1330 = 15840
180 = 06720	470 = 59328	760 = 27008	1050 = 60864	1340 = 00160
190 = 58592	480 = 47296	770 = 63424	1060 = 40224	1350 = 27008
200 = 42048	490 = 41536	780 = 56864	1070 = 28384	1360 = 38912
210 = 08224	500 = 55840	790 = 25312	1080 = 47008	1370 = 19008
220 = 24736	510 = 34944	800 = 08224	1090 = 64800	1380 = 29504
230 = 60320	520 = 42400	810 = 56512	1100 = 12864	1390 = 06560
240 = 48224	530 = 46432	820 = 08224	1110 = 33536	1400 = 39232
250 = 28672	540 = 62688	830 = 23776	1120 = 30048	1410 = 54496
260 = 56576	550 = 38112	840 = 61920	1130 = 27008	1420 = 19936
270 = 35904	560 = 06208	850 = 40928	1140 = 29056	1430 = 33792
280 = 28320	570 = 08608	860 = 01504	1150 = 58656	1440 = 02144
290 = 23648	580 = 40416	870 = 60224	1160 = 65088	1450 = 21504
300 = 19328	590 = 42400	880 = 08224	1170 = 61344	1460 = 27008
310 = 58976	600 = 53248	890 = 41440	1180 = 54016	1470 = 07328
320 = 09376	610 = 01664	900 = 08224	1190 = 02880	1480 = 35648
330 = 09760	620 = 22112	910 = 23776	1200 = 00896	1490 = 27008
340 = 08928	630 = 42400	920 = 30912	1210 = 53120	1500 = 55552
350 = 44800	640 = 57696	930 = 05824	1220 = 40928	1510 = 51200
360 = 58080	650 = 55520	940 = 01504	1230 = 59552	1520 = 44544
370 = 38688	660 = 15680	950 = 60224	1240 = 36704	1530 = 13120
380 = 26048	670 = 30912	960 = 08224	1250 = 31552	1540 = 25952

Pointers to hi-res plotting



IAN SHARPE compares two Mode 2 drawing packages

THERE are two main reasons for using a drawing program. One is to create images on the screen, the other to output the results to a printer or plotter.

In the second case colour can be a hindrance because what you see on the screen doesn't bear much relation to the hard copy.

Colour printers vary in quality and can be expensive to buy and run. You've got to be pretty serious about buying one and you'd probably want to keep it for best and use an ordinary dot matrix as a work horse.

At first sight Siren Software's Cherry Paint and Metrotec's Easidraw might seem limited in that they work only in Mode 2. You do, however, have the advantage of finer detail and if you're thinking in terms of printed output, the screen is close to the appearance of the end product.

The two packages operate very differently and are not aimed at the same type of market. There is some overlap, but you could produce drawings with Easidraw which would be virtually impossible with Cherry Paint – and vice versa.

The first thing noticeable about Cherry Paint is the single sheet of instructions. Screen designers tend to be so complicated as to merit a complete manual, and it made me wonder if there were going to be enough features to make it much use.

Cherry Paint

Once loaded you have a drawing area, a series of icons, a menu bar and a pointer. The pointer can be moved around with the cursor keys, joystick or AMX mouse and the control option is set up with a separate configuration program. This also allows you to redefine control codes to cater for non-standard printers. The pointer moves slowly at first then – if you hold down the key – accelerates.

Loading a previously saved picture is simply a matter of moving the pointer to the file option and pressing the spacebar so that a pull-down menu appears. Several items are listed here – save or load picture, select default disc drive, print picture, or format a disc.

You move the pointer down the menu to the appropriate item, let go of the spacebar, and the selected function leaps into action, in this case prompting you for a filename.

The group of icons top left of the screen access most of the drawing functions. The first is a pencil which, once selected, inverts in colour. The pointer in the drawing area becomes a pencil and by moving it while pressing the spacebar you can leave a trail.

Accuracy limited

The eight directions inherent in keyboard or joystick control coupled with the pointer's acceleration limit the degree of accuracy for freehand work and I found rubber-banded lines better.

You can choose the line thickness at the bottom left of the screen and lines are drawn using one of the patterns at the bottom of the screen. The current pattern is selected by moving the pointer over it and pressing the spacebar, mouse or fire button. One of these patterns is a solid block so you can have pure black lines.

The aerosol allows you to spray an area with the current pattern. Here the effect builds up gradually, unlike the brush where you can paint the texture on to the screen using one of the shapes shown in the group of six below the function icons.

The drawing area shows part of a screen-sized sheet and the hand lets you push the paper about to position the part you're working on under the window. Unfortunately most functions can only be used on the visible area which can be inconvenient.

At one stage I wanted to move a block which was taller than the drawing window. It had to be moved in two sections, and this involved careful positioning and some tidying up afterwards.

Text can be added with the A icon. You have a choice of sizes and styles – bold, italic, underline or 3D – which can be mixed to give, for instance, bold italic. These are accessed from the Size and Style menus. Another menu – Font – is also concerned with text but has only one item and therefore seems redundant. Perhaps we may see this menu extended in the future.

Box drawing

Two box icons at the bottom of the function block allow you to draw empty or filled rectangles. If you want the box to have an outline, with a filled box it is drawn with a solid line in the currently selected thickness. With empty boxes the line is again drawn in a pattern. Like the line drawing function, the boxes rubber-band.

Defining an area with a dotted box allows you to push it round or operate on it using one of the options under the Edit menu.

These include multiple copies of the area – with or without leaving the original intact – delete, vertical or horizontal reflection, and colour inversion. There is a bug here which sometimes leaves a copy of the pointer on the screen.

The pull-down menu under Special

allows you to zoom in on an area for pixel editing, view the page as a whole or undo the last function. Zoom is very good but has a slight problem in that it won't take in the last pixel round the edge of the drawing area. When viewing the page a window opens and you see a scaled-down version of the whole picture. This has the effect of turning the darker patterns black and I would prefer to see the screen at its full size.

You're stuck with the patterns provided, and it would have been nice to be able to define your own. Apart from the filled box, there is no area fill but you can achieve the same result by painting and spraying with the required pattern and tidying up the edges afterwards.

Printer control

I mentioned earlier that you can redefine printer control codes with the configuration program. If you are lucky enough to own a DMP2000 or compatible there are a variety of printer drivers to choose from which give different sizes of dump orientated vertically or horizontally.

If you need to define your own driver, there isn't a way of getting more than one size. Fortunately, if this is a problem Cherry Paint screens are ordinary binary files which can be loaded from Basic and used with whatever dumps you have available. For the benefit of the less experienced a little more explanation of the configurator in the instructions would not go amiss. Other than that I found them adequate.

The program is exceptionally easy to use with a nice slick professional feel. I missed an ellipse function – though if you were desperate you could do it in Basic – and the ability to redefine at least one pattern, preferably the whole lot. Being able to design your own fonts would be a nice bonus, as would the facility to get a readout of the cursor's coordinates.

I'd like to see a Cherry Paint Plus with these features implemented. They'd turn a program that's already nice into something special. If you want to design colourful screens or concentrate on technical work, this isn't the package to get, but within its limitations it's good value and performs well.

Easidraw

ON to Easidraw. It is aimed at the production of accurate drawings based on lines, circles, rectangles and crosshatching – electronic draughtsmanship. The filenames on the disc reinforce this impression – they all start with CAD which is an acronym for computer aided design.

Metrotec also does an Easiart program for artists, so there can't be much doubt as to Easidraw's function.

Rom clashes

Before seeing the computing light I spent many years in railway civil engineering and produced countless engineering drawings the hard way. Easidraw was, therefore, of great interest.

The program clashed with one or more of my numerous roms. Switching them off with the appropriate command wasn't enough and I had to unplug my romboard – hardly conducive to long-term edge connector longevity. Although the packaging says CPC, Easidraw will not run on the CPC464 owing to the use of CPC6128/664 – specific commands, all of which could have been avoided.

Control is by a choice of trackerball, mouse or joystick. With a joystick you have to use three function keys to simulate the mouse buttons and this is fiddly if your stick doesn't adhere to the table. Why then isn't there a keyboard option? I haven't got a trackerball, so I used an AMX mouse.

After the main program has loaded you are presented with the editing screen. This has a pencil-shaped pointer and a readout of its coordinates. By default you are in line mode where you can draw lines by moving the pencil and pressing Execute. This draws a line – optionally rubberbanded – from the end of the last one or the last place where you pressed Move.

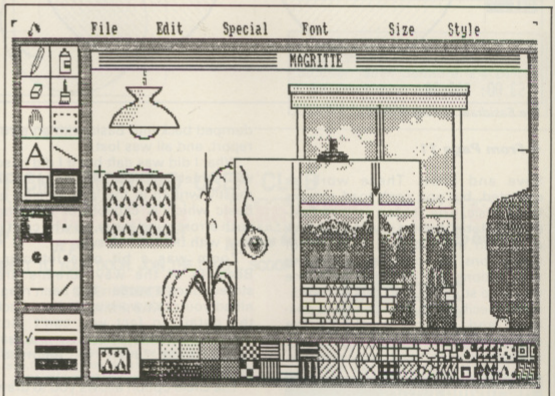
Two nice features are Near and Blend. Near mode – which can be turned off – will scan for a nearby line end. If one is found, the end of the line you're drawing will be made to connect with it. Blend allows you to round off the corners of line joints by specifying a radius. There is also a facility to change line style but there are only two possibilities – solid or dotted.

I found that moving the pointer long distances with the joystick was a slow process. It's much quicker by rodent, and presumably equally so by trackerball. Moving the pencil to the top left of the screen pulls down a menu. From here you access all functions by moving the pointer down the list and pressing Execute.

A section of program – or overlay – is then loaded from disc to perform the task. The few seconds delay which ensues can be frustrating when you're in full flow, and given that Easidraw is mainly restricted to the CPC6128, it's odd the programmer didn't store the overlays in the extra ram.

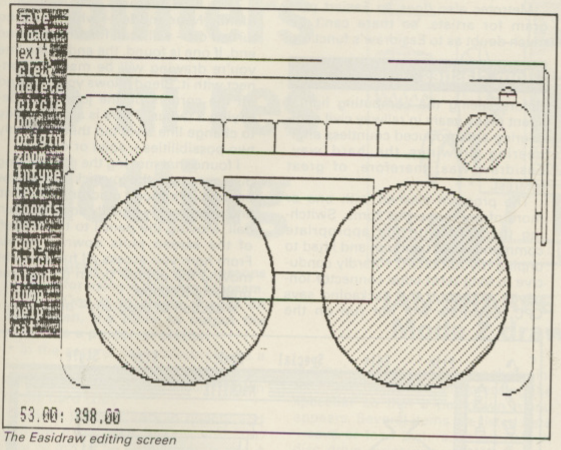
The overlay system has the advantage that the program can be larger than one contained solely in memory and so can have more facilities. Easidraw does have a reasonable range of options, but I would have expected more in a program that is supposed to be a viable alternative to a set of drawing instruments, even at a simple level.

The first items on the menu are



The Cherry Paint editing screen

Turn to Page 12 ▶



The Easidraw editing screen

◀ *From Page 11*

Save and Load. These work as expected, but you can't load screens from Basic. The reason is that Easidraw pictures are not saved as a block of screen memory but as a list of instructions. As you create a drawing your actions are recorded so a line would be stored as two sets of coordinates specifying the start and end position, and a circle would be the coordinates of its centre plus the radius.

Rectifying errors

This method saves disc space and makes possible the Delete function. Here you can, for example, erase a complete line. The program deletes it from the list of objects and the screen is drawn afresh.

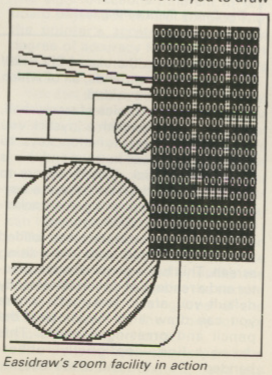
This leaves everything else intact but complicated designs get tedious as the picture is laboriously reconstructed every time you rectify a mistake. Also this system makes the tidying up of pictures, by erasing small bits, impossible – you can only erase a complete circle as you drew it, not just a section.

After a couple of hours I decided it would be a good idea to save my work. Without thinking I swapped the system disc for my picture disc and selected the Save option. The program looked for the Save overlay and of course it wasn't there. I was dumped back into Basic with an error report, and all was lost.

What I did was daft but if I did it, so will somebody else. The program is mostly written in the later version of Basic which is capable of trapping such errors quite easily, so why can't it deal with them?

Zoom was a bit of a letdown. Because of the way screens are stored, once a section has been magnified you can't work on it, just check the detail. In fact you can't plot individual points – not an unusual requirement, even in technical drawing.

The circle option allows you to draw segments as well as complete circles. Unfortunately this function is not as useful as it could be.



Easidraw's zoom facility in action

It isn't uncommon to want to use large radii – constructing a cross section through a lens for example, or a surface with a long flat curve – which would involve part of the circle going offscreen. As soon as you try, the function gives up.

There is a facility to copy a section of screen by enclosing it in a box and specifying X and Y offsets to the new position. It will only move objects completely enclosed in the box, so if one end of a line begins outside it, the entire line will be left behind, as will any text or shading.

This method of specifying offsets means you have to keep a pencil and paper handy to keep track of the coordinates of key points and calculate where you are going.

Leaky fills

The hatch option allows you to fill an area with one of two styles – left or right. It's slow and not particularly efficient as complicated shapes need to be done in several stages.

Another moan is that if the fill leaks out of the shape – an easy mistake with dotted lines – you cannot abort. Neither can you unhatch an individual section. If you try, all the hatching on the screen disappears. Two styles of cross hatching without even a solid fill are, in my opinion, inadequate.

The screen dump is configured specifically for the DMP2000. This is compatible with many other printers, but not a lot of use if you have something slightly non-standard. A program whose main aim in life is to produce hard copy should be more developed in this area and include a reconfiguration facility and plotter drivers.

A text function allows the addition of notes, but only in one style. The ability to turn text sideways to print vertically is essential for technical work, but Easidraw doesn't cater for it.

Other functions are for cataloguing a disc, and customising the coordinate system. With this the origin can be relocated and you can specify a scale factor which will be applied to the coordinates to give a second readout of the pointer's position.

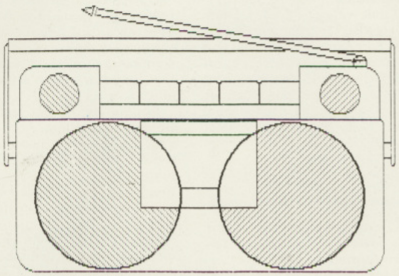
The instructions are supplied in a five-page ringbound manual and supplemented by a Help function. They're enough to find your way round but fail to point out that this is a Mode 2 package, that it won't run on the CPC464/DD1 and you can't drive

non-standard (but hardly rare) printers.

I have to say that the Easidraw approach didn't work very well for me. As a former draughtsman I had a clear idea of what I wanted from the package and how long it would take me to get equivalent results using drawing instruments. Easidraw does not go far enough down its chosen avenue; it's slow and does not enable me to do anything I couldn't do a lot faster with the minimum of drawing equipment.

There are, however, many relatively simple things that I could do by hand which would take a long time or prove impossible with Easidraw. Metrotec could argue that I'm applying too high a standard, but I find it difficult to think of a situation where even an unskilled person would find this program a genuine aid.

Even something like designing a new layout for your living room would be better done with graph paper and cardboard rectangles to represent the furniture. I wonder if it's significant that there are no demonstration screens on the disc?



All my own work

Product: Easidraw
Price: £19.49 (disc only)
Supplier: Metrotec, Tec House, 20 Vine Place, Sunderland SR1 3NA
Tel: 091-510 9595

Product: Cherry Paint
Price: £9.99 (disc only)
Supplier: Siren Software, 2-4 Oxford Rd., Manchester M1 5QA
Tel: 061-228 1831

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CPC/DB/3

ROBIN NIXON pays a visit to an exciting new software house

FRENCH CO

loriciels loriciels loriciels loriciels

LORICIELS is a name we only hear from time to time in Britain, but all that's set to change. In partnership with top software house Elite it has set up a UK operation to market the best software from France.

To launch the new company Loriciels and Elite recently held a press day at the National Motorcycle Museum in Birmingham. The reason being that first off the starting grid is Grand Prix 500cc, a completely rewritten and upgraded version of a game which found its way on to the British market last year.

Chairman Laurant Weill started by giving a run down on the company's background. He explained that he and his associate Marc Bayle founded Loriciels in September 1983.

By early the next year they were so busy they had to create their own marketing and publicity department, and by September it had become the number one French software house, having sold more than 200,000 units.

At this time it had more than 150 titles on its books including arcade and adventure games, management applications, communications packages and languages.

In the autumn of 1986 it had grown so big it had to move to new premises near Paris with 1600 square feet of offices and warehousing space. From its new base it immediately launched 15 programs it describes as being a completely new generation. To handle these releases it also created a distribution wing, an in-house advertising agency and a graphic arts studio.

As if all this weren't enough, Laurant and Marc also found time to set up two more companies, Microids and Priam. Microids concentrates on micro and domestic robots, and design simulation software such as GP 500cc. Priam writes professional software such as the word processor Evolution which has sold more than 50,000 copies in France alone.

Today Loriciels has 53 employees, it is the number one software publisher in France, and the third largest distributor with an expected turnover of £5 million this year.

> ***Companies with Loriciel's and Elite's success working together have formed a great start for Loriciels***
>
> – Nikky Penny, Product Manager, Loriciels UK.

After filling us in on the background they told us about their future plans. Now that the UK company is up and running it expects to release programs every two weeks for the CPC series, Atari ST, IBM-compatibles, and the Commodore 64.

Out of 65 titles to be produced in France this year, 12 to 14 will appear over here. But before we get to see them they will go through a strict screening process at Elite to ensure that they have been effectively translated.

Apparently it's not just a matter of translating the text. According to Loriciel's marketing manager, the software market in the UK is quite different from in France. For instance, they have just produced an adventure based on a well known story by Victor Hugo. Playing the game would be impossible for anyone unfamiliar with the book – even if it were translated into English.

The French also have a unique way of presenting their adventure games using big characters and speech

CONNECTION

bubbles. A lot of humour is often included – but that is sometimes lost in the translation.

By the way, you know how we often complain about the high cost of software? Well, in fact we're really quite lucky. According to Loriciels, software in France can cost 30 per cent more than in Britain.

> ***'We want Loriciels UK to be a British company – not a French subsidiary.'***
>
> – Laurant Weill, Chairman, Loriciels France.

Below are some of the releases to look forward to.

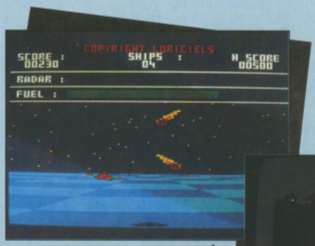
Niki Penny, Loriciels Product Manager

From top to bottom: Steve Wilcox, Director Elite Systems; Niki Penny, Product Manager Loriciels; Marc Bayle, Director Loriciels; Laurant Weill, President Loriciels.

Straight Six

A compilation of six games previously only released in France. They are 3D Fight, a space shoot-'em-up; Billy, an arcade adventure; Soccer, a colourful simulation; MGT, an excellent 3D maze game featuring a tank of the future; Flash, a zap-'em where you can change your mode of transport; and ZOX 2099, a futuristic adventure.

We have managed to obtain the first copies of Straight Six to give away in our great competition – turn to Page 31.



Two games from Straight Six

3D Fight ▲

Billy ▶

Sapiens

AN adventure set a thousand centuries ago with an incredible three million locations generated using fractals. In order to win you have become a valiant hunter and set off to conquer new lands where nothing but trouble awaits you.

Your weapons must be hand made from flint, warriors must be coaxed or fought, and food must be found. In this Stone Age adventure the only law is survival of the fittest.

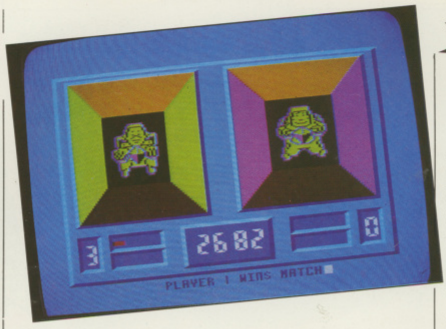
Grand Prix 500cc

This should be in the shops any time now. It's a motorcycle racing simulator featuring a two-player option – each with their own screen. There are 12 international circuits and the object is to become the world champion.

All these games – and many more from Loriciels – will be reviewed first in *Computing with the Amstrad*. Make sure you don't miss them! After a great day out, I came away feeling that we are in for some interesting developments from across the Channel. Loriciels could certainly give the British software houses a run for their money, and with their different approach to writing software they'll be bringing in a breath of fresh air.

GALACTIC GAMES

Activision
£9.99 (tape)
£14.99 (disc)
Joystick and keys



THIS unlikely collection of warped wonders masquerades under the concept of an interplanetary Olympics, and must be among the motliest medley ever seen on the Amstrad. Let's get one thing clear – these games are weird.

The collection has much the same feel as the track and field programs of a couple of years ago, only I can't see the 100m slither, space hockey, psychic judo, head tossing, or the metamorph marathon being eligible for Seoul this year.

The 100m slither puts you into good old worm mode, attempting to burn up a 100m track in under 70 seconds. Any longer and you will be disqualified. I really need not tell you of this contingency because if you play the game, you will no doubt experience such an occurrence.

The blasted wormoid is hellishly difficult to get moving at a reasonable pace without raising its temperature so much that it burns out. This 100m is not the joystick-breaking dash of a typical race amongst humans, more a skilful manipulation to get a reasonable rhythm going.

Space Hockey is an excellent advanced variation of the old TV football games. You knock a puck around the screen attempting to force it into your opponent's goal. Sounds simple doesn't it? The puck is a living creature which visibly grimaces as you hit it. Thus to the limited extent of its mobility, the puck tries to avoid being hit.

The goals are not standard, they're black holes which will also suck in players if they get too near. A final consideration is that the whole game is played in deep space. Hitting the ball or colliding with the opposing player will result in you bouncing back from the point of impact.

The consequence of all this is a game bordering on mayhem until you get used to the style of play needed to score points over the four 60-second quarters that constitute one match.

Head throwing bears a fair resemblance to the computerised javelin game. You get your character to the starting line with as much momentum as possible, press the Fire button, and off flies his head.

Further control of initial trajectory and angle of landing are available to ensure you get a long even flight with the head's nose landing firmly in the astroturf. A nice resounding scrunch is heard when this occurs. You also have the option of waggling the head's ears in mid-flight to gain a little extra distance.

Psychic judo and the metamorph marathon bear no obvious comparison. The former is a combat game involving you attacking various sectors of your opponent's body, whereas the latter pits you as a many-shaped being travelling a large circuit, slipping into your various guises to complete different parts of the course.

Although the two player option for all these games utilises both keys and joystick, the one player against the computer mode appears to insist on the joystick being used. Though the controls are extremely good, the keyboard player looks to be at a bit of a disadvantage.

What these games all have in common is a great sense of fun. There is considerable humour, not the unfunny schoolboy antics and innuendo of unfunny schoolboy programmers, but a few quips and jokes included in the game design that do not cease to be amusing after one or two plays.

With the exception of the metamorph marathon, and to some extent the 100m slither, all the games were straightforward after a bit of practice. I particularly enjoyed space hockey when played against the computer. The computer's skill level – which was not selectable – seemed ideal in that it was a notch higher than mine, enabling me to win the odd victory but to improve against it as well.

All five programs are selected from disc via a menu which outputs a brief scene-setting page. This is printed on-screen using a slow but novel method, which can be avoided, and the next event loaded in.

You can save your results and complete a full five-game championship. To make the best use of this option, as well as not to die of boredom while waiting for a new event to be loaded in, you really need the disc version.

It is such simple but useful considerations as the above, plus the ability to choose to play the games in whichever order you like, that marks this collection as a grade higher than many others.

The events are not only whacky but they are quite wonderful, well designed, full of detail, and eminently playable. I'm hooked and I'll wager that many others will be too.

Clive Gifford

Presentation 80%
Good introduction screens.

Graphics 90%
Not a major breakthrough, but good use of the Amstrad's graphics.

Sound 88%
Good effects, crisply programmed.

Playability 93%
Easy to understand, generally a pleasure to play.

Addictiveness 94%
One to play again (and again!)

Value 90%
Five excellent games at a reasonable price.

Overall 92%
A weird and wonderful collection.

STAR WARS

Domark
£9.95 (tape)
£14.95 (disc)
Joystick or keys

SEVERAL years ago Atari released an arcade game based on that classic science fiction adventure film Star Wars. Employing fast-moving vector graphics, it was an instant success. Now Domark has produced an Amstrad version, and it's a cracker.

Before the mission can start you must select the level of play – easy, medium, or hard. True to the coin-op original, Star Wars is played in three stages.

First comes my favourite – the approach to the Death Star – which involves a frenzied dogfight with imperial tie-fighters. Squadrons fly into view, launch fireballs, and zoom away at high speed.

Somewhere among the tie-fighters is a small fast incredibly manoeuvrable ship piloted by non other than Darth Vader. This little beauty is worth a full 2,000 points, but you'll need all the force you can muster if you're going to hit it.

Having received a sound thrashing, the fighters turn tail and head for the Death Star – the beginning of stage two.

Skimming low over the surface of the artificial planetoid you come under fire from its laser defence towers. The towers can't be destroyed, but they can be immobilised by shooting off their tops – tricky and hardly worth the 200 points – just steer around them and head for the trench.

The ease with which the trench can be flown varies tremendously. Initially you face only fireballs, but on level two the catwalks begin to appear. By level four there are more catwalks than space to fly in.

Finally, at the end of the trench, you reach your goal. One well placed shot up the exhaust port and the Death Star is no more – until the next level that is.

The best arcade games are those you find yourself still playing at night while desperately trying to fall asleep – Star Wars is one such game.

Nev Astly

Presentation 85%
Everything displayed on-screen.

Graphics 92%
Slick vector graphics.

Sound 78%
Excellent tune.

Playability 90%
You definitely need "the force" on the higher levels.

Addictiveness 93%
I love it, I love it, I love it!

Value 90%
Think of all the ten pences you'll save.

Overall 91%
A masterful copy.

SCRUPLES

Virgin
£9.95 (tape)
£14.95 (disc)
Joystick and keys

A QUESTION of Scruples is the popular adult game in which a group of friends fire awkward – and potentially embarrassing – questions at each other.

Between three and ten players can take part, and any or all may be computer controlled. After selecting a computer opponent you are presented with a selection of mug shots from which you choose the computerised player.

Their personality is suggested by their appearance – ones wearing sunglasses are probably dodgy whereas the vicar could be a good guy.

Human players are required to input their own personality profile. Using the joystick you set values of between plus and minus five for each of 12 personality traits on a bar graph.

These include principles, trust, personal and professional integrity, greed, and honesty. When you are satisfied with your opinion of yourself, the computer will adjust the graph to bring the profile within the bounds of realism!

Each player is dealt a number of question cards, plus one answer card. The answer card is one of three possible types – Yes, No, or Depends. You must deduce which of your opponents will give that particular answer in response to one of the questions you are holding.

Guess correctly and you can discard the question card plus your current answer card. You are then dealt a new answer card.

The aim is to be the first player to get rid of all your question cards. In addition to these straightforward question-and-answer stages, players are also allowed to challenge the answering player's response.

Another contestant may select either of the remaining two possible answers. There follows a ballot in which everyone casts a vote for the player they believe. The loser gets another question card.

Computer Scruples is entertaining and well written, but soon becomes repetitive. It is not really suitable for use with a large number of human players.

Carol Barrow

Presentation 85%
Easy-to-follow instructions.

Graphics 75%
Expressive character.

Sound 78%
Excellent title tune.

Playability 80%
The computer eliminates the human bias.

Addictiveness 60%
The novelty value may soon wear thin.

Value 62%
I would be tempted to go for the card version.

Overall 65%
Only if you've no friends to play the original with.

3D STARFIGHTER

Code Masters
£1.99 (tape)
Joystick or keys

IN a distant hostile galaxy human colonists flee from the evil forces of Zentar. Small fighters continually attack your fleet while Zentarian flagships move ever closer.

The fleet's last hope lies with the Complete Hostile Alien Obliteration system – CHAOS – a missile so destructive it will annihilate the pursuing aliens in one massive explosion.

You fly a Panther fighter equipped with light drive, a protective shield and emence (that's what it says!) fire power. The object – to shoot the baddies. Your first task is to select your destination – one of nine planets – on a battle chart. Select the planet with a cross-hair cursor and press Fire. Whichever planet you select, however, you're plunged into the same scenario.

The other planets may have a purpose but the review copy was a pre-release version and came with pre-release instructions – none! Once in the planetary system you must centre the cross-hair sights on approaching alien craft and blast them.

The alien ships look more like BEMs (bug-eyed monsters) and giant snowflakes than deadly space ships. They don't fire, they just crash into you if you don't shoot 'em first. If you miss there's always your shield.

The sights have built-in inertia which they are reluctant to overcome – the aliens can run rings around you. Keyboard control seems more responsive.

In the two-player option both players are defending the same ship. After zapping so many baddies and completing the first screen you speed to another scenario, pretty much the same. In all, 3D Starfighter is a souped-up amalgamation of many older games and I couldn't get very enthusiastic about it.

Ian Waugh

Presentation 78%
Good! Two-player option and definable keys.

Graphics 77%
Nice ship interior but I didn't like the aliens.

Sound 82%
Good sampled speech and jolly shoot-em-up tune.

Playability 66%
Didn't like the way the sights moved.

Addictiveness 56%
It's been done before.

Value 71%
You get your £1.99's worth.

Overall 68%
I've seen and played better.

GRYZOR

Ocean
£9.95 (tape)
£14.95 (disc)
Joystick or keys

YET more Konami coin-op action is set to sizzle across your Amstrad's screen. Unlike many conversions, this one really does capture the feel of the original and give us a game worth playing.

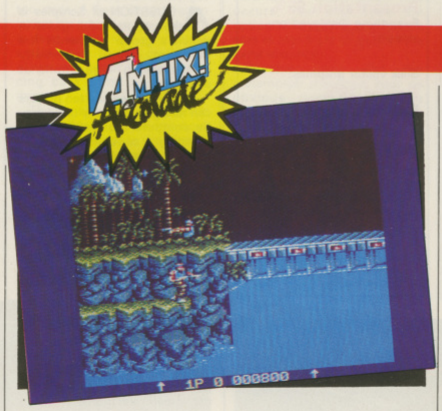
Earth's defences have been breached by the alien Durrs from the distant planet Suna. They have set up a stronghold housing an atmosphere processing plant.

With this deadly device they have total control over Earth's weather, and plan to cause another ice age.

Lance Gryzor, armed with only a machine gun, is charged with the task of thwarting Durr plans to throw Earth into turmoil and annex our resources.

He must infiltrate the Durr stronghold, shoot his way past the deadly androids, and destroy the atmosphere processor.

There are three sections, each one being loaded from tape or disc – unless you are running the disc version on a 128k machine.



As you progress through deadly tunnels and awkward mazes, you will come across a number of weapon stores where you can pick up scatter guns, lasers, and barriers.

A status area shows your remaining lives, current score, and so on. As you move into one of the tunnel scenes, a small clock shows the time left to complete the sequence. Failure to escape within the time limit will lose you another life.

In essence, Gryzor is just another combat game. Where it scores over the opposition is in the attention given to fine detail. The graphics are beautifully drawn and the movement is fast and smooth. Control is accurate and responsive, especially using a joystick.

The sound effects are pretty good, and you do have the option to switch on some music if you have a 128 machine.

Steve Lucas

Presentation 75%
No definable keys, but otherwise good.

Graphics 95%
Detailed landscapes and fast responsive action.

Sound 85%
Choose music or sound effects on 128k machines.

Playability 92%
Smooth control with plenty of action.

Addictiveness 95%
You've just got to keep playing.

Value 90%
A reasonable price for a first-class game.

Overall 92%
One of the most exciting games I've seen for ages. Happy, John?

MASK II

Gremlin
£9.95 (tape)
£14.95 (disc)
Joystick or keys

ONCE again Mask must muster its forces to save the world from the villainous Venom and Miles Mayhem. There are three missions to complete. In the first you must save the president of the Peaceful Nations Alliance.

In the second you must find a missile and use it to destroy a Venom base, and in the third you must locate and return a stolen ruby which Venom are using for nefarious purposes, awesome weapon creation in particular.

With the aid of the Mask computer at Boulder Hill you must choose the three most suitable team members and vehicles for each mission. As the action takes place in different habitats – desert, rocky, and jungle – and some vehicles are more suited to the terrain than others, careful selection is important.

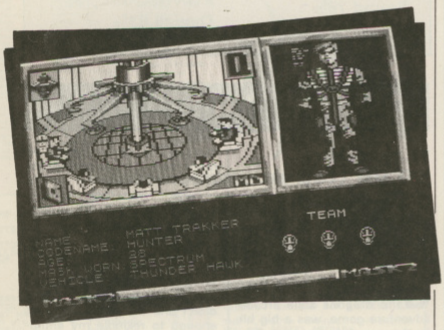
Once on the move you'll find yourself surrounded by Venom gun emplacements, and swamped by Venom agents in various craft. Fingers to the Fire buttons, chaps!

Fuel and armour can be found lying around the scenarios which you must pass over to collect. Here enters the puzzle element, because they're often below ledges and the vehicles tend to fly over them resulting in the Tom and Jerry effect – known as momentum in scientific circles – and it takes a while to stop.

There are other sneaky problems, too, as certain vehicles may be able to get into a tight corner, but can't get out. And all the time Venom are on your tail. Finding solutions is a major part, but if you get stuck you can send off for a hint sheet.

If you tried the original Mask and didn't like it, don't let that put you off. Mask II is basically a good old fashioned shoot-'em-up, albeit one requiring planning and strategy. If you like that sort of thing, you'll like this, and it's certainly a must for Mask fans.

Ian Waugh



Presentation 66%
Good instructions with short comic strip, but no definable keys.

Graphics 87%
Lovely chunky cartoon graphics, and smooth scrolling.

Sound 70%
Only bangs and zaps during the game.

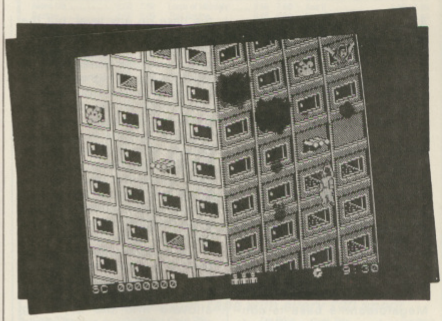
Playability 70%
Too much Tom and Jerry effect for me, otherwise it plays well.

Addictiveness 79%
Very, but once you've completed a mission you may not feel like repeating it too often.

Value 76%
It's three games in one.

Overall 81%
Go on, save the world again.

FIRETRAP



Electric Dreams
£9.99 (tape)
£14.99 (disc)
Joystick or keys

IT is 9.30am and news has just come in of a major fire on the fourth floor of the biggest skyscraper in the world. Hurriedly, you grab your coat and dash to the scene, but by the time you get there the fire has spread. The whole building is alight, and falling debris is making life difficult for the fire service.

Hundreds of people, many with pets, are believed to be stranded inside the building. Suddenly a ball of flame from one of the upper storeys leaps across to ignite the adjacent building, and within seconds the whole area is alight.

With the fire service stretched to the limits, there is only one person brave (or daft) enough to venture into the towering inferno to rescue the victims... you.

You quickly clamber into the experimental fire fighting suit, strap the hi-tech water cannon on to your back, and climb up a fire escape. Avoiding falling debris, you must clamber across the surface of the building to rescue those people who have managed to get to a window.

Movement is smooth and easily controlled, but not very fast, which makes it difficult to keep out of the way of small outbreaks of fire.

As soon as you reach someone and climb on to the window ledge they can parachute to safety. Every time you come into contact with fire or falling objects, you fall off the building and lose a life. You can get some protection by sheltering under one of the flagpoles when you see something falling towards you, but this only works once.

A quick blast with the water cannon will usually extinguish a small fire, and allow you to progress. If you can reach the top, rescue the stranded woman by using your jet pac to fly her down to the street below before time runs out, you can move on into the next, and even more dangerous building.

The only fault I can find with the game is the tune which, although good, begins to irritate after a while. Firetrap has good graphics, smooth action, and a good choice of control. It is one of those addictive games which you just can't stop playing.

Steve Lucas

Presentation 80%
Fair range of options.

Graphics 85%
Plenty of detail but not much colour.

Sound 50%
Let's turn the sound down!

Playability 85%
Smooth and responsive.

Addictiveness 92%
Please, just one more go?

Value 82%
Will give hours of fun.

Overall 85%
A good game.

CAPTAIN AMERICA DEFIES THE DOOM TUBE

U.S. Gold
£9.99 (tape)
£14.99 (disc)
Joystick and keys

THE United States of America has been given an ultimatum – capitulate to the demands of Dr Megalomann, or die when he launches his virus-laden missile. As Captain America you have one hour to infiltrate Dr. Megalomann's stronghold and disarm the missile.

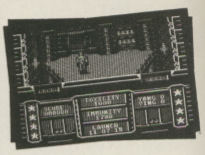
Known as the Doom Tube, Dr Megalomann's base is constructed on a number of levels interconnected by a network of lifts. You are allowed to enter the base on any level, but the lower you go, the more contaminated the atmosphere becomes. Your immunity level must always be higher than the toxicity of your surroundings.

Not only do the biological hazards increase as you descend, but the number and ferocity of the defence droids increases too. Having arrived at the desired level you press one of the four buttons before you, the computer console displays a few brief instructions, and you are ready to step outside.

The area immediately outside the lift is always buzzed by a pair of droids which must be destroyed before you are allowed into the adjoining room. Using your trusty shield as a lethal frisbee you decapitate swarms of droids while striving to complete the task set for that sector.

The battles are all fought by colourful fast-moving well-animated sprites. The large number of starting points on offer stops the game from becoming boring, and Captain America is a game that you'll still be playing well into 1988.

Nev Astly



Presentation 82%
On-screen messages are given before each new section.

Graphics 80%
A superb Captain America.

Sound 78%
Toe-tapping title tune plus standard zap effects.

Playability 82%
A large number of starting positions is available.

Addictiveness 84%
Fast action all the way!

Value 81%
A very reasonable price.

Overall 83%
God bless America!

RIDING THE RAPIDS

Players
£1.99 (tape)
Joystick or keys

RIDING the Rapids is another in a long line of simulations. You must paddle your canoe down the river, through gates, past poles, avoiding rocks and rapids, islands, and the shore.

The aim is to beat the course

record. As in the real sport, you must keep the red poles to your right. If you hit any, a five second penalty is incurred. If a gate is missed that's 10 seconds.

You have to choose your route very carefully as a wrong turn could make you miss a gate altogether. You can also capsize, run out of energy, or get stuck between rocks. If you suffer that particular indignity, the only way out is to abort.

There are four courses to choose from, and if that's not enough, there is a course designer. With this you can create a course that's easy or very, very hard. Try one that's dead straight with no hazards and is only fast water. Then try it against your friends – its a real joystick junker!

My only criticism is that your right hand is the canoeist's right, but as he travels from the top downwards, when looking at the screen his right is on your left. Also, it's not always easy to judge which is the front of the canoe.

I found this game very enjoyable and a pleasant change. It is not easy, but with practice the records can be beaten. It is a game which must involve more than one player to get the most out of it.

Paul Sherreard

Presentation 85%
Nicely done.

Graphics 90%
Nicely drawn.

Sound 85%
As you'd expect, wet.

Playability 95%
Good with a crowd.

Addictiveness 85%
You'll be back!

Value 95%
Definitely.

Overall 90%
Good fun.

GAUNTLET II

U.S. Gold
£9.99 (tape)
£14.99 (disc)
Joystick and keys

GAUNTLET, the dungeons and dragons style arcade adventure game, was a big hit in the arcades. Gauntlet 2 is now on the streets, packed with even more features, and it's sure to be a smash hit.

The object is the same as before: Scour each maze-like level of the dungeon until you find the exit. Secondary objectives consist of monster hacking and the looting of long-lost treasure.

Waiting patiently beside the dungeon entrance are four eager adventurers. These are huge characters drawn in stunning colours – an impressive sight. Whether you are playing alone or with a friend, you must select two of the four heros before the game starts.

I could find no reference in the instructions to the number of lives allocated to a player. When playing with two adventurers each character appeared to be allowed an infinite number of reincarnations.

This neat little trick does not work if you only activate one hero. As you might expect, progression down through the dungeon is accompanied by more and increasingly nasty monsters. Be careful not to unleash Death: This guy is so mean he should carry a government health warning.

If you haven't played Gauntlet 1, or are still playing it, you'll find Gauntlet 2 a winning formula. However I'd exhausted my interest in Gauntlet 1 and didn't find the sequel different enough to rekindle my enthusiasm.

Steve Brook

Presentation 85%
Classy character selection routine.

Graphics 76%
Good scrolling, but small Mode 0 characters are a bit amorphous.

Sound 74%
Standard tune and effects.

Playability 75%
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Addictiveness 85%
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Value 78%
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Overall 77%
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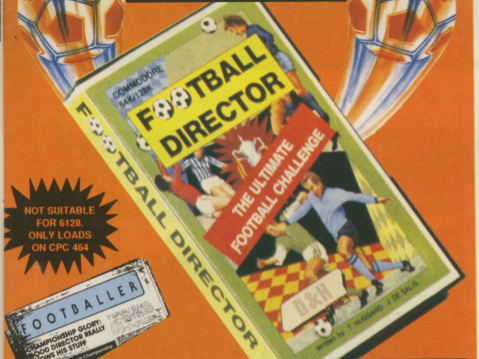

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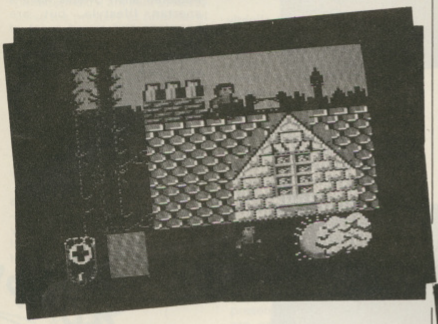
WEREWOLVES OF LONDON



Viz Design/ Ariolasoft
£9.99 (tape)
£14.99 (disc).
Joystick or keys

THIS is an everyday tale of London folk, with a good dollop of tongue in cheek (or should it be teeth in jugular?).

A curse has been cast upon you. Now, as soon as the sun goes down, you develop an unquenchable thirst – not for lemonade, of course, but for the red elixir of life. At the same time your body sprouts a plantation of hair.

The aim of the game is to rid yourself of the curse by fanging unsuspecting victims. There are plenty about, but you can only attack them at night. During the day you have to pass away the time like any other citizen. However you don't get it all your own way, and while tracking down potential victims the good old British bobby is on your trail.

Such defenders of the establishment have an unfortunate habit of turning up just when you don't want to see them. If they catch up with you, it's off to jail if you're lucky, or a silver bullet in the heart if you're not.

The action takes place in London's network of streets, rooftops, parks, and tube stations. There's plenty to explore, particularly after you've found the torch and lifted the lid on the sewers.

The background graphics, particularly the town scenes, are rich in colour and nicely detailed. The figures, however, are crudely drawn. Another problem is that half the game is spent as a normal citizen, which gets monotonous, even for a peace-loving creature like me.

Any objects you collect (tube ticket, torch, file and so on) are displayed at the bottom of the screen, as is your status – man or wolf – and the amount of blood you have left.

Werewolves of London is quite good fun and certainly playable, but far too much time is spent waiting for nightfall. In this respect, the game is frustrating.

Tony Flanagan

Presentation 56%
No options, vague instructions.

Graphics 76%
Colourful urban backgrounds, but poor animation.

Sound 75%
Freaky tune to accompany a freak.

Playability 74%
Easy to get into and initially enjoyable.

Addictiveness 53%
Not one to keep you glued to the screen.

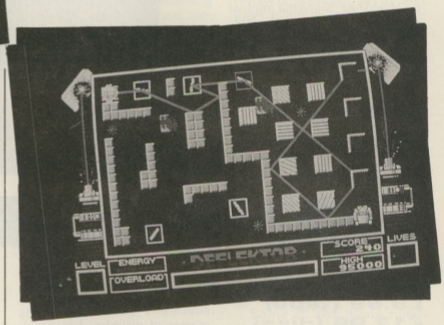
Value 57%
Beware of bloodsuckers!

Overall 61%
Something lacking here.

DEFLEKTOR

Gremlin Graphics
£9.99 (tape)
£14.99 (disc)
Joystick or keys

THERE are lots of things I like about this game – original, easy to learn, and indecently addictive. On each screen is a laser gun and a receiver, both of which are fixed in position. The idea is twofold – use the laser to zap all the cells and when you've done that, form a circuit with the receiver.



Though simple in concept, each of the 60 screens is an exercise in logic. The beam strikes walls and other furniture and can be redirected by moving the cursor over mirrors which you can then swivel. The problem is finding out how to direct the beam to all the cells and the receiver before your energy runs out.

Other things which alter the beam's path are polarisers, refractors which send the ray out in random bursts, mirrors which rotate automatically giving a lighthouse effect, reflecting walls, and fibre-optic channels which capture the beam and release it somewhere else.

The laser can overload if you reflect it back upon itself, shine it on a mine, or stretch it too far. And then there's the gremlins. These little rats – well blobs – wander round and twiddle your mirrors. This can upset all your delicate positioning or even worse, put you in a situation where you rapidly overheat and lose a life.

You rid yourself of the little beggars by getting them under the cursor and pressing Fire – but you've got to catch 'em first and anyway, turn your back and they sneak in again.

When you make it to level 60 you'll find out what the real object of the game was.

Gremlin and the authors – Vortex – are to be congratulated. It's a nice change to see something that's both original and good fun. My only real criticism is that when you get to the higher levels you still have to start each game from screen one. Apart from that, Deflektor gets the Wood seal of approval.

Tiffany Wood

Presentation 70%
Definable keys would have been nice, otherwise well appointed.

Graphics 85%
Nice 'n' slick without being exceptional.

Sound 60%
Unextravagant, but adequate.

Playability 85%
Yeah!

Addictiveness 90%
Put it down and you'll get withdrawal symptoms.

Value 70%
I'd have been happier at a quid or two less.

Overall 88%
Different, fun – my compliments to the chef.

GET DEXTER 2

PREVIEW

Infogrammes
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£14.95 (disc)
Joystick or keys

GET Dexter was one of the first French CPC games to hit Britain, and what a fuss it caused. Known as Crafton and Xunk in France, it featured superb 3D graphics which were faster and more colourful than the best home-grown efforts such as Knightlore and Alien 8. And what's more, it had devilish gameplay to match.

So here we are two years later, and the sequel is about to be unleashed. Since the original game appeared lots of water has passed under the bridge. Every software house worth its salt – and many who aren't – have had a crack at the 3D iso format. To stand out from the crowd a 3Der has to be truly exceptional, and even then there are always a few who'll turn up their proverbials.

The preview copy was one of the few in the country. It came in just before deadline, so I haven't spent long enough with it to give you a full report. The packaging, novella, and in-game text are in French but the British version should be the same apart from language translation. The French title is Crafton and Xunk II – The Crystal Guardian.

You'll have to forgive me if the plot turns out to be slightly different cos I translated the blurb with a dictionary and half-remembered schoolgirl French. The gist of it is that after freeing Xul-3 in the first of the series, Crafton and Xunk turn their attention to the planet Kef. In Britain Crafton and Xunk were Dexter and Scooter, but I'll stick with the French names.

On Kef there are two races: The Stiffiens and the Swapis. The Stiffiens hold power and are a methodical disciplined humanoid race. The big-hootered alien Swapis have a spartan lifestyle, but are harmless and spend most of their time bartering.

After a series of natural disasters a new and exclusively Stiffien religious sect has appeared. Antinès is the home of the Gods, they proclaim. Antinès is a mysterious building on a remote mountain side. Nobody knows who built it or how old it is, nor has anybody successfully penetrated it.

Antinès has become the focus of the new religion whose doctrine is characterised by xenophobia and the rejection of technology. The first victims of

STIFFLIP AND CO.

Palace
£9.99 (tape)
£12.99 (disc)
Joystick or keys

THIS game takes you back to those glorious days of the Empire when Britain made a great deal of money ripping off underdeveloped nations in the name of civilisation. The subversive Count Chameleon, master of disguise, has developed a Rubbertronic Ray no less. With this he aims to destroy the Empire and all it stands for – three cheers for Count Chameleon, what!

You control the main character – Viscount Stifflip – a bumbling aristocrat with more time and money than sense. Sipping back G and Ts at the club, shooting pheasant, and watching foxes being ripped to bits, his life is getting a little monotonous.

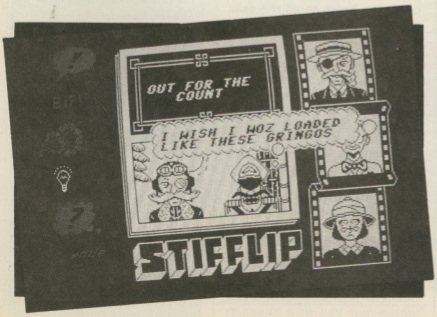
Suddenly he gets a telegram informing him that the Empire is under threat. Enlisting the help of his pals – Colonel R. G. Bargie, Professor Braindeath, and Miss Primbottom – he sets out to track down Count Chameleon and nip his plan in the bud.

At any point in the game you can take the part of any of the four characters, that's if you haven't led them to a premature demise.

The central panel shows various scenarios and characters in comic-strip style, complete with speech bubbles. Down the left hand side of the screen are six icons and it is through these that progress is made. You can interact with other characters, and move through the various scenes as you would in a graphic adventure.

The graphics are competent but lack colour. There are some impressive sound effects, particularly when changing roles. The main problem is that the basic scenario lacks any real credibility. Stifflip and Co. is a game which certainly promises much and will undoubtedly please fans of this genre. If you prefer animated games, however, steer clear.

Tony Flanagan



Presentation 81%
Well organised screen. Playguide could have been more informative.

Graphics 69%
Comic strip – more colour would have helped.

Sound 82%
Some excellent and unusual sound effects.

Playability 69%
One to persevere with.

Addictiveness 65%
If you make progress initially, yes.

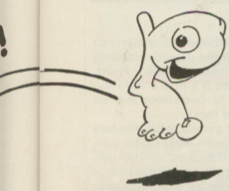
Value 80%
Plenty of game content.

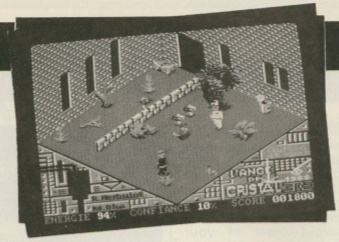
Overall 81%
A good game but the whole scenario lacks credibility.

its fanatical followers are the Swapis.

Crafton, the ultra-perfect android, and Xunk, his pet podocephalus, are sent to Kef to solve the mystery of Antinès. In order to gain entry they must win the confidence of the Swapis who know the location of a secret passage into the ancient edifice.

At the start of the game Crafton and Xunk are in a small town where the buildings are separated by gardens inhabited by weird fauna and flora. As Crafton reaches the edge of the playing area Xunk pogos to his side and the next room is drawn, but they don't come





over as rooms until you get inside a building.

The artist – Michel Rho – and the programmer – Rémi Herbulot – have managed to get away from the feel of distinct rooms, and the impression of a continuous area is enhanced by other characters being able to wander on and off stage.

To win the Swapi vote Crafton must perform three favours. These are written on plaques in Swapi buildings and clues to the problems these present – and other messages – are on plaques to be found elsewhere. Certain acts will incur Swapi displeasure so he's got to be careful.

Crafton needs to watch his energy supply which can be replenished from electrical sockets. Contact with most of the characters – and there are some pretty fearsome specimens lurking about – will drain energy. You can put paid to most pursuers with mouse-traps and dynamite.

Contact with a Swapi gives Crafton the opportunity to trade. If he is carrying an object, the Swapi will offer something in return which Crafton can accept or refuse. The range of objects is huge and their use complex. Crafton can call Xunk and order him to find an object. If it's within range Xunk will hop off to collect it.

The graphics must rank amongst the best to grace a CPC's screen. Being French they have a refreshingly different feel to anything produced over here, and Michel Rho has done a beautiful job.

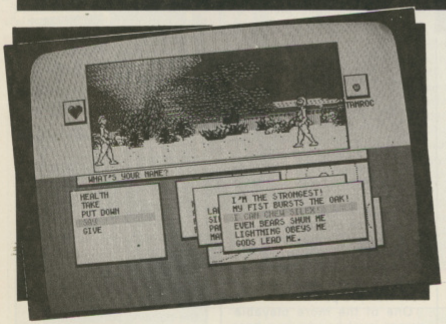
When you've succeeded in part one, the next stage takes place in Antinès. I've only glimpsed this in demo mode and the graphics look every bit as good.

There's a nice sense of humour as well. At one point I jumped Crafton on to an office chair – you know, the sort that winds round. As soon as I did, you guessed it, the chair spun round and dumped him on his bionic bum. There are plenty more surprises lying in wait, but I won't spoil the fun by spilling the French beans.

A game of this size and complexity needs weeks to review properly and as I haven't been able to do that it wouldn't be fair to give Get Dexter 2 a rating. I will say that everything I've seen so far looks like one of 1988's memorable games, and what's more, Get Dexter 1 is thrown in for free.

On that basis it's got to be fantasmagorical value for money so I have no hesitation in recommending it to arcade-adventurers. **Tiffany Wood**

SAPIENS



Loriciels
£9.99 (tape)
£14.99 (disc)
Joystick or keys

SAPIENS is a semi real-time graphic window and menu-driven adventure with arcade overtones. I haven't seen anything quite like this on the CPC before, although the copyright notice says it was written in 1986.

The top half of the screen shows a display. You can choose a landscape view or a side view, in which case you can see your character.

Underneath and to the left is a window containing a list of options. It includes the usual adventure type commands such as Take, Put Down, Say and Give. Sub-options are revealed in other windows.

The Make command lets you try for an assegai or a hatchet. These must be chipped out of rock by moving a flint triangle around a spearhead shape and pressing the fire button to chip. Not easy.

The review copy, pre-release, lacked instructions so I can't say exactly what your objective is. Basically you wander around meeting people and animals, picking up things to eat and generally trying to survive.

Your biggest health problem, however, will be finding water. Hares appear every so often but I haven't worked out how to catch one yet. There are no commands to Use or Throw anything.

You'll meet lots of people, most of whom will be friendly if you say the right things.

Some of the game needs tidying up. For example, the Health window may say you are a little hungry, extremely thirsty, tired out, seriously wounded – and *dead*!

I suspect hardened adventurers may dismiss Sapiens as too restrictive. Lazy would-be adventurers – like me – however may find it more accessible than ordinary text and type-in adventures.

Ian Waugh

Presentation 88%
A great concept nicely implemented.

Graphics 95%
Well drawn with good animation.

Sound 90%
Gilles Soulet has created an excellent atmospheric soundtrack.

Playability 80%
You never have to struggle against the program's built-in vocabulary although it is restrictive at times.

Addictiveness 80%
Exploring the landscape and talking to the characters is fascinating.

Value 80%
It's worth looking at.

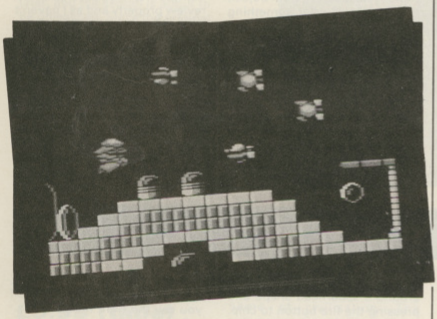
Overall 80%
Seasoned adventurers may be unhappy with the sometimes irrational responses and restricted choices.

AGENT XII

Mastertronic £2.99 (tape) Joystick or keys

IF you thought that you'd managed to dispose of the Mad Professor, you're very much mistaken. Even though you may have foiled his attempts to kidnap the President, you failed to defeat him totally and he is back with a vengance.

From his hideout on the moon he is planning to unleash his terrible Zit-Ray to inflict terrible terminal acne on the whole human race.



Only you, Agent XII, can foil him in his potty plan to throw the world economy into total chaos with expenditure on spot-removing cream.

Away to the moon you fly to fight past the wacky waglots and find your way into the secret sub-surface stronghold of the enemy.

With a plot like that, you could be forgiven for thinking that this is going to be something completely different. In fact, it turns out to be just another shoot-'em-up.

Graphically, it can't be faulted. As you battle through wave after wave of crazy adversaries, you slowly make your way across a highly detailed landscape of pipes, globes and strange buildings.

Throughout your flight, the musical accompaniment is excellent. Unfortunately, although you can control your craft using defined keys or joystick, there is no way to turn around and shoot the enemy from behind. Each contact with one of the Professor's minions saps your strength, so it is usually easier to dodge out of the way than stand and fight.

If you find the right place at the bottom of the screen, you can avoid most of your attackers with just an occasional movement of the joystick.

This game lacks a number of the standard features we've come to expect such as a high score table and multiple lives. This detracts from its long term playability.

Technically, Agent XII is more than competent, but unfortunately it is about as addictive as watching grass grow.

If you haven't already got a shoot-'em-up and want something that's cheap and colourful, this game can be recommended. On the other hand if you've already got a few games of this type, I'd give this one a miss.

Steve Lucas

Presentation 60%
Skimpy instructions and no high score table.

Graphics 80%
Lots to see.

Sound 85%
Good music throughout.

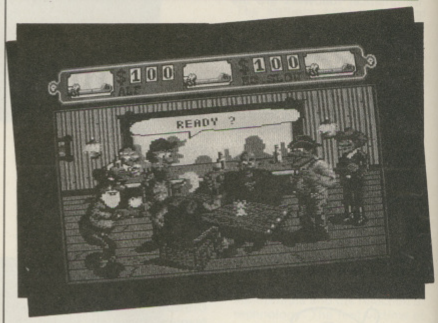
Playability 60%
Fair choice of keys.

Addictiveness 40%
Have you ever felt that you've been here before?

Value 65%
Not bad for a budget game.

Overall 55%
Dull.

WESTERN GAMES



Magic Bytes/ Ariolasoft £8.99 (tape) £14.99 (disc) Joystick or keys

JOHN Wayne would have loved this one – six games for the baccy-chewin', beer swillin', gunslingin' macho ... moron. Then again, perhaps he wouldn't.

Instead of the typical wild west scenario, Western Games shows how the true cowpoke really spent his time – playing silly games in the local saloon!

The first is arm wrestling, in which you try to cook your opponent's hand by forcing it down upon a candle.

The screen shows a typical barroom scene with you and your opponent at the table and an audience of friendly drunks looking on. The two arms are displayed in detail in the left and right corners of the screen and rise or fall depending on how well you perform.

One of the more playable games involves you in a beer shooting competition. Here you and Mr. Slow fire consecutively at five different types of glass, held by two rather foolhardy volunteers.

In a similar way to arm wrestling, windows show the movements of hand to gun. Once the gun has been drawn, it's then a matter of targeting as quickly as possible and firing – hoping that you are both quicker and more accurate than Mr. Slow.

Quid-spitting is the most bizarre in the collection. Here you chew tobacco and then spit it out with the object of landing in the other fella's pint. Sometimes it's just a little too tempting to overshoot and hit him in the face!

In other games, what you lack in skill you can make up for with underhand tactics. In the milking competition, your task is to fill a pail faster than the other guy. As long as the referee isn't watching you can also give your opponent a swift elbow in the ribs which, if it doesn't wind him, will certainly break his rhythm.

On the whole Western Games has some nice comic touches, interesting graphics and good novelty value. It's a pity that most of the games lack playability.

Tony Flanagan

Presentation 85%
Two player option, copious and humorous instructions.

Graphics 77%
Large, colourful, comic graphics.

Sound 66%
Gunshots are very atmospheric; great tune in the dancing competition.

Playability 40%
Some of these games are initially too demanding to sustain interest.

Addictiveness 30%
Not one you'll want to return to too often.

Value 59%
If you persevere, it might be worth your while.

Overall 51%
Different but lacks playability.

2 CLASSIC COMPILATIONS

Now you can obtain some of the all-time classics on the CPC for as little as £1.20 each!

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What you get in Five Star Games II

- Dandy
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- Cauldron II
- Alien Highway
- Doomsday Blues

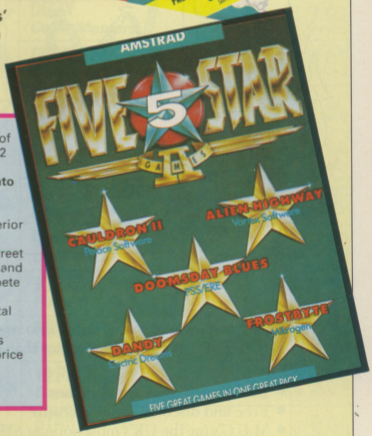
There are no 'stocking fillers' here – every game has been highly commended, and many have been awarded coveted Amtix Accolades.

6-Pack Volume 2 contains some of the very best games of the last 12 months.

There's war-time action with **Into the Eagle's Nest,** the futuristic racquet game **Batty,** the realistic flight simulator **Ace** and the superior shoot-'em-up **Lightforce.**

In **Shockway Rider** you fight street gangs on the moving walkways, and in **International Karate** you compete against another player or the computer in this top-notch oriental combat game.

This magnificent compilation is only available at a special offer price with a new subscription or a subscription renewal.



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TO ORDER, PLEASE USE THE FORM ON PAGE 53

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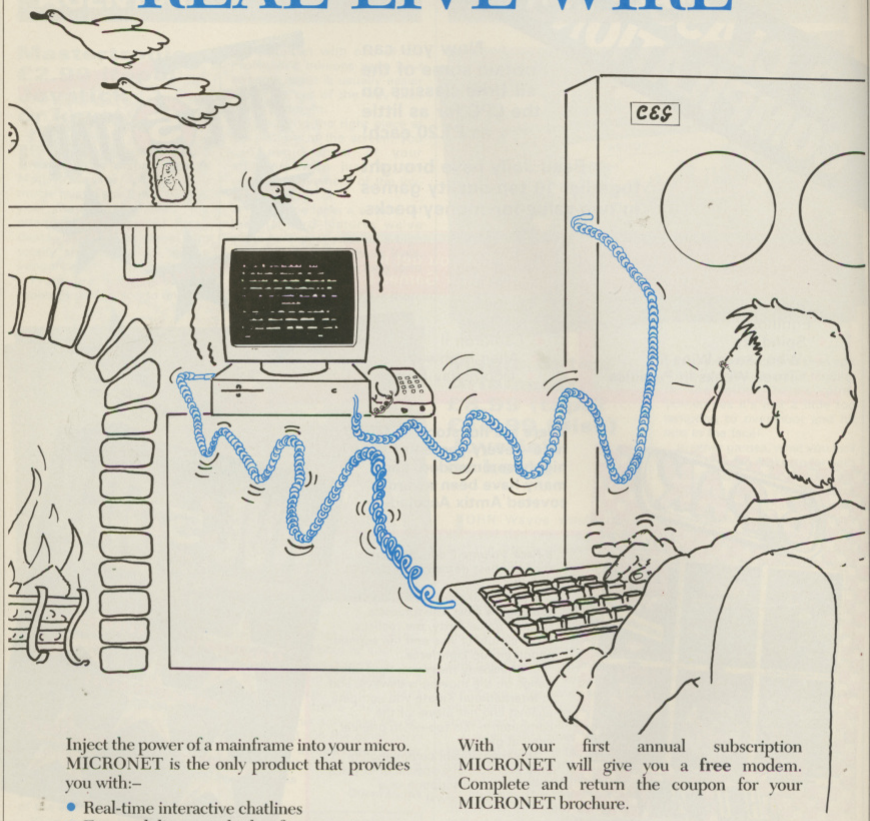

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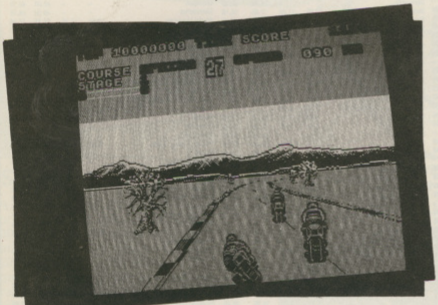
SUPER HANG-ON

Electric Dreams
£9.99 (tape)
£14.99 (disc)
Joystick or keys

FANCY becoming Britain's next Barry Sheene? Well, why not keep away from the noise and grime of the race circuit and practice your motorcycling skills in the comfort of your own home?

You are given the choice of four continents on which to race, each being equivalent to a different skill level. Africa is the easiest – the wide open plains provide a relatively easy route for motorcyclists, and this stage can be completed at full speed.



As the difficulty increases, so the roads narrow and pack in far more twists and turns per mile. In addition, the roadside becomes increasingly littered with obstacles, thus reducing your likelihood of survival should you stray into the verges.

The difficulty levels have been well thought out. Each is reasonably harder than the previous one, but none is totally unplayable. Scuffing the road edge loses speed rather than automatically taking you to your death. Even nudging other riders does not prevent you from continuing to race, although your speed is cut dramatically after such a bump.

It is fair to say that the game's emphasis is more on the speed of course completion than fine control of a racing motorcycle. It is possible to negotiate all the available courses at a low enough speed, but your time will probably run out before you cross the finish line.

The controls are particularly responsive and there is even a sensitivity adjustment. I found the medium setting ideal for learning to cope with the controls, but the high setting better for tackling the more difficult courses.

The graphics are good, but quite simple, and the sound is very basic. There is no race order, as you do not get a place position when you cross the finishing line.

However, the game is very playable and with the provision of selectable skill levels and bonus laps for fast times it becomes quite addictive.

Clive Gifford

Presentation 80%
Good options, straightforward layout.

Graphics 78%
Not really arcade standard, but effective nonetheless.

Sound 57%
Feel they could have done more than the tinny whine.

Playability 90%
Great adjustable sensitivity, courses designed with skill.

Addictiveness 85%
Fastest times and bonus levels help make you play again.

Value 76%
Not bad at all.

Overall 75%
Good motorcycle racer with the game more important than realism.

THE GALLUP CHART TOP 20 CPC SOFTWARE

THIS MONTH	LAST MONTH	TITLE (Software House)	PRICE
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2	•	MAGNIFICIENT SEVEN *Ocean*	9.95
3	4	SOLID GOLD *US Gold*	9.99
4	1	PRO SKI SIMULATOR *Code Masters*	1.99
5	3	GAME SET MATCH *Ocean*	12.95
6	2	GRAND PRIX SIMULATOR *Code Masters*	1.99
7	7	LIVE AMMO *Ocean*	9.95
8	•	MATCH DAY 2 *Ocean*	8.95
9	5	DIZZY *Code Masters*	2.99
10	•	COMBAT SCHOOL *Ocean*	8.95
11	9	BMX SIMULATOR *Code Masters*	1.99
12	•	ELITE COLLECTION *Elite*	14.95
13	14	SOCCER BOSS *Alternative*	1.99
14	15	INDIANA JONES *US Gold*	9.99
15	6	JOE BLADE *Players*	1.99
16	10	RENEGADE *Imagine*	8.95
17	18	10 PACK *Gremlin Graphics*	9.99
18	•	STAR WARS *Domark*	9.95
19	•	FIVE STAR GAMES 3 *Beau Jolly*	9.95
20	13	CRICKET INTERNATIONAL *Alternative*	1.99

There are seven new entries this month – as the full-priced games have made a comeback, with Outrun and the Magnificient Seven compilation entering at number one and two. There are a further five new games to watch out for, too.

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Super Sprint	9.99	8.99	14.99	13.49
Suspect	–	–	24.99	22.49
Suspended	–	–	24.99	22.49
Sword and Sorcery	9.95	8.96	14.95	13.46
Tai Pan	8.95	8.06	14.95	13.46
Theatre Europe	–	–	14.95	13.46
They Sold a Million	9.95	8.96	14.95	13.46
They Sold a Million 2	9.95	8.96	14.95	13.46
They Sold a Million 3	9.95	8.96	14.95	13.46
They Stole a Million	–	–	14.99	13.49
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Tomahawk	9.95	8.06	14.95	13.46
Top Gun	8.95	8.06	14.95	13.46
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Trivial Baby Boomer	14.95	13.46	19.95	17.96
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Trivial Young Edit	14.95	13.46	19.95	17.96
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Ultima Ratio/Quester	–	–	6.99	6.29
Vulcan	8.95	8.06	–	–
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Combined Business Package	–	–	–	99.00
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Condata Firmware Spec CPC	–	–	19.95	17.96
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Pascal 80	–	–	44.95	40.46
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Supercalc II	–	–	49.95	44.96
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Tas Print	–	–	12.95	11.66
Tas Print 464	9.90	8.91	–	–
Tas Sign	–	–	29.95	26.96
Tas Spell	–	–	16.50	14.85
Tascopy	–	–	12.95	11.66
Tasword	–	–	24.95	22.46
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Chemistry	9.95	8.96	14.95	13.46
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Maths Mania	9.95	8.96	14.95	13.46
Maxi Maths	9.95	8.96	14.95	13.46
Physics	9.95	8.96	14.95	13.46
Playschool	9.95	8.96	14.95	13.46
Weather/Climate	9.95	8.96	14.95	13.46
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WIN A TELLY!

. . . in our sensational super small screen Straight Six sizzler

To celebrate the launch of Loriciels UK, we present this easy-to-enter competition. By correctly answering six simple questions and writing a humorous tie-break sentence could win you one of the fabulous prizes shown here!

1st prize

Casio TV1500 hand-held 2.5 inch colour TV – *VALUE £250*

2nd prize

Casio TV400 pocket 2 inch colour TV – *VALUE £150*

Straight Six

A compilation of six games previously only released in France: 3D Fight, a space shoot-'em-up; Billy, an arcade adventure; Soccer, a colourful simulation; MGT, an excellent 3D maze game featuring a tank of the future; Flash, a zap-'em where you can change your mode of transport; and ZOX 2099, a futuristic adventure.

Prizes for runners up

20 copies of Loriciels latest release: Straight Six *(indicate tape or disc below)*

3rd prize

Casio TV200 pocket 2 inch black and white television – *VALUE £50*

How to Enter

Please answer the following questions relating to the number six:

1 What is the number of the beast?
2 What is the significance of 2.44948974?
3 What is the common name for an old sixpence?
4 What number is opposite the 6 on a die?
5 Name six different Amstrad computers.
6 How many brain cells has the editor got? (Hint: More than zero – we think).

Now write a sentence or phrase containing the word six using no more than sixteen words. The more humorous the entry, the greater chance you have of winning.

ENTRY FORM

Closing date March 31. All entries must be on this form – or a photocopy. Only one entry per person.

Please fill in your answers:

1 _____ 4 _____

2 _____ 5 _____

3 _____ 6 _____

My winning sentence: _____

_____

If I win I would like Straight Six on ☐ tape ☐ disc (please tick)

Name _____

Address _____

_____

Please address your entries to:

Pocket TV Competition
Computing with the Amstrad CPC
Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP.

Pixelator's blow-up window in action

Paint a pretty pixel

Edit your pictures in minute detail with ROBIN NIXON's Pixelator

PIXELATOR is a machine code pixel editor offering functions you'd normally find only on the most powerful graphics packages. Most of its facilities can easily be accessed using the cursor keys in conjunction with Shift, Control or Copy.

The idea is to make editing those fiddly bits of pictures much easier by magnifying them. Although Pixelator is probably most useful when used in conjunction with your normal art package, you can also use it to design screens from scratch.

I built one limitation into the system – the program only runs in Mode 0. This is because of the maths required to get the direct pixel scrolling and to make manipulation as fast as possible.

A more general routine would be a lot slower (and longer) and anyway, I think you get the best effects from having all 16 colours available in Mode 0.

When you run Program I it saves a binary file called PIXEL.OBJ to tape or disc. This file can then be loaded and run at a later date by a simple Basic program such as this:

```
100 MODE 0
110 MEMORY &3FFF
120 LOAD "PICTURE.BIN",&4000
130 LOAD "PIXEL.BIN",&8000
140 CALL &8000
```

You will notice that HIMEM has been set to &3FFF by the MEMORY command in line 110. All programs that use Pixelator must do this as a copy of the screen is stored at &4000 so the memory above this address must be protected.

When the code is called – as in line 140 above – you are presented with a menu offering a number of selections – see Table I.

Tab	Edit picture
I	Change inks
L	Load picture
S	Save picture
Esc	Return to Basic

Table I: Main menu keys

The colours assigned to the inks are as you left them when you entered Pixelator. So if you have set ink 3 to yellow in your Basic program, that remains.

However, if you are not happy with the colours which have been chosen, you can change them by selecting I (for Inks) from the menu.

You are then prompted for the colour number which you must enter in hexademical (0 – F). If you are unsure about hexadecimal, the colours are listed on the screen next to their selection numbers.

Having selected an ink number you are prompted for a colour to assign to it. You choose one with the cursor keys: The left arrow selects ink 0, the right arrow selects ink 26 and the up and down arrows select the next or last ink.

When you have made your choice, press Return and select the second ink – make this the same as the first if you don't want the colour to flash. The keys required are summarised in Table II.

If the currently loaded picture is not the one you wish to edit, you can load a new one by pressing L (for Load picture). Likewise, pictures you wish to keep can be saved by pressing S.

Pressing Tab takes you into edit mode. Here you see the whole of the picture you are editing with a window, taking up a quarter of the screen, containing a blown-up portion of it.

←	First colour
→	Last colour
↑	Next colour
↓	Previous colour
Return	Select colour

Table II: Ink selection keys

If the part you want to look at is obscured by the window, you can move it using the cursor keys with Control.

Once you've got the window where you want it, you can move the cursor to its required position using the arrow keys on their own. When the cursor reaches the edge of the

window it automatically scrolls, showing you where you are. If you prefer to keep the cursor at a certain position within the window you can still scroll it by using the arrow keys with Shift.

Sometimes the window can get in the way too much for you to decide exactly what you're going to do next.

	Normal	Shift	Control	Copy
←	Cursor left	Scroll window left	Move window left	First colour
→	Cursor right	Scroll window right	Move window right	Last colour
↑	Cursor up	Scroll window down	Move window up	Next colour
↓	Cursor down	Scroll window up	Move window down	Previous colour

TAB	Enter main menu
CLR	Hide window
SPACE	Set pixel
ESC	Return to Basic

Table III: Edit mode keys

To avoid this, pressing Clr at any time hides the window.

To select the current drawing colour use the arrow keys in conjunction with the Copy key. All these commands are documented in Table III.

If you would like a copy of the complete source code (which unfortunately is far too long to fit in the magazine), written using Maxam, write to me enclosing a stamped addressed envelope.

Program I: Pixelator

```
100 REM ******************
110 REM *                *
120 REM *    PIXELATOR   *
130 REM *                *
140 REM * By  Robin Nixon *
150 REM *                *
160 REM *  (c) Computing  *
170 REM *      with the  *
180 REM *      Amstrad   *
190 REM *                *
200 REM ******************
210 REM
220 MODE 2:DEFINT a-z
230 PRINT "Checking data..."
240 MEMORY &7FFF
250 m=&8000
260 LOCATE 1,3:PRINT"Line"
270 lin=1000
280 FOR j=1 TO 212
290 LOCATE 5,3:PRINT lin;
300 READ p$
310 c=0
320 FOR x=1 TO 24 STEP 2
330 p=VAL("&"+MID$(p$,x,2))
340 POKE m,p:m=m+1:c=c+p
350 NEXT:READ b$:c1=VAL("&"+b$)
360 IF c MOD &100 <>c1 THEN PRINT
"Incorrect":END
370 PRINT "Ok"
380 lin=lin+10
390 NEXT
400 SAVE "pixel.bin",b,&8000,&9F0
410 END
1000 DATA 3A2888CD35BCCD38BCCDAA84,64
1010 DATA CDD2BCCD4EBB3E01CD0EBCC3,FA
1020 DATA A287E5C5D619C5E5D60A3A0A,F0
1030 DATA 88A7F52D1D9756CB4A2802CB,58
1040 DATA DFCB6A2802CBD7CB5A2802CB,FA
1050 DATA CFCB7A2802CBC7CD9A8D9756,A4
1060 DATA CB422802CBDFCB622802CBD7,DA
1070 DATA CB522802CBCFCB72CA6180CB,94
1080 DATA C7CD9A8023F1281D9756CB4A,09
1090 DATA 2802CBDFCB6A2802CBD7CB5A,FA
1100 DATA 2802CBCFCB7A2802CBC7CD9A,2C
1110 DATA 80109BE17CC60867FE803804,77
1120 DATA 0150C009C111087C1E1C9F3E5,B5
1130 DATA C521F8874F0600093A0F8847,DB
1140 DATA 3A26888B20213A1088473A27,5B
1150 DATA 88B82017DD21F8873A288832,10
1160 DATA C8803A2988A7DD7E0028054E,50
1170 DATA FF18017E2A0D8806047C57723,BE
1180 DATA 772BF57CC60867F1C110F2FB,F7
1190 DATA 210F88347EFE14383336002A,47
1200 DATA 0D880126000B7ED4222DD8821,7A
1210 DATA 1088347EFE1938003600220B,0E
1220 DATA 88220D88181C2A0D88010020,53
1230 DATA 0930004150C009220D88180A,30
1240 DATA 2A0D8801020009220D88C1E1,24
1250 DATA C93A2A88A720055229881808,84
1260 DATA 3A2988EE013229882AD888CD,44
1270 DATA 1A803E17CD1EBBC247823E15,73
1280 DATA CD1EBB2803C356833E09CD1E,9F
1290 DATA BB285697CD1EBB28113A2888,99
1300 DATA 3C322888FE1020399732288,FE
1310 DATA 18333E02CD1EBB28123A2888,55
1320 DATA 3D322888FEFF20213E0F3228,04
1330 DATA 88181A3E08CD1EBB28269732,9D
1340 DATA 2888180D3E01CD1EBBCAA082,A6
1350 DATA 3E0F3228883A2888CD35BCCD,A4
1360 DATA 38BCC3A0823E2FCD1EBB28D3,17
1370 DATA C02B043E06CD1EBB28BF3A2A,F6
1380 DATA 88EE01322A883E06CD1EBB20,65
1390 DATA F93E444CD1EBB28D3C3AA843E,7B
1400 DATA 10CD1EBB28143E4ECD0B8C3E,3F
1410 DATA 10CD1EBB20F93EC0CD0B8CC3,21
1420 DATA A0823E08CD1EBB28C03A2688,2A
1430 DATA 3DFEFFCACF8332268853E01CD,42
1440 DATA 1EBB280C3A26883CFE14D2A1,B6
1450 DATA 8332268897CD1EBB28BC3A27,35
1460 DATA 883DFEFFD2568332278B3E02,BE
1470 DATA CD1EBB28BC3A27883CFE19D2,E8
1480 DATA 7D83322788185933E0BCD1EBB,3E
1490 DATA 28BD212388357EFEFF205236,59
1500 DATA 0B184E3E01CD1EBB28BD2123,CC
1510 DATA 88347EFE0923E3600183A97,BE
1520 DATA CD1EBB28113A2388D6033223,F2
1530 DATA 8830ZAC6D9322388188233E02,09
1540 DATA CD1EBB28133A2388C6033223,E4
1550 DATA 88FE09381BD6D9322388188D9,B4
1560 DATA 3E42CD1EBBCA2D81C9CDDA84,C2
1570 DATA CD19BD3E4BCD0B8CC2111883A,A6
1580 DATA 2388874F06000E95E2356EB22,74
1590 DATA DB88220D882A0888CD1A8DCD,38
1600 DATA DA823EC0CD0B8CC32D812A0B,91
1610 DATA 8801012087ED427CFEC03006,00
1620 DATA 2804018D3F09E5CD3283E101,6E
1630 DATA 1004093004015DC009CD3283,ED
1640 DATA 2A0B88E52BCD1183E1012800,38
1650 DATA 09CD1183C90619C5CD218330,B8
1660 DATA 040150C009C110F3C9060236,E9
1670 DATA 107CC60867362D7CC6086710,D8
1680 DATA F2C9060Z5E53E10CD4F83E1,3B
1690 DATA 7CC60867E53E20CD4F83E17C,F0
1700 DATA C60867C110E6C9062A772310,8F
1710 DATA FCC997CD1EBB28213A2588A7,D9
1720 DATA 281B3D3225882A0888010008,22
1730 DATA B7ED427CFE4D30062804018D,B3
1740 DATA 3F09220888E02CD1EBB281D,25
1750 DATA 3A2588FEAF28163C32258824,17
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1790 DATA 07EE0132DA881813EE01320A,10
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1830 DATA A0823A0A88A720166EE01320A,F6
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1890 DATA 7ECD4484B077010080D977CD,D8
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2060 DATA 66BB3E02CD9DBB3E0DCD96BB,D5
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2090 DATA 7E23E5CDAE873E2FCD5ABBE1,B8
2100 DATA 7E23E5CDAE873E0ACD5ABB3E,F0
2110 DATA 0DCD5ABBE1F13CFE1020C93E,32
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2120 DATA 03CD90BB3E02CD96BB26012E,CE
2130 DATA 14CD75BB21B188CDEA873E44,2B
2140 DATA CD1EBB28143E00CD0EBCCDD5,59
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2200 DATA 4730E7F5D63DFE0A3802D607,78
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2260 DATA E1CDF285CDD587C3AA84E5CD,F1
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2310 DATA FEFF20CA361A18C697E5CD1E,7C
2320 DATA BBE1280B7E3C77FE1B2DB736,26
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2470 DATA BCBC210004011004021004011,6C
2480 DATA 004ADC98BCD447870100003E,42
2490 DATA 06CD8FBCC3EC85CD81BB214B,C7
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2520 DATA A728EE053E7F2B3E08CD5ABB,D2
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2560 DATA 06BB18F326012E14CD75BB21,53
2570 DATA FB88CDEA87C3D6BBF1F1CD84,78
2580 DATA BBC3EC853E02CD9DBB97CD96,41
2590 DATA BB26172E14CD75BB061D3E20,AB
2600 DATA 18143E02CD9DBB97CD96BB26,5F
2610 DATA 012E14CD75BB0623E2CD5A,F1
2620 DATA BB1DFB26012E14CD75BBCD09,02
2630 DATA BB0DCD0CBBCD06BB18F421D9,E3
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2710 DATA 33F33FFFF004000000C000000,64
2720 DATA 0001E014E027EBE1C1F4C107,3A
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2810 DATA 7774C157686963682063 6F6C,FD
2820 DATA 6F75723F20283D2D4629A053,9C
2830 DATA 656C656374203173742 0696E,3C
2840 DATA 6BBA53656C6563742 0326E64,A9
2850 DATA 20696E6BBA5441423D456469,42
2860 DATA 7420493D496E6B7320 4C3D4C,A4
2870 DATA 6F6164205330D536176652045,D8
2880 DATA 53433D517569F42 03DA02020,40
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2910 DATA 656E616D653AA0075072 6573,81
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2980 DATA 74E147726565EE437961EE53,24
2990 DATA 6B7920626C75E559656C6C6F,31
3000 DATA F757686974E55D6173746 56C,E1
3010 DATA 20626C75E54F726 16E67E550,74
3020 DATA 696EEB5D617374656C206061,19
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3090 DATA 6967687420796 56C6C6FF750,38
3100 DATA 617374656C2079656C6C6FF7,55
3110 DATA 427269676874207768 6974E5,21
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Gandalf reports

A new era dawns

Gandalf on the world of the adventurer

LAST November an adventurer's convention was held in Sutton. Unfortunately, I was unable to attend and only now am I beginning to receive reports about it.

Many of the comments have been favourable – though some have not – but the overall impression seems to be that a convention is a marvellous idea and could be the first of many.

I'm pleased that adventures are reaching a wide enough audience to justify such a gathering and I wish the organisers every success.

Steve Cannon is in difficulties with two adventures. In Microman, to develop the paper he must: Examine the tray, empty the correct bottles into the tray, examine the tray again and develop the paper.

In the Boggit, Steve has found the diary but has not worked out how to use it to get through the door: One of the numbers entered as a five-digit number will allow him to leave.

Chris Frakes from New Zealand has asked for help with Snowball. His main problem is that he cannot get his light to work. The command he needs is LIGHT LAMP, but this will only work if he already has a battery for it.

If you haven't Chris, drop the viewer, use the screwdriver to get the batpack, and put it in your lamp. You will now be able to climb the web. If you are still stuck, send me an IRC and I'll send you a complete solution.

Susan Bloy is also having problems with two games. In the Big Sleeze, she keeps getting her dynamite wet and will continue to do so unless she wears the mac. In Seabase Delta, she needs to startle the hen by blowing a bubble with the gum. This will get her the final ingredient for the pancake.

Dawn Adoti is also in difficulties with Seabase Delta. Use the hammer, nails, plank and barrel (from the tavern) to make a see-saw. This will enable you to get to the platform. The cannon ball? Lever the cannon with the piece of wood.

BUG HUNTER

GRAHAM Wheeler has written to tell me about a bug in Rigel's Revenge. When you load your saved data from Part I into Part II you are told *The mesh is two foot square*. Removing your goggles gives you the further information that you are outside a hut, but you can't move as you are told it is dark.

This should not be the case, as a new day has dawned. Graham goes on to say that he has successfully completed Part II on another machine and the Amstrad version is definitely bugged. Owing to deadlines I hadn't quite completed Part I when I wrote the review, but I have since discovered the bug myself. So be warned!

HALL OF FAME

***Lord of the Rings* – A hint sheet by M. Jennings**

- Tell Merry to climb into the silver lake and then get out again. He will have two green jewels.
- To save Sam, Pippin and Merry from the willow, ask Tom Bombadil for help.
- When the red lady asks you into her tower, do not enter.
- When you enter Rivendell make sure you have the pony with you.
- Do not go through the Misty Mountains.
- When near to the outline of a door, say FRIEND to it.
- When in the corridor with the carved heads, push the eagle's head.
- To get past the balrog, send Gandalf ahead of you.
- When at the riverbank in Loth Lorien, ask the taciturn elf for help.
- Ask Galadriel for help.

***Mindshadow* – A solution by Iain Purdie**

Part I

N, enter hut, take straw, E, E, take metal, E, take vine, W, W, S, drop metal straw, E, tie vine to rock, down, W, take rock, dig, take map, E, up, W, drop rock, N, read map, N, N, E, N, E, E, S, S, E, take rum, W, N, N, W, W, S, W, S, S, S, take all, drop rock, bang rock with metal, give rum, drop rock steel, N, W, S, kill man, S, take cleaver, W, N, N, take canvas, drop cleaver, S, S, E, E, N, N, E, E.

Part II

E, E, E, S, search man, take all, N, W, N, E, give hat, E, examine drink, chase man, think tycoon, S, W, take and examine hat, W, S, W, N, give money, S, S, give money, N, W, fish debris, read paper, think Arcman, drop pole, hat and paper, E, E, N, N, E.

Say Chandralt, give money, W, S, S, W, N, N, enter plane, drop ticket, N, W, booth 11, search man, read note, think Jared, read ID, think Bob Masters, drop ID and note, E, E, buy pickle, N, N, W, W, N, up, S, E, N, wear canvas.

W, take and read parchment, drop parchment and canvas, E, S, W, N, down, S, E, E, E, S, E, S, dig, take and read leaflet, drop leaflet and shell, W, N, W, W, W, say AN11649, open box, take gun, give box, E, N, W, W, N, up, S, E, N, N, N, N, E, shoot man, take and read message, think William. End.

***Neverending Story Part II* – A solution by Graham Wheeler**

E, N, E, get the globe, W, W, N, get the rope, E, E, NW, remove the planks, down, SE, S, get the knife, N, W, tie the rope, E, NW, up, E, E, (you are pushed), W, N, W, N and get the key (to save bothering with the tin of

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HALL OF FAME (Continued)

◀ *From Page 35*

poison), SE, SW, down. Cut the web, drop the knife and leather, W, SW, unlock the cell, E, get the pouch, (a coin drops out), get the coin.

Drop the pouch and keg, W, W, drop the coin, W, get the golden key, E, E, E, down, up, E, NW, up, S, S, S, E, (you will see Auryn and Falkor), get them both to complete the game.

The solution to Part III was published in the August 1987 edition of *Computing with the Amstrad CPC*.

***Sorcerer* –**
A solution by Graham Wheeler

NE, read sign, wait, wait... you wake up in bed after a nightmare.

Get up, W, read note, drop note, S, S, W, get and read matchbook, get calendar, get and open ochre vial, drink potion, drop vial, E, open receptacle, put matchbook in receptacle, close receptacle, E, get scroll, examine scroll.

Gnusto Meef, examine volume, W, N, W, get and examine scroll, Gnusto Gaspar, learn Gaspar, Gaspar yourself, E, N, W, move hangings, get key, examine drawer, open drawer, get and open box, get amulet, drop box, get journal, read journal and note password (it will be a creature from the infotator).

Get infotator, drop key, examine and drop infotator, E, S, S, down, examine trunk, press (colour) button (press button in colour order of password creature), get and examine scroll.

SW, open receptacle, (mail should have arrived), get, read and drop issue, get orange vial, cast Aimfiz on Belboz, NE, down, down, S, W, learn Izyuk, Izyuk yourself, W, W, N, get coin, S, E, learn Izyuk, Izyuk yourself, E, E, sleep, learn Gaspar, Gaspar self, N, up, up, E, NE, learn Pulver, Pulver river, down.

NE, get and examine scroll, Gnusto Fweep, get amber vial, get guano, learn Izyuk, down, SW, up, W, W, Izyuk yourself, NE, SE, E, examine flagpole, pull rope, examine flag, get aqua vial, E, look into cannon, drop guano into barrel, get and examine scroll, learn Izyuk, W, W, Izyuk yourself, NW, SW, E, E, down, down, E, wake gnome, give coin to gnome, search pocket, E, E, N, N, drop all but spellbook. Now wait until you are tired and then sleep. Learn Gaspar, Gaspar yourself.

Learn Fweep (about six times), drop spell book, E, Fweep yourself, N, E, S, S, W, down, E, N, N, wait, wait and the spell will wear off. Fweep yourself, up, up, S, E, wait, wait, wait, wait and spell will wear off again. get scroll, drop scroll into hole.

Fweep yourself again, W, W, S, E, down, down, W, W, wait, wait, Fweep yourself, up, up, N, N, down, E, S, E, N, down, wait, wait, Fweep yourself for the last time, W, S, W, up, N, wait until spell wears off again, get all and sleep. Learn Gaspar and use it on yourself, S, S, E, get parchment scroll and examine it. Gnusto Swanzo, W, W, W, W, W, SW, SW, S, SW, W. A barrier will stop you progressing further and a gnome will appear, give him the coin and you may now enter.

***Return to Oz* –**
A solution by Dawn Adoti

DAWN sent this solution to Tiffany who passed it on to me. Unfortunately, I have never heard of this adventure and would welcome any information on it. The command structure suggests that it could be an arcade-adventure. Does anyone know for sure?

Search the cage, get Billinda and the key (you'll also get some slippers), leave, search the bureau, get the tinder box, leave through the door on the left hand side, search the room, get the pumpkin, leave, leave through the door on the right hand side.

Talk to the doctor, list, use the tinder box, talk to the girl, leave, leave on the yacht, leave, leave, search the sack, get the triangular key, leave towards the emerald city, leave through the brown door, search the tin man, get the rope, leave through the brown door.

List, use the key, look, list, use the triangular key, talk, leave, talk to Wheeler, list, use the rope, get the stone key, leave, use the triangular key, leave through the door, talk to princess, leave, talk to jack pumpkin, search, leave, search the bed.

List, drop the slippers, leave, list, use the triangular key, leave through the floor, leave through the grid, leave, list, use the stone key, search the cupboard, search the jewellery box, get the mirror and ladder, leave through the end of the tunnel, list.

Use the mirror, leave through the end of the tunnel twice, list, use the ladder, talk to the gump, list, use Billinda, leave, talk to the king five times, leave, talk to the axe, leave, talk to Billinda, search, get the egg, get Billinda, list.

Use the egg, look, search in the dust, look, get the ruby slippers, list, use the ruby slippers, look in the mirror, talk to the scarecrow, get the mirror, list, use the mirror, talk to the girl, list, drop the ruby slippers, talk to the girl. End.

Top Ten Competition

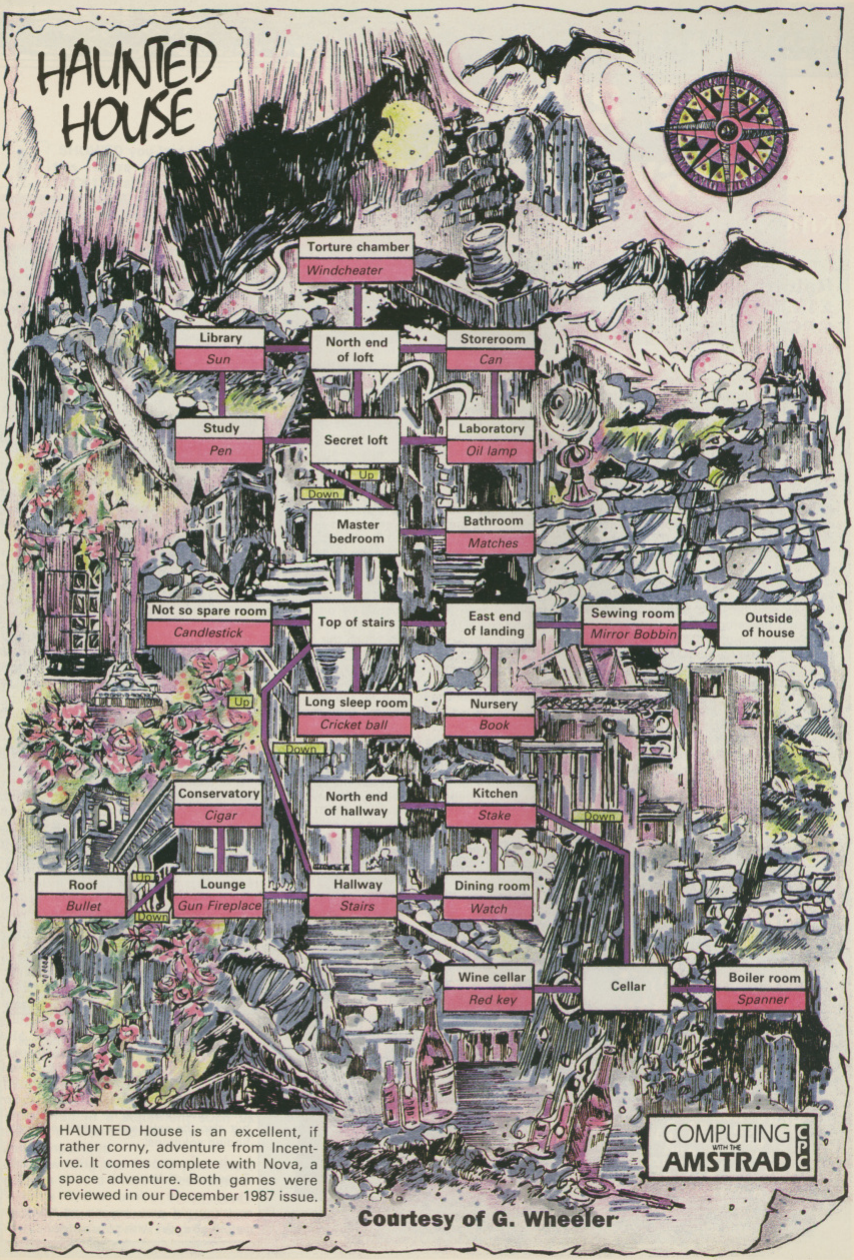
THERE wasn't enough space last month to publish the all-time top 10 list so here it is:

1 Hitchhiker's Guide to the Galaxy.
2 Leather Goddesses of Phobos.
3 The Pawn.
4 The Boggit.
5 Bored of the Rings.
6 Red Moon.
7 Dungeon Adventure.
8 The Lurking Horror.
9 The Colour of Magic.
10 Worm in Paradise.

There was a large variety of entries, but when they were collated the clear winner was Pam Fairclough.

Pam wins The Pawn, Leather Goddesses of Phobos, and The Silicon Dreams Trilogy. I don't think there are any surprises in her selection, just a well-balanced mix between complexity and humour. What I did find surprising was the absence of budget titles. Price is obviously not a factor when considering the lasting qualities of an adventure.

Congratulations Pam, and thanks to all those who took part. I look forward to the next one.


HAUNTED HOUSE
Torture chamber
Windcheater
Library
Sun
North end of loft
Storeroom
Can
Study
Pen
Secret loft
Laboratory
Oil lamp
Up
Down
Master bedroom
Bathroom
Matches
Not so spare room
Candlestick
Top of stairs
East end of landing
Sewing room
Mirror Bobbin
Outside of house
Up
Long sleep room
Cricket ball
Nursery
Book
Down
Conservatory
Cigar
North end of hallway
Kitchen
Stake
Down
Roof
Bullet
Up
Down
Lounge
Gun Fireplace
Hallway
Stairs
Dining room
Watch
Wine cellar
Red key
Cellar
Boiler room
Spanner
HAUNTED House is an excellent, if rather corny, adventure from Incentive. It comes complete with Nova, a space adventure. Both games were reviewed in our December 1987 issue.
COMPUTING WITH THE AMSTRAD CPC
Courtesy of G. Wheeler

Knight Orc

Rainbird/Level 9 £19.95 Disc only CPC6128/464 with ram pack

I'M sure most adventurers never stop to think about the poor orcs they kill in their search for treasure. In Adventure Quest you killed many, in Dungeon Adventure you killed their lord and almost finished them off.

A few remain in the Dark Tower, and recently they made a foray into the surrounding countryside. After some initial success the marauding orcs were surrounded by a large army. They managed to escape by leaving one of their number – you – behind to challenge the army's champion.

At the time you were unaware of this as you were sleeping off an over- indulgent drinking session. You awake tied to the back of a horse on a jousting field facing the enemy champion. Being a typical orc – fearless in large numbers, fierce enough to frighten a small mouse, and strong enough to raise a glass of ale – you do not last very long.

Your apparently lifeless body is dumped on the local garbage heap and it is here that some hours later you awake. Your task in this three-part graphics adventure is to find a means of rejoining your faithless companions.

An initial examination of your surroundings reveals that there is a multitude of treasures lying around – almost as many as there are adventurers looking for them. Further exploration reveals that your task is to cross a broken bridge. The solution to this problem is simple – find a rope.

As you travel around you realise that the rope will have to be made up from smaller pieces which you must find and collect. Many are evident: A tether around the goat's neck, a washing line inside a tree, and a halyard on the flagpole. Other pieces have to be obtained by solving a variety of problems.

A green knight who keeps challenging you to battle is almost unkillable, though his horse isn't. The drawbridge need not be opened and presents a vertical answer to another piece of the rope. The hermit may seem immutable but his robe provides help if you can distract his attention.

Most of the problems in the first part are fairly easy to solve, but as you progress things change and solutions rely on successful character interaction. I'm not sure I approve of the degree to which the later stages depend on this.

My first thoughts are that it is likely to divert your attention from finding how you solve a problem to looking for the way to get other characters to help. I think there may be a tendency for software writers to use this as a means of avoiding having to create original puzzles.

The idea behind Knight Orc is the most original in a long time, but I feel the implementation leaves something to be desired. Having adventurers roaming around the scenario is potentially the funniest case of role-reversal I have seen but it is overdone – there are far too many of them.

Whenever you are identified as an orc you are attacked – usually with fatal results. A cloak offers some degree of anonymity, but you are rumbled with annoying regularity.

As with Gnome Ranger, the parser allows you to FIND objects or characters, GOTO or RUN TO locations, objects and characters and so can speed up the gameplay considerably. I do think, however, that such a command structure can make you lose touch with the feel of the game.

The initial frustration I felt when I first loaded Knight Orc, though eased, still remains. It is simply too much trouble to play. Gone are the days of ambling gently through an adventure. Here you are harried from all sides by adventurers greedy for any treasure you may find and intent on your death when they discover your identity.

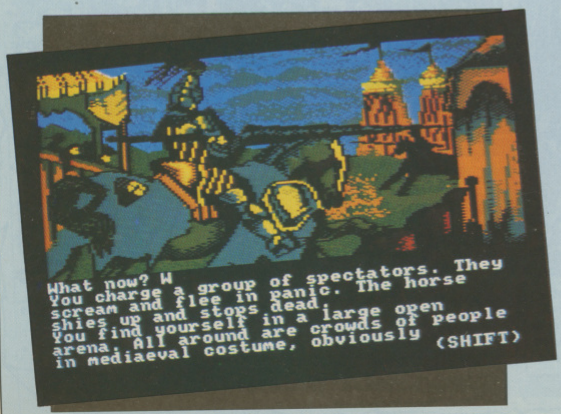
Although the game is a masterpiece of programming, I think Level 9 has gone slightly over the top. The concept is original and with great potential, yet it is too fussy.

My one reservation is that it will not run on an unexpanded CPC464. As I own one this trend towards disc-based CPC6128 – only games makes me sad and I hope it will not continue.

One final point for readers who lack a second disc drive: Both this adventure and Gnome Ranger would not run on my A drive. In both cases I had to backup the game on to a blank disc and then re-copy the program on to the original.

I have not had problems with any other review discs in the past and am inclined to think that the duplicating methods used for these programs may be a bit dodgy if your drive is slightly out of alignment.

This is not a game I shall return to. It's one of those you are likely to either love or hate, so it's worth a look. I didn't love it – but you might.



Presentation 85%
Up to Rainbird's usual high standards.

Atmosphere 54%
Too atmospheric for my taste.

Frustration factor 36%
This mark is not just for how hard it is but also the satisfaction obtained after finding solutions.

Value for money 50%
Twenty quid? No way!

Overall 57%
You'll love it or hate it: Find out which before you part with your money.

Deposits and withdrawals

IAN SHARPE continues his investigation into the CPC6128's extra ram

I SHOWED you last time how the extra ram in your CPC6128 sits alongside the main memory pool, and why we need Bankmanager to communicate with it. Now we'll see Bankmanager's commands in action.

From side one of your system disc run *bankman*. This will install Bankmanager in memory. Before we do anything with the second bank we must tell Bankmanager how long the records are going to be. If they are going to be 10 characters, the instruction:

```
|BANKOPEN,10
```

must be in the program before you use any other Bankmanager commands. The Amstrad will then divide the extra ram into blocks of 10 bytes, one after the other like railway carriages. BANKOPEN has another effect, as we'll see in a moment.

When reading or writing a record the CPC must know which one it's dealing with. Bankmanager keeps a note – known as a pointer – of the current record number. After you have read or written a record the pointer moves up to the next one – just as the screen cursor moves along when it's written a character.

If you read record 100, the pointer automatically moves up to 101. If you read another record without specifying which one, Bankmanager refers to the pointer, reads record 101, and increments the pointer to 102.

A side effect of BANKOPEN is to restore the pointer to zero – the first record. Having opened the extra ram with a specified record length we can start putting things in there. The command to write a record is:

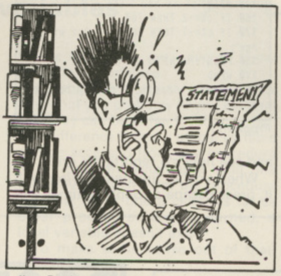
```
|BANKWRITE,@c%,a$,record
```

or:

```
|BANKWRITE,@c%,a$
```

When writing information it's possible that a problem will occur. If it does, Bankmanager has a way of telling you something went wrong. It puts a code number in the variable immediately after |BANKWRITE. Here I called it *c%* but you can call it anything you like as long as it's an integer – that is with % after the name or declared in a statement such as DEFINT c. Don't forget the @, it's vitally important.

After writing the record your Basic program should check the contents of *c%*. If it's –1, the number of the record you tried to access was bigger than the available number of records. If you get –2, try resetting the machine and starting again.



". . . Bankmanager has a way of telling you something went wrong"

If there's still no joy, I hope your guarantee is still in force because –2 indicates either a hardware fault or a faulty Bankmanager program.

If there were no problems, *c%* will contain the record number just accessed. The internal pointer will be one greater than this because it has moved on to the next record in the chain.

As you may have guessed, the next parameter – *a$* – is the string being written. The third parameter – *record* – is optional. With it you can specify the number of the record to write to; in effect you're changing the current record number. If you do that, after the operation the pointer will move on and be one greater than *record* and *c%*.

Reading a record out again is very similar:

```
|BANKREAD,@c%,a$,record
```

or:

```
|BANKREAD,@c%,a$
```

The contents of the record – whether it be the current record or a specified number – are copied into *a$*. The variable *c%* contains a code with the same meaning as the ones you get after a write operation.

Before using the two commands there are some points to remember.

- *c%* must exist before it is used with BANKREAD or BANKWRITE. That's easy to arrange – put c%=0 after the |BANKOPEN command.
- The same goes for *a$*. This isn't a problem when writing records because you'll have put something in *a$* before |BANKWRITE. If you also use *a$* for reading, all will be well as long as *a$* wasn't shorter than a record. You wouldn't want to read something before anything had been written so *a$* will have been created earlier in the program.

If, on the other hand, you use *a$* for writing and another variable – say *b$* – for reading, you'd need to bring *b$* into existence before using it with BANKREAD. This creates space where the contents of a record can be copied to. To do this, at the same time as you create c% put:

```
b$=SPACE$(n)
```

where *n* is the record length. Then you'll have *b$* big enough to take the contents of a record.

- When you switch on your machine the extra ram is full of random numbers. Say you've specified the record length as 15 and store a 10 character string in the extra ram. The record it goes into will have the 10 specified characters plus five random ones on the end. We don't want these, and they could easily confuse matters later.

In another instance you might be writing the 10 character string to a record that's previously been used for a string of between 11 and 15 characters. The first 10 will be overwritten but the extra ones will still be there, now tagged on to the new string.

In either case, when you come to

Turn to Page 40 ▶

◀ *From Page 39*

read the record you'll get unwanted characters stuck to the end of your string with no way of telling how many you put there in the first place.

The way round this is to add enough spaces to the end of the string to pad it out to the length of a record. In this way unwanted characters are over-written with harmless spaces.

It's particularly important not to read a record containing random characters, because some of them could have Ascii values less than 32. These are control codes and will have all sorts of weird effects when you try to show them on the screen or printer.

Now type in Program I. This simply sets up a record length of 12 and puts a message in each one. It starts at record 0 and keeps on going until it runs out of room. This is detected when the variable *c%* is returned holding the error code –1 rather than the record number just written to.

When it's filled all 64k – it takes a few minutes – you can test it by reading any record. Try accessing one greater than the last record written and see how *c%* reports the error.

```
10 REM Program I
20 MODE 2:PRINT"Just written to"
30 !BANKOPEN,12
35 REM -- Fill extra ram ---
40 c%=0:WHILE c%>=0
50 a$="Record"+STR$(i%)
60 a$=a$+SPACE$(12-LEN(a$))
70 !BANKWRITE,@c%,a$
80 IF c%>=0 THEN LOCATE 16,1:PRINT i
%:i%=i%+1
90 WEND
100 IF c%=-2 THEN 200
110 PRINT"c% is " c%
115 REM -- Access records --
120 b$=SPACE$(12)
130 WHILE 1:PRINT:INPUT"Type a recor
d number ",rn
140 !BANKREAD,@c%,@b$,rn
150 PRINT"c% is now " c%;
160 IF c%=-2 THEN 200
170 IF c%=-1 THEN PRINT" - Out of ra
nge";
180 PRINT:PRINT"b$ is " b$
190 WEND
200 PRINT" - This is a poorly comput
er"
```

Program I

When you've finished playing with it, press Escape a couple of times and type in the following from direct mode:

```
a$="Too many characters"
!BANKWRITE,@c%,a$,0
!BANKREAD,@c%,a$,0
PRINT a$
```

This illustrates what happens to strings which are too long – they are cut short. Note that after the BANKWRITE to record 0 the internal pointer will have moved up to record 1 so BANKREAD has to move it back again. After reading record 0, the pointer will have moved up again and you can see that record 1 is unharmed:

```
!BANKREAD,@c%,a$
PRINT a$
```

Now try this:

```
!BANKWRITE,@c%,"test",0
!BANKREAD,@c%,a$,0
```

As *test* is shorter than the record length it has picked up the surplus characters it didn't overwrite, so don't forget to pad your strings out.

● *That's covered reading and writing to the extra ram. Next time: How to use Bankmanager's search facility.*

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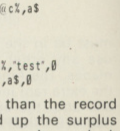

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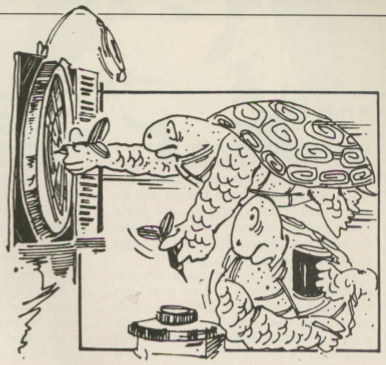
Meet the locals...



IAN SHARPE concludes his Logo series with a last look round recursion and local variables

A RECURSIVE procedure is one that calls itself, and the use of recursion tends to result in elegant programs producing complex results. There are two sorts of recursion, the simplest is known as tail end:

```
to runrings
 fd 8
 rt 4
 runrings
end

cs
runrings
```

The first lines of **runrings** tell the turtle to go forward eight units and turn right by four degrees. Then the procedure calls itself and the turtle again goes forward and turns right, calls itself, and so on. Eventually this generates a circle – quite good for a procedure with only three instructions.

This procedure will continue indefinitely because it never reaches **end** and therefore never returns. The point where the procedure calls itself is next to **end** so even if it did eventually return there would be nothing more to do. Knowing this, Logo doesn't bother to keep track of how many times it has been through the cycle, or store up a list of **end**s to come back to.

If you insert an instruction between **runrings** and **end** – it doesn't matter what – Logo knows there is unfinished work and makes a note that it might have to come back to complete it.

This is no longer tail-end recursion and if you let the modified procedure run as before, eventually the stack of notes – one for each time the procedure recurses – piles up to fill the area set aside for it. At this point Logo will give up with an error report.

This is another type of recursion and before tackling it, we need to know about local variables.

Variables store values – we all know that – but you probably hadn't realised that they can be either local or global. The difference is that a global variable can be accessed from any procedure in the program whereas a local one can only be seen from the procedure it's local to, or one it calls. As far as other procedures are concerned, a local variable doesn't exist.

To make some sense out of that, type this in:

```
to "proc1
make "fred 7
pr :fred
proc2
pr :fred
end

to proc2
make "fred 1
pr :fred
```

Running the procedure **proc1** will result in 7 being printed followed by 1 and 1 again. If you edit **proc2** and add a line:

```
(local "fred)
```

straight after **to proc2** you'll get 7 1 7. Why? In the first case, everything behaves as you'd expect. *fred* is made to hold 7, control is passed to **proc2** where fred is changed to 1. Then it's back to **proc1** where *fred* is printed out again, its value unchanged.

By adding the extra line we're making a subtle change to the way *fred* operates. The new line tells **proc2** to create a second variable with the same name and treat it as a separate entity. The new one is independent of the original and starts life blank.

As there are now two variables called *fred* and we've told **proc2** which one we want to use, we can't refer to the other from within that procedure.

If a procedure has a local variable, every time you enter that procedure the variable is created afresh, and any value you left in there last time will have disappeared.

Declaring a variable this way isn't the only method of making it local. Have a look at this:

```
to proc :f
make "f :f +1
pr :f
end

make "f 6
proc 1
:f
```

As you can see, it works in much the same way as before. By putting *f* in the **to proc** line of the definition it becomes local to **proc** and the original *f* – the one containing 6 – remains intact when **proc** executes.

The next example passes a parameter to itself and you will be able to spot that *num* is local.

```
to keepadding :num
 make "num :num + 1
 if (:num = 10)
[stop]
 pr :num
 keepadding :num
 pr :num
end

keepadding 0
```

Every time **keepadding** calls itself, a copy of the current version of *num* is made leaving the original intact. As the procedure keeps calling itself, more copies of *num* are created and

Turn to Page 42 ▶

◀ *From Page 41*

stored when the recursion goes to a deeper level. If this is allowed to continue indefinitely the space Logo allocates for storing these copies will be exhausted and the program will grind to a halt with an error message. Here, though, we've arranged for it to come to an end – when *num* holds 10.

When it gets to this point the last procedure returns to the previous level and picks up at the second **pr :num** with the old value of *num* restored. This then terminates at the **end** and returns to the procedure before that. This cycle continues picking up and printing the stored value till it gets back to the top level.

Thinking ahead

There are various reasons why you might want to use local variables. If a variable is only needed for temporary storage, the space it takes up can be reclaimed when Logo exits from the procedure. This would be useful if you were short of space.

There is a school of thought among professional programmers which says that a program is less prone to bugs if a procedure which doesn't need to know the value of a variable used in another procedure is unable to alter it by accident. You could do this by inadvertantly using the same name twice, which could be disastrous if the name belonged to a global variable, but is no problem if it is local.

Another use for local variables is if you have a program which needs to consider several possible courses of action by thinking ahead.

A draughts program would be a good example of this. Say the computer looks two moves ahead and is in a situation where it has two likely choices of move.

For each choice the human opponent may have several plausible replies and each reply will present numerous further potential moves to the computer. The possibilities fan out like the tree shown in Figure I. I've restricted it to two possible replies to each of the computer's moves.

The program would want to use the same set of procedures to work out the board position after each move. If the computer has worked out what the board looks like after move 1 and now wants to look at the position after replies 1a and 1b, it doesn't want to lose the record of the position at move 1 while it's looking at 1a, because that record will be needed to generate 1b.

This is an ideal situation for local variables, because when the program has returned from the procedures showing the position at 1a, the position at move 1 will be intact ready to generate 1b.

Short and sweet

Without local variables there is a lot of messy copying of variable contents in order to save them before the variable is used again in the next depth of search. With local variables there's none of that, and the program is shorter and easier to write.

Although it's not strictly relevant to the subject in hand, you're probably wondering how the draughts program would evaluate which of the possible moves was the best result.

A simple way is to give each result a score and choose the move with the highest value. The score would be calculated by taking into account a number of factors such as number of pieces on the board – say 1000 each for all the computer's colour and –1000 for each of the opponent's pieces.

If the move had lead to the computer's piece being about to be taken, points would be deducted. From a strategic point of view some squares on the board are more important than others, so bonus points would be awarded if the computer occupied these points, or deducted if the opponent did. You can carry on with all sorts of other factors which contribute to the strength of a given board position.

Now dig out our September 1987 issue. In it is a recursive program to draw a tree which may have been incomprehensible at the time. Now you should be able to follow it through, particularly if you turn the picture it generates upside down where it fits in with the analogy of going down levels and coming back up again.

Well, that winds up the series. I hope this tour round Logo has proved interesting and opened up an area which would otherwise have remained a mystery. It's a pity that the version of Logo supplied with the CPC isn't fast or powerful enough to make more practical applications possible.

Nevertheless, Logo is representative of the way programming languages are going and is valuable background experience to the next generation of computers as well as being an an easy introduction to computing in general.

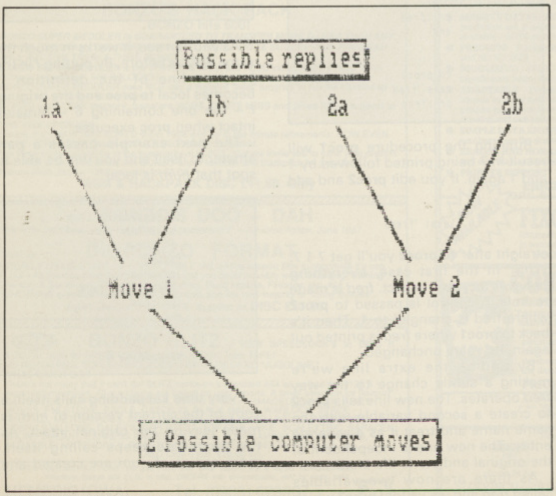


Figure I: Potential moves in draughts program

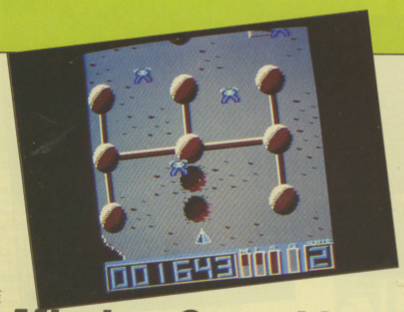
AM tips

Zynaps

(Hewson)

Jason Brooks hasn't half been busy with his Four Smash Hits tape. Frustrated Zynapians get 255 lives and only five aliens to shoot per level. Skip past the first file called Zynaps, press Play, and run the poke.

```
10 'Zynaps By
11 'Jason Brooks
12 MODE 0:MEMORY &3FFF
13 LOAD"!loader",&4000
14 FOR i=0 TO 15
15 READ a:INK i,a
16 NEXT:BORDER 0
17 POKE &414E,&80
18 POKE &414F,&BE
19 FOR i=0 TO 12
20 READ a$:a=VAL("&"+a$)
21 POKE &BE80+i,a
22 NEXT
23 CALL &4000
24 DATA 0,26,13,16,15,6
25 DATA 3,24,12,9,18,19
26 DATA 20,11,2,1
27 DATA 3e,ff,32,7e,5f
28 DATA 3e,01,32,1a,5d
29 DATA c3,00,90:'Leave
```



Mission Genocide

(Firebird Silver)

If the cheat mode isn't enough for you (type QED in upper case and a number between 1 and 9), here's a Pinder poke for infinite lives. Run the poke, rewind the tape, and press Play.

```
10 REM Mission Genocide
20 REM By C.J.Pinder
30 REM (C) CWTA/CPC
40 MODE 1:MEMORY &5FF
50 FOR n=&BE80 TO &BE88
60 READ a$:a=VAL("&"+a$)
70 POKE n,a:NEXT
80 LOAD "!":POKE &862A,&80
90 POKE &862B,&BE
100 CALL &8600
110 DATA cd,a1,bc,af,32,c7
120 DATA a0,c9,a9
```

I'VE been wondering what's going to happen to the CPC games market this year. Sales of Amstrad games titles are still running a healthy third to Spectrum and Commodore, so we can look forward to plenty of new releases. The trouble is, how often do you see a game that doesn't fit into a well-established category? We seem to get the same old ideas churned out in different flavours. OK, so they're often still enjoyable, but there doesn't seem to be much innovation going on.

There are exceptions – Gremlin's Deflektor isn't like anything I've seen before but it is an excellent game. The software houses rely on customers coming back month after month. In the long run we'll only keep doing it if we think what we're going to buy offers something we can't get out of the games we have already.

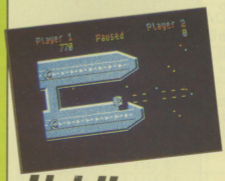
As someone said in a letter on the mail page, the trend towards compilations and budget games could be counter-productive because although people are spending roughly the same amount on software as before, they're getting more games for their money so the software houses make less on each one.

That being the case, they'll spend less time and money on developing an individual game. If that's true, whatever you think the level of staleness is now, it's going to get worse because compilations and budgets are highly successful and the software houses go where the money is.

I've also noticed a trend towards fancy graphics without the gameplay to back them up. First impressions count, and people will often buy a game on the strength of brilliant visuals, which is fine if as much effort has gone into the rest of the program. In the early days superb graphics were a good indication of the game's overall quality, but this isn't always true any more. I hope 1988 isn't going to be dominated by graphic – but otherwise mediochre – masterpieces.

Next month I'll print a top 10 based on your nominations for your favourite games.

Tiffany



Uridium+

(Hewson)

This is for the tape version on the Four Smash Hits compilation, surely some of the best value around. Skip past the first file (Uridium+) and run the poke.

```
10 'Uridium +
11 'By Jason Brooks
12 MODE 1:MEMORY &3FFF
13 LOAD"!loader",&4000
14 BORDER 0:INK 0,0
15 INK 1,20:INK 2,26
16 INK 3,24
17 POKE &414E,&80
18 POKE &414F,&BE
19 i=&BE80
20 READ a$
21 IF a$="+" THEN CALL
 &4000
22 POKE i,VAL("&"+a$)
23 i=i+1:GOTO 20
24 DATA 3e,ff,32,2d,47
25 'Numerous Lives
26 DATA af,32,c2,5e
27 'Infinite lives
28 DATA c3,00,40,+
29 'Leave 28
```

Monty on the run

(Gremlin)

Still running into trouble? Rob Nuttall's come up with infinite lives and stopped the crushing crushers.

```
10 REM Monty on the run
20 REM by Rob Nuttall
30 REM (C) CWTA/CPC
40 MEMORY &3000
50 MODE 1:t=0:CALL &BD37
60 FOR n=&BE80 TO &BEBB
70 READ a$:a=VAL("&"+a$)
80 POKE n,a:t=t+a:NEXT
90 IF t=&180D THEN LOAD ""
:CALL &BE80
100 PRINT "Oh,oh data erro
r ..."
110 DATA 21,80,be,11,e0,02
120 DATA 01,40,00,ed,b0,c3
130 DATA ee,02,3e,c3,21,02
140 DATA 03,32,6b,42,22,6c
150 DATA 42,21,ff,ab,11,40
160 DATA 00,c3,38,42,3e,34
170 DATA 32,35,02,3e,04,32
180 DATA 36,02,f3,f1,c9,af
190 DATA 32,bc,9c,3e,c9,32
200 DATA e3,9b,c3,e9,82,a9
```

Dizzy

(Code Masters)

After his Dizzy poke in the January *CPC*, Jason Brooks has written in with some bolt-on lines to give infinite lives. All you have to do is add them to the original poke listing:

```
151 DATA 21,00,00,22,d7,
78,22,de,78
152 REM This lets you se
e screens being drawn
153 DATA af,32,3a,95,32,
37,95
154 REM Infinite lives
```

Peter Shilton's Handball Maradonna

(Bugbyte)

Can't say I was too impressed with this game, but I'm getting a few letters from people who like it. So here's how to get to the higher levels except the last one. Use TC – the initials of T.P. Cheung of Ipswich – with these codes:

Level	Skill code
B	5378
C	3411
D	1471
E	2416
F	4876
G	6815
H	7875
I	8112
J	5172
K	3617
L	1677
M	2613
N	4573
O	6514

Agent XII

(Mastertronic)

Here's a big beefy poke, some passwords and tips from Jason Brooks.

THE TIPS:

Part one: Just keep blasting away. You must destroy the brain three times.

Part two: To get the access codes for the computers move into the spiked ball that will move across the screen. To access the computers move on to one and press the spacebar. It will either say off-line or ask for a code.

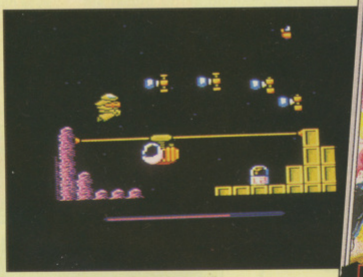
You must access three computers. After the third, take the fourth access code to the bottom computer.

THE PASSWORDS:

LOUDHAILER GOOSE to load level two. PITIFUL LOBSTERS to load level three. SMALL CHANGE GOT RAINED ON is the password on level three.

THE POKE:

Just rewind your Agent XII tape, press Play, and run the poke.



```
10 ' AGENT XII
20 ' All Parts (TAPE)
30 ' By Jason Brooks
40 DATA 06,00,11,00,30,CD
50 DATA 77,BC,EB,CD,83,BC
60 DATA CD,7A,BC,21,35,A0
70 DATA 11,40,00,01,92,00
80 DATA ED,B0,21,00,03,11
90 DATA 01,03,01,00,02,36
100 DATA 00,ED,B0,3E,C3,21
110 DATA 40,00,32,0C,03,22
120 DATA 0D,03,C3,72,01,F3
130 DATA 31,FF,BF,CD,C7,00
140 DATA CD,BA,00,3E,C9,32
150 DATA DA,5C,21,64,00,22
160 DATA 0D,03,C3,00,40,4A
170 DATA 61,73,6F,6E,20,42
180 DATA 72,6F,6F,6B,73,F3
190 DATA 31,FE,BF,DD,21,9A
200 DATA 02,CD,72,02,CD,C7
210 DATA 00,CD,BA,00,CD,C7
220 DATA 00,DD,21,00,D0,ED
230 DATA 5B,9D,03,3E,FF,CD
240 DATA A1,01,21,00,D0,11
250 DATA E0,8C,01,10,21,AF
260 DATA 32,A1,DD,ED,B0,21
270 DATA A5,00,22,D0,03,C3
280 DATA 00,70,43,2E,57,2E
290 DATA 54,2E,41,2E,F3,31
300 DATA FE,BF,CD,C7,00,CD
310 DATA BA,00,AF,32,9A,5D
320 DATA 21,00,53,22,71,03
330 DATA E9,DD,21,00,04,ED
340 DATA 5B,9C,03,3E,FF,C3
350 DATA A1,01,DD,21,9C,03
360 DATA 11,05,00,AF,C3,A1
370 DATA 01
380 FOR i=&A000 TO &A0C6
390 READ a$:a=VAL("&"+a$)
400 chk=chk+a:POKE i,a
410 chk1=chk1+(i*a)
420 NEXT
430 IF chk=19735 THEN 450
440 PRINT"Data Error.":END
450 IF chk1<>-482991419 TH
EN 440
460 CALL &BD37:CALL &A000
```

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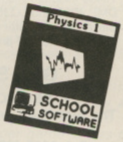

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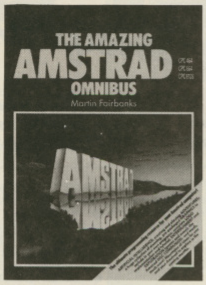

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Heading for cut price disaster

I READ with interest your news story in the February issue about the boom in budget games. Over the last six months the trend towards recycling past best-sellers as budget titles or as parts of compilations has become particularly noticeable.

There was a time when the vast majority of budget titles were originals noticeably less lavish than the full-price offerings, but often just as enjoyable.

Then everybody noticed that compilations featuring former big names almost always got into a top 10 which was becoming increasingly dominated by budget titles.

The software companies cottoned on to the fact that old games are not worthless, but can be given a second lease of life as an el cheapo.

The budget companies, ever hungry for new titles, also turned to golden oldies as a source of supply.

Great idea you might think, everybody benefits. We punters get full-price quality software for a fraction of the original cost, and the software houses milk every last drop of profit from what would have been dead meat.

Not so. Think what the current trend could lead to. The market has wakened up to the fact that cheapies and compilations sell, so everybody is jumping on the bandwagon.

This means that there is a greater demand for games to market in this way. Have you noticed how at one time you had to wait ages for a game to reappear, but now some are revived after only a couple of months?

The consequence of this is that the public now expects that if a game is any good – and often if it isn't – it will resurface in a short time.

The temptation is to wait till it comes back in Computer Hits 93 or as a Code Masterbird £1.99er, and in any case they're all spending their money on compilations and budgets anyway.

This means that the original game will sell less well than it would otherwise have done, and comes back as a cheapie even quicker. It's a process of positive feedback where the effects fuel the cause.

A compilation sells at about the same price as a full-priced game so the profit per game is less than it would have been. Innovative quality games cost money to develop but as the software houses can now count on less return for a given game they will tend to spend less on it in the first place.

The upshot of all this is that the current trend is leading to an increase in demand for the quantity of games produced, but without a proportional increase in profits. This must mean that the quality of individual games is going to get worse – substituting quantity for quality.

The obvious answer is for us to boycott cheapies and compilations, and only buy full-priced software to enable the quality to stay up. Human nature being what it is, nobody will – me included. – **Keith Seymour, Halkyn.**

Ancestral programs

I HAVE a problem and there is no other to turn to but you. My son and I are very interested in getting a program about genealogical tables in which we could edit every progenitor and facts about him or her.

My son, poor devil, has a Commodore 128 so if you could tell us where to get a genealogical program for either the Amstrad or the Commodore we would be very grateful. – **Edwin Petersen, Copenhagen.**

● If your Amstrad is a disc model try: David Computer Software, 38, South Parade, Bramhall, Stockport SK7 3BJ. Tel: 061-439 4841 who do two genealogical programs for the Amstrad CPC, and various other formats.

Quick on the undraw

I AM writing a Basic program which draws wireframe pictures. It can draw objects from any angle and I've been trying to produce simple animation by drawing the object, clearing the screen, drawing it again from a slightly different angle, and so on.

The trouble is that it's far too slow. Some investigation revealed that clearing the screen takes quite a long time and I wondered if there's a way of speeding up this part of the operation?

Are there any other tips for making Basic programs run faster?. – **Alan Moulds, Fleetwood.**

● You'll find that clearing the screen more quickly is still too slow for decent wireframe animation in Basic. You need machine code for that, and even then it might be better to erase individual lines rather than wipe the whole screen.

There are several ways of making Basic programs run faster. Most of them make the program more difficult to read but that can't be helped:

● Avoid REMs.

● Use integer variables where possible.

● Avoid unnecessary GOSUBs.

● Cram as many statements on to a line as you can.

● Where the result of a

Turn to Page 48 ▶

Minifile explained

I BOUGHT your Utilities Galore disc, chiefly for Checksums and Minifile. Checksums is OK but I cannot get Minifile to work.

I wish to set up an address and phone book so I presume I need the Record option.

On selecting this and the sub-option Add, I can get no further. How is a record added? – **F.E.L. Parsons, Shrewsbury.**

● The record option simply adds blank cards to the file. When you've generated a sufficient number of cards you need to select the Format option.

From here you can add titles – in your case a person's name – and fields such as the address, telephone number, and any other details.

For each field select the field option, type the text, and press Return. The text will now appear on the card. Use the cursor keys to move it to the desired position and press Copy.

This fixes the field and you can now add more, or exit.

◀ *From Page 47*

calculation is used more than once, put it in a variable for reuse. Calculate all your sines, cosines and tangents at the start of the program and put them in arrays.

● Stick to short variable names.

● In speed-critical sections try thinking of different methods to achieve the desired result, and then time each one to find the fastest.

This routine clears the screen over three times faster than CLS. It ignores windows, the current paper setting, doesn't home the cursor and doesn't attempt to keep the display tidy while at work. It might upset anything relying on TIME or interrupts.

```
10 MEMORY HIMEM-&4E:m=HIME
M+1
20 FOR a=m TO m+&4D:READ v
$:v=VAL("&"+v$)
30 POKE a,v:c=c+v:NEXT
40 IF c<>9538 THEN PRINT"T
yping mistake in data":END
50 PRINT"CALL &"HEX$(m)" t
o clear screen"
60 DATA 18,29,F3,21,0,0,1,
0,2,ED,73,27,80,31,0,0,E5,
E5,E5,E5,E5,E5,E5,E5,E5,E5
,E5,E5,E5,E5,E5,E5,B,78,B1
,C2,10,80,31,0,0,FB,C9,13,
13,D5,DD,E1,DD,36,FE,0,DD,
36,FF,0,21,25,0,19,DD,75,9
,DD,74,A,21,E,0,19,DD,75,2
2,DD,74,23,DD,E9
```

For those of you into machine code, here's how it works. The stack is temporarily relocated at the top of screen memory.

HL is loaded with 0 and there follow 16 PUSH HL instructions. This has the effect of filling the top 32 bytes of the screen memory with zeros. This is repeated 512 times, eventually filling all 16k.

Finally the stack is restored to its former position before returning to Basic.

The routine runs with interrupts disabled. This is partly for speed but also to get round a problem: With interrupts enabled the routine gets interrupted several times by the operating system.

The interrupting routines use the stack and it was found that allowing them to do so caused the occasional crash.

The only other point of note is that the routine is relocatable and the first time it is called it adjusts internal references to absolute addresses to suit the current location in memory.

A CPC for Christmas

AFTER typing in Save Santa (which is 257 lines long!) I found that it didn't work. I was very disappointed. Every time I typed RUN, Type mismatch in 2180 *came up. This is my first issue of your magazine as I got my CPC6128 for Christmas.*

Could you tell me what is wrong? The line 2180 is exactly the same as in the magazine, so I have not made a mistake.

Also could you tell me how to save a program on a disc? – **Sarah Thomas, Port Talbot.**

● Welcome to all the new readers who have had Amstrads for Christmas, and thanks for all your letters about Save Santa. The program runs perfectly if you don't make any typing mistakes, honest!

Line 2180 may be typed in correctly but it uses the information in lines 2210 to 2570. If any of these lines are mistyped, it's possible that line 2180 will not be able to understand the information, and stop with an error report.

The way to discover the problem line is to wait for the program to stop and type:

```
PRINT ln
```

It isn't unusual for a typing error in one line to produce symptoms in another that looks perfectly healthy.

We don't have time to reply to individual letters like this, but there is a way to track down all those slips of the finger. Use the mail order form on Page 53 to get hold of a copy of our June 1987 issue.

In it is a short utility program which you can use with the Get It Right numbers. It will tell you all the lines that aren't typed in exactly as shown in the magazine.

To save a program, you first need a formatted disc. A brand new disc can't be used until it's been through a formatting process which lays down tracks where the computer can store your programs.

To do this, put side one of the discs that came with your computer into the drive and type:

```
|CPM
```

Wait until you see:

```
A>
```

and type:

```
DISCKIT3
```

When the menu appears select the format option. Opt for data format and put your new disc in the drive. Wait for it to format and then flip it over and do the other side. The disc is now ready for saving programs. Now, choose a name up to eight letters long, say *santa,* and type:

```
SAVE"santa
```

To load it back again, type:

```
LOAD"santa
```

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£10 Prize letter

Printer pointer

WHEN writing programs which use the printer it's handy to be able to detect if the printer is on line. The following routine does just that:

```
100 REM Detect state of pri
nter
110 REM by Michael J. Nowak
120 REM To use: CALL &B0F7
130 REM and then PEEK &B0FF
140 REM 0 means ON LINE
150 REM &FF means OFF LINE
160 FOR a=45303 TO 45310:RE
AD b:POKE a,b:NEXT:DATA 205
,46,189,159,50,255,176,201
```

Put it at the start of your program and at the point where you want to test the state of the printer use it like this:

```
CALL &B0F7
state=PEEK(&b0ff)
IF state=&ff THEN PRINT"Prin
ter off line"
IF state=0 THEN PRINT"Printer
on line"
```

I hope this proves useful to other readers. – **Michael J. Nowak, London.**

Software Soft sell

WHY does nobody want to sell me software? Each month computer magazines carry lavish advertisements aimed at enticing the likes of me to part with cash. The promotional efforts are further aided by the appetite-whetting activities of the reviewers.

Why then was it impos-

sible for me to buy a copy of Deluxe Scrabble for the CPC6128 in the six week run up to Christmas? No, it was not that stocks had run out because of the Christmas rush.

None of the shops I visited in this neck of the woods – including branches of large chain stores – had received a single copy of the program. Many claimed to have it on order but were awaiting delivery, while others looked vague, gasped, and passed.

I wonder how many other people found a similar problem? How many, like me, were bemused at how it could be that at the time of year when sales opportunities are at their highest, neither manufacturers nor retailers appeared particularly concerned about missing out on sales?

The situation seems even more perplexing when you take into account the fact that this apparent lack of business acumen is displayed by software houses and retail outlets who invariably charge full price for the products – when they have them – and therefore enjoy the biggest margins.

If ever there was a case for promoting the success of the discount mail order advertisers, this is it. More power to your elbows lads! **– A. B. Haberfield, Porthcawl.**

Free editor

AS a disc user I frequently find myself editing them so I have written a 2k machine code disc sector editor. It is fast, efficient, and user-friendly.

Not being selfish, I would like to offer all readers of Computing with the Amstrad CPC *a free copy of the program, plus some RSXs for disc formatting. Just send me a disc with SAE.* **– Niall Brady, Holywell Rd., Sligo, Eire.**

Bugged by biomorph

I TYPED in the Biomorph program from your January issue and tried to save it to disc. It would not all save, but got up to line 1040 with two more lines of gobbledegook.

I got rid of the two lines and resaved it. When I catalogue the disc I find that the program is 5k long but the resaved version is 38k! Any ideas? **– Richard Gore, Catford.**

● It's very difficult to diagnose something like this at a distance. The problem may be a faulty disc; try with another disc to see if it makes any difference.

We suspect that the problem is either the disc operating system or Basic have crashed when you attempt to save.

This would happen if the save occurred after you had run the program and you had made a typing mistake in one or more of these lines: 80,90,100,1340,1360

You don't stand much chance of recovering the lost lines. Reload the program but do not run it. Save it as an Ascii file like this:

```
SAVE"biomorph.bas",a
```

Catalogue the disc. If the file shows as 5k or less you can reload the program and retype the missing lines. If not, there's nothing we can do and you'll have to start from scratch. Don't run it before saving a copy!

If there are further problems, use the checksum routine from our June 1987 issue to rectify any typing mistakes.

Linking up a monitor

I INTEND to buy an Amstrad CPC464 and I already have a Philips CT2007 colour TV/monitor, which has an RGB socket. In order to use the Amstrad with this via the RGB socket would I have to buy the power supply and modulator? If not, is it possible to buy the CPC464 without the monitor? **– Alasdair Martin, Stornoway.**

● The official line by Amstrad is that the monitor and keyboard are not available separately. In practice you might find branches of Comet and Currys will split systems.

To use a CPC464 keyboard independently of the Amstrad monitor you do need a power supply. This can be provided by the MP1 modulator which will also generate a signal suitable for the TV's aerial socket. If you are going to connect to the RGB input of the monitor, you still need the MP1 as a power supply unless you can provide 5v rated at 2 amps by other means.

There are two sorts of RGB – linear and TTL. The Amstrad uses linear RGB. If your monitor is TTL you will not get the full range of colours with the RGB input. If the monitor is linear, it may still need some resistors in the lead to get the voltage level right.

Pattern designer bug

I TYPED in Ian Sharpe's pattern fill program in the January issue – wonderful! I'd like to point out a problem in the pattern designer – there isn't a line 450, as there should be. The missing line, as I'm sure you've guessed, is:

```
450 RETURN
```

I hope this helps other readers who may have been confused. **– Philip Arden, Uxbridge.**

● You're quite right Phil. Thanks to you and many others who brought the mistake to our attention. The last line of the program was cut off somewhere between typesetting and printing – as will this reply if the artroom reads it!

Face the music

LAST year you very kindly printed a letter from me which stated that I was offering my version of J.S. Bach's Brandenburg Concertos for CPC owners who have Rainbird's Advanced Music System.

I got a very good response from that, thank you very much. Since then I have completed two further discs of music for the Advanced Music System. Music II contains music by Mozart, Mussorgsky, Handel, Bach and others.

Music III features, among many other things, Vivaldi's The Four Seasons.

Those who only have the basic version of The Music System need not feel left out. I have just completed a collection of demo pieces for them entitled Short Works which comprises 50 pieces of music. Sadly, like my other collections it is only available on disc.

If anybody is interested they are invited to send me an SAE for further details. **– Rob Baxter, 50 Milton Grove, Whalley Range, Manchester M16 0BP.**

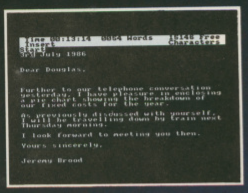
Pen pals please

I AM a 14-year-old Norwegian girl with an Amstrad CPC6128. I would like to exchange hints, tips and listings with other Amstrad owners so grab your pen and write a letter to: **Irene Brenna, Steinspranget 5, 3340 Amot, Modum, Norway.**

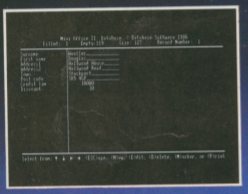
★ ★ ★

HELLO, I'm French and I'd like an English pen pal to exchange ideas and listings. **– Philippe Sivy, La Close Raie, 56630 Langonet, France.**

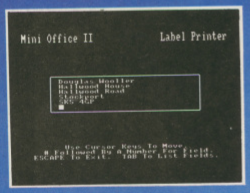
All this in just



WORD PROCESSOR
Compose a letter, set the print-out options using embedded commands or menus, use the mail merge facility to produce personalised circulars – and more!



DATABASE
Build up a versatile card index, use the flexible print out routine, do powerful multi-field sorting, perform all arithmetic functions, link with the word processor – and more!



LABEL PRINTER
Design the layout of a label with the easy-to-use editor, select label size and sheet format, read in database files, print out in any quantity – and more!

...and at a price

Mini Office II offers the most comprehensive, integrated suite of programs ever written for the Amstrad – making it the most useful productivity tool yet devised.

A team of leading software authors were brought together to devote a total of 26 man years of programming to the development of Mini Office II. What they have produced is a package that sets new standards in home and business software.

The sample screenshots above illustrate just a few of the very wide range of features, many of which are usually restricted to software costing hundreds of pounds. Most are accessed by using cursor keys to move up and down a list of options and pressing Enter to select.

Is it that easy to use? Several leading reviewers have already sung its praises on this very point.

Yet possibly the best advertisement for Mini Office II is that it comes from the same stable that produced the original Mini Office package back in 1984.

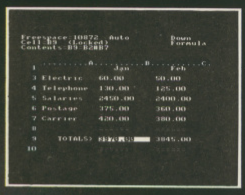
That was so successful it was shortlisted in two major categories of the British Microcomputing Awards – the Oscars of the industry – and sold in excess of 100,000 units!

It was up to Mini Office II to take over where the first Mini Office left off, with 32 extra features, two additional modules, a program to convert existing Mini Office files to Mini Office II format, and a 60 page, very easy to follow manual.

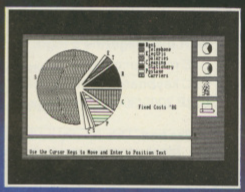
This is the package thousands of Amstrad owners have been waiting for – and at a price everyone can afford!

t ONE package!

SPREADSHEET
Prepare budgets or tables, total columns or rows with ease, copy formulae absolutely or relatively, view in either 40 or 80 column modes, recalculate automatically – and more!



GRAPHICS
Enter data directly or load data from the spreadsheet, produce pie charts, display bar charts side by side or stacked, overlay line graphs – and more!



COMMS MODULE
Using a modem you can access services such as MicroLink and book rail or theatre tickets, send electronic mail, telex and telemessages in a flash – and more!

ce that can't be matched!

Here's what some independent reviewers say about Mini Office II:

Menus throughout the program were abundant and well structured, allowing complex choices to be made with hardly a glance at the pocket-sized spiral-bound manual, and offering a wealth of user-defined functions . . . For the money it really is unbeatable. Dedicated word processors, spreadsheets and comms packages may offer some extra facilities, but some are so full of whistles and bells you may find yourself forever in the manual or even not using half of their power. What you get with Mini Office II is a valient attempt to provide an all-embracing small business package at a down to earth price; it fulfills all its promises, and there's nothing cut-rate about the facilities it provides. – **Tubelink/Viewfax 258**

Amstrad CPC 464, 664, 6128

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Voted Business Program of the Year – 1985 AND 1986
"Popular Computing Weekly"

'This package is incredible value. It includes a word processor, database, spreadsheet, graphics display, label printer and communications module. You could well spend over £200 to get the same range of functions if you bought separate programs from other firms.'
Daily Mail Home Computing Guide.

DATABASE SOFTWARE

Order form on Page 53

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(4) **Disc box.** This luxury padded box is the ideal storage medium, holding up to 30 3in discs.

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– Gandalf, Computing with the Amstrad CPC, January 1988

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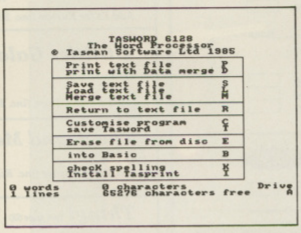

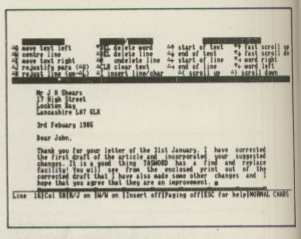

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Your 464 becomes a professional standard word processor with TASWORD 464. Supplied complete with a comprehensive manual and a cassette which contains both the program and TASWORD 464 TUTOR. This teaches you word processing using TASWORD 464. Whether you have serious applications or simply want to learn about word processing, TASWORD 464 and the TUTOR make it easy and enjoyable.

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TASPRINT 464 and TASCOPY 464 drive the following dot-matrix printers:

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EPSON FX-80	TALLY MT-80	BROTHER HR5	COSMOS-80
EPSON RX-80	BROTHER M1009	DATAC PANTHER	AMSTRAD DMP 2000
EPSON MX-80 TYPE III	NEC PC-8023B-N	DATAC PANTHER II	

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Produce and print your own signs, posters, banners and large notices to get your message across with maximum impact.

- *Four distinctive lettering styles*
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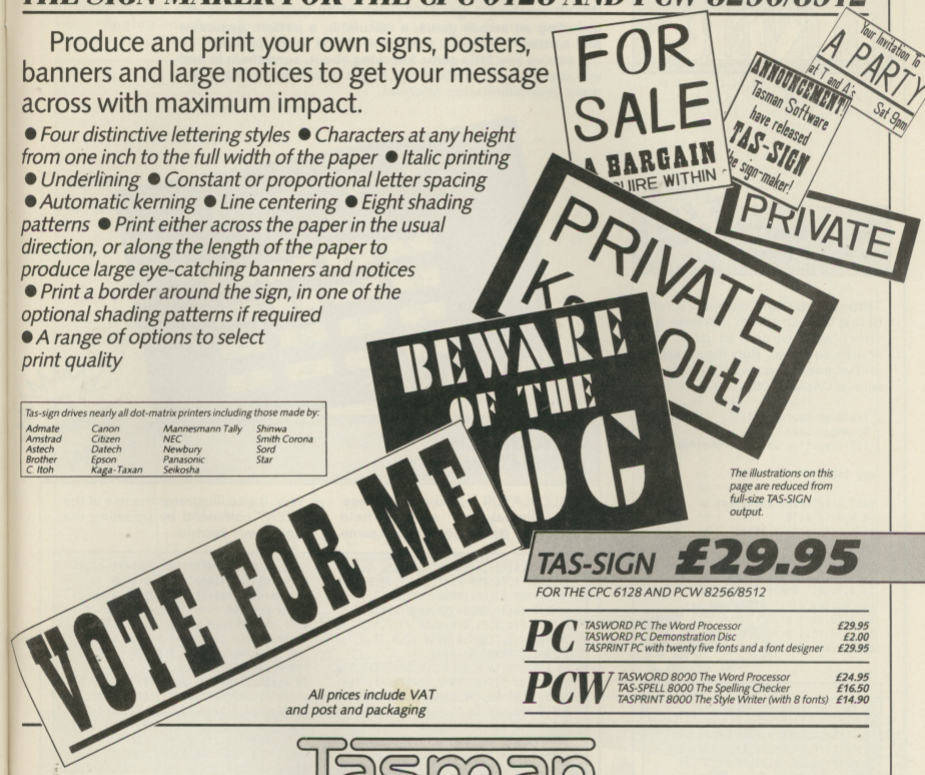
- *Underlining*
- *Constant or proportional letter spacing*
- *Automatic kerning*
- *Line centering*
- *Eight shading patterns*
- *Print either across the paper in the usual direction, or along the length of the paper to produce large eye-catching banners and notices*
- *Print a border around the sign, in one of the optional shading patterns if required*
- *A range of options to select print quality*



The illustrations on this page are reduced from full-size TAS-SIGN output.

Tas-sign drives nearly all dot-matrix printers including those made by:

Admate	Canon	Mannesmann Tally	Shinwa
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Textdump
By Angus Lear

£10 WINNER

THIS program will output a screen of text to your printer. Because it is short we decided to print the source code too. Run the program and whenever you want to print the screen CALL &A000.

```
; Textdump source code
; By Angus Lear
; (c) Computing with the Amstrad

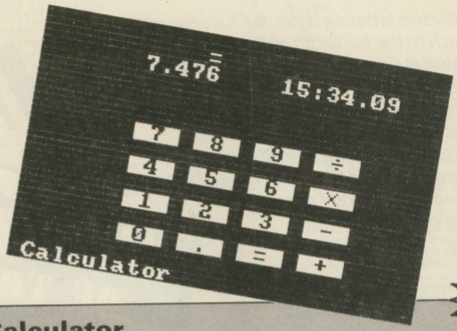
 org &a000

 call &bb81:call &bc11:inc a
 ld b,a:ld a,10
.tloop:sla a:djnz tloop
 ld b,a:ld c,25:ld hl,257
 call &bb75:push bc
.loop:call &bb60:call print
 ld a,9:call &bb5a:djnz loop
 pop bc:dec c:ret z:push bc
 ld a,10:call print
 ld a,13:call print:jp loop
.print:call &bd2b:ret c:jp print
```

```
10 REM Textdump by Angus Lear
20 MEMORY &9FFF:FOR x=&A000 TO &A03C
30 READ a$:POKE x,VAL("&"+a$):NEXT
40 DATA cd,81,bb,cd,11,bc,3c,47
50 DATA 3e,0a,cb,27,10,fc,47,0e
60 DATA 19,21,01,01,cd,75,bb,c5
70 DATA cd,60,bb,cd,2c,a0,3e,09
80 DATA cd,5a,bb,10,f3,c1,0d,c8
90 DATA c5,3e,0a,cd,36,a0,3e,0d
100 data cd,36,a0,c3,18,a0,cd,2b,bd
,d8,c3,2c,a0
```

Get it right!

10 = 20480	
20 = 04608	
30 = 45408	
40 = 12064	
50 = 30080	
60 = 34816	
70 = 46464	
80 = 58176	
90 = 22848	
100 = 42784	



Calculator
By David Bozon

£5 WINNER

CALCULATOR features an impressive display of a hand-held calculator and works in the same way. It also illustrates the use of the EVERY command by updating the time every second.

```
10 DIM k$(15),x(15),y(15):MODE 1:INK
0,0:INK 1,26:INK 2,11:INK 3,13:BORDER
 13:PAPER 3:CLS:SYMBOL AFTER 42:SYMBO
L 42,0,66,36,24,24,36,66,0:SYMBOL 47,
0,24,0,126,0,24,0:WINDOW #1,7,33,4,18
:PAPER#1,2:CLS#1:WINDOW #2,9,18,5,7:P
APER#2,3:PEN#2,0:CLS#2
20 FOR a=0 TO 6 STEP 2:PLOT 528+a,350
-a,0:DRAW 528+a,110-a:DRAW 96+a,110-a
:NEXT:PLOT 96,110:DRAW 96,350:DRAW 52
8,350:FOR n=0 TO 15:READ k$(n),x(n),y
(n):PAPER 0:PEN 1:LOCATE x(n),y(n):PR
INT" "k$(n)" ":NEXT:f=1:LOCATE#1,2,15
:PEN#1,0:PRINT#1,"Calculator";
30 WINDOW #3,22,31,5,7:PAPER#3,3:PEN#
3,0:CLS#3:PRINT#2,"12-hr Time";:PRINT
#2," £hh:mm£";:PRINT#2," <ENTER>":LOCA
TE #3,2,2:INPUT#3,tim$:CLS#2:CLS#3:h=
VAL(MID$(tim$,1,2)):m=VAL(MID$(tim$,4
,)):mm=VAL(MID$(tim$,5,1)):EVERY 50
GOSUB 80
40 a$=INKEY$:IF (a$>="0" AND a$<="9")
 OR a$="." THEN GOTO 50 ELSE IF a$="+
" OR a$="-" OR a$="*" OR a$="/" OR a$
="=" THEN GOTO 60 ELSE 40
50 in$=in$+a$:SOUND 2,50,10:LOCATE #2
,1,2:PRINT#2,SPACE$(10);:LOCATE #2,11
-LEN(in$),2:PRINT#2,in$:GOTO 40
60 num=VAL(in$):IF f=1 THEN ans=num:n
s$=a$ ELSE IF f>=2 THEN os$=ns$:ns$=a
$:IF os$="+" THEN ans=ans+num ELSE IF
 os$="-" THEN ans=ans-num ELSE IF os$
="*" THEN ans=ans*num ELSE IF os$="/"
 THEN ans=ans/num
70 ans$=LEFT$(STR$(ans),10):LOCATE #2
,1,2:PRINT#2,SPACE$(10);:LOCATE #2,11
-LEN(ans$),2:PRINT#2,ans$:SOUND 2,100
,10:LOCATE #2,10,1:PRINT#2,ns$;:IF ns
$="=" THEN f=1:ans=0:in$="":GOTO 40 E
LSE f=f+1:in$="":GOTO 40
80 ss=ss+1:IF ss=10 THEN ss=0:s=s+1:I
F s=6 THEN s=0:mm=mm+1:IF mm=10 THEN
mm=0:m=m+1:IF m=6 THEN m=0:h=h+1:IF h
=13 THEN h=1
90 h$="0"+STR$(h):t$=RIGHT$(h$,2)+":"
+RIGHT$(STR$(m),1)+RIGHT$(STR$(mm),1)
+":"+RIGHT$(STR$(s),1)+RIGHT$(STR$(ss
),1):LOCATE #3,2,2:PRINT#3,t$;:RETURN
100 DATA 1,14,14,2,18,14,3,22,14,4,14
,12,5,18,12,6,22,12,7,14,10,8,18,10,9
,22,10,0,14,16,".",18,16,"=",22,16,"/
",26,10,"*",26,12,"-",26,14,"+",26,16
```

Get it right!

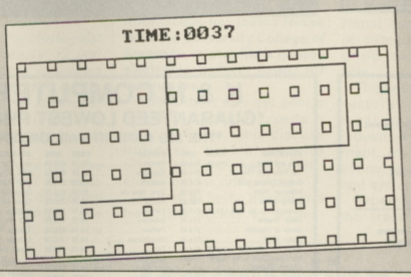
10 = 63200	60 = 01056
20 = 12896	70 = 24032
30 = 06656	80 = 44352
40 = 26720	90 = 41632
50 = 53344	100 = 41056

Digger
By D. Wilkes

£5 WINNER

IN this game the object is to survive as long as you can by directing your digging machine to pass through untouched areas. Use the cursor keys to control the direction and avoid obstacles and your own trail. The game ends if you come across a tunnel you've already dug.

```
10 MODE 1:INK 0,5:BORDER 5:INK 1,26:I
NK 2,24:INK 3,6:MEMORY &7FFF:FOR A=&8
000 TO &828B:READ B$:POKE A,VAL("&"+B
$):NEXT A:LOCATE 13,4:PRINT"TRENCH DI
GGER":PEN 3:LOCATE 1,8:PRINT"Guide th
e Trench Digger around the maze."
20 PEN 3:LOCATE 1,10:PRINT"How long c
an you last before hitting the":LOCAT
E 2,12:PRINT"maze or falling into you
r own trench.":LOCATE 6,16:PEN 2:PRIN
T"-USE CURSER KEYS TO CONTROL-":LOCAT
E 9,22:PEN 1:PRINT"PRESS ENTER TO STA
RT":IF INKEY(18)=-1 THEN 20
30 DATA 3E,01,F5,CD,0E,BC,F1,CD,0E,BB
,11,5A,00,6B,62,D5,E5,CD,C0,BB,11,2C,
02,E1,E5,CD,F6,BB,11,2C,02,21,36,01,C
D,F6,BB,D1,D5,21,36,01,CD,F6,BB,D1,E1
,CD,F6,BB,21,36,01,06,06,C5,E5,06,0D,
11,5A,00,C5,E5,D5,CD,C0,BB,D1,E1,E5,D
5,21,00,00,11,0A,00,CD,F9,BB,21
40 DATA F6,FF,11,00,00,CD,F9,BB,11,F6
,FF,21,00,00,CD,F9,BB,21,0A,00,11,00,
00,CD,F9,BB,E1,D1,01,26,00,09,EB,C1,1
0,C8,E1,01,06,FF,09,C1,10,B9,3E,02,CD
,90,BB,21,03,0F,11,47,82,CD,5C,81,3E,
03,CD,0E,BB,21,40,01,22,8C,82,21,C8,0
0,22,8E,82,21,02,00,22,90,82,21
50 DATA 00,00,22,92,82,21,00,00,22,94
,82,DD,21,90,82,06,05,AF,DD,77,00,DD,
23,10,F8,AF,3C,CD,1E,BB,28,0E,21,00,0
0,22,92,82,21,02,00,22,90,82,18,3C,3E
,08,CD,1E,BB,28,0E,21,00,00,22,92,82,
21,FE,FF,22,90,82,18,27,AF,CD,1E,BB,2
8,0E,21,00,00,22,90,82,21,02,00
60 DATA 22,92,82,18,13,3E,02,CD,1E,BB
,28,0C,21,00,00,22,90,82,21,FE,FF,22,
92,82,2A,8C,82,ED,5B,90,82,19,22,8C,8
2,E5,2A,8E,82,ED,5B,92,82,19,22,8E,82
,D1,D5,E5,CD,F0,BB,FE,00,C2,A4,81,E1,
D1,CD,EA,BB,3E,08,0E,07,CD,34,BD,3E,0
7,0E,38,CD,34,BD,AF,0E,14,CD,34
70 DATA BD,3E,07,0E,3F,CD,34,BD,21,03
,14,CD,75,BB,CD,69,81,C3,BD,80,CD,75,
BB,1A,FE,40,C8,CD,5A,BB,13,18,F6,2A,9
4,82,23,22,94,82,DD,21,90,82,DD,E5,06
,05,DD,7E,00,FE,09,20,08,AF,DD,77,00,
DD,23,18,06,3C,DD,77,00,18,02,10,E9,D
D,E1,01,04,00,DD,09,41,DD,7E,00
80 DATA C6,30,CD,5A,BB,DD,2B,10,F4,C9
,06,FF,C5,3E,08,0E,0C,CD,34,BD,3E,07,
4F,CD,34,BD,ED,5F,4F,3E,06,CD,34,BD,0
6,00,10,FE,C1,10,E3,3E,07,0E,3F,CD,34
,BD,3E,01,CD,0E,BC,2A,94,82,ED,5B,96,
82,7C,BA,38,5D,20,06,7D,BB,38,57,28,5
5,22,96,82,21,98,82,11,90,82,06
90 DATA 04,1A,77,23,13,10,FA,21,0E,18
,CD,75,BB,2A,96,82,DD,21,98,82,CD,74,
81,21,05,0B,11,51,82,CD,5C,81,DD,21,9
D,82,CD,74,81,21,0E,0B,11,60,82,CD,5C
,81,21,16,07,11,6E,82,CD,5C,81,3E,2E,
CD,1E,BB,C4,00,00,3E,2B,CD,1E,BB,28,F
1,C3,00,B8,21,0E,18,CD,75,BB,DD
100 DATA 21,98,82,CD,91,81,C3,03,82,5
4,49,4D,45,3A,30,30,30,30,40,59,4F,55
,52,20,54,49,4D,45,20,57,41,53,20,40,
42,45,53,54,20,54,49,4D,45,20,49,53,2
0,40,44,4F,20,59,4F,55,20,57,41,4E,54
,20,41,4E,4F,54,48,45,52,20,47,4F,20,
28,59,2F,4E,29,3F,40:CALL &8000
```




```
10 = 48448
20 = 00000
30 = 06048
40 = 40000
50 = 43488
60 = 31680
70 = 21216
80 = 03072
90 = 06976
100 = 58240
```

Get it right!

Spiral
By Michael Wilcox

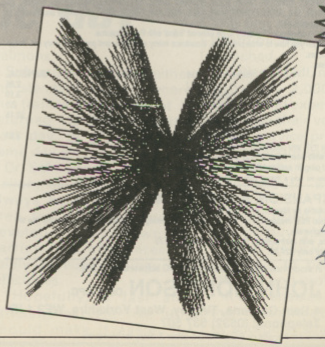
£5 WINNER

SOME quite complex and pleasing patterns are generated by this program. When you've seen enough of one pattern, press any key for another.

```
10 MODE 1:INK 3,6:INK 2,0:BORDER 1
20 DEFINT b,c
30 ORIGIN 320,200:CLG
40 b=RND*5+1
50 c=RND*5+1
60 FOR a=0 TO 1000 STEP PI/30
70 MOVE 0,0
80 DRAW 200*COS(a/b),200*SIN(a/c),3
90 DRAW 23,30,1:IF INKEY$<>"" THEN 30
100 NEXT:GOTO 30
```

```
10 = 19008
20 = 59136
30 = 63296
40 = 24896
50 = 41024
60 = 00384
70 = 62912
80 = 51744
90 = 23360
100 = 01184
```

Get it right!



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Statement	(timing in seconds)	Amstrad Basic	JMPASCAL
For I= 1 to 10000	: Next I	12.5	2.65
A(I)=A(I)+A(I)	(10,000 times)	34.4	3.19
PLOT X, Y	(10,000 times)	12.46	2.1
PRINT "X"	(10,000 times)	57.5	20.15
10 A=0			
20 A=A+1: IF A < >	10000 THEN 20	32.74	2.61

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Last year its charter was changed to allow it to maintain a register of chartered psychologists which the general public will soon be able to consult.

This gives the country a new breed of chartered specialists whose education and professional conduct the BPS oversees.

The society is no stranger to the benefits of electronic mail. For some time its members who work in academic institutions have been communicating via JANET, the Joint Academic Network.

By joining a more widely-used service like MicroLink, BPS members working in all areas of psychology can now communicate faster and more efficiently with the Society's offices in Leicester.

In addition the society's extensive business activities, which include publications and software, will be enhanced by MicroLink Email and telex facilities.

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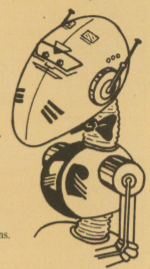

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Q: HOW DOES IT WORK THEN? IS IT EASY? USER-FRIENDLY? ERROR-TRAPPED? IDIOT PROOF? GUARANTEED?

A: YES! It works a treat and it could not be easier. The menu gives four basic options – to **SAVE** a program, to **RETURN** to continue it, to **JUMP** (say to your own routines – invaluable for hackers) and **TOOL** to access the MULTI-TOOLKIT set of built-in utilities. For example pressing **S** to **SAVE** will first allow you to **NAME** the back-up and then let you save a **PROGRAM** or just a **SCREEN** to **TAPE** or **DISK**. Before the saving itself, MULTIFACE compresses the program so that it takes the least amount of space on tape/disk and will re-load as quickly as possible. Once a program is saved, you can **RETURN** or **JUMP**, use the **TOOLKIT** to change it, **SAVE** it again, etc.

Q: DON'T YOU CORRUPT THE SCREEN WITH YOUR MENU, INSTRUCTIONS, PULL DOWN WINDOWS, ETC.?

A: NO. MULTIFACE TWO has its own memory (8K ROM & 8K RAM) and a lot more hardware – thus when it finishes its job or when you re-load your back-ups, everything is **FULLY** and **AUTOMATICALLY** restored: screen modes, colours, windows, etc. This is essential and NO OTHER DEVICE CAN DO IT!

Q: OK, SO MULTIFACE CAN COPY FROM TAPE TO DISC, BUT CAN IT DO TAPE TO TAPE OR DISC TO DISC OR DISC TO TAPE?

A: Of course it can. MULTIFACE saves either to tape or disc and it saves whatever happens to be in the computer at that time – no matter how you loaded it in.

Q: SO FAR SO GOOD. BUT CAN'T I DO ALL THIS WITHOUT THE MULTIFACE?

A: ABSOLUTELY NOT! First, you need a hardware device, a "magic box", to be able to stop and copy programs AT ANY STAGE – be it upon loading, half-way through the game, etc. Tape/disc copiers can only try to copy programs BEFORE they load: if there are unorthodox loaders, speedlocks, protections against copying, etc., you'll end up with a problem – but not with a back-up. Also, with MULTIFACE you can poke infinite lives, ammunition, etc. – and then SAVE.

Q: MULTIFACE IS NOT THE ONLY 'MAGIC BOX' ON THE MARKET – WHY SHOULD I BUY IT MORE THAN ANYTHING ELSE?

A: There are four devices on the market. Action Reply by Datel Electronics, Disc Wizard by Evesham Micros, Mirage Imager and MULTIFACE TWO. Each manufacturer would naturally argue his product is the best buy – fortunately (for you and us), MICRONET recently compared all four units and MULTIFACE TWO came out the best in literally all respects: the most successful one – 100%, the ONLY AUTOMATIC ONE, the FASTEST ONE both in LOADING *AND* SAVING time, the one taking the LEAST ROOM when saving – and you still get a couple of EXTRAS: a RESET button and an extensive and unique MULTI-TOOLKIT.

Q: MULTIFACE IS IT! THE RIGHT THING IN THE RIGHT TIME! IF ONLY IT PAID FOR ITSELF...

A: But it does! By the time you buy 8 programs on tape instead of disc, you will have saved £40 – the cost of the MULTIFACE. The money you save on further programs is all yours ... MULTIFACE **is worth every penny, saves you pounds!**

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That alone would have satisfied many people, but Romantic Robot has gone one step further, incorporating a memory editor. No program is safe with this every thing is out in the open, including the Z80 registers, CRTC data and any part of memory.

Don't be fooled into thinking this will result in mass piracy, however. The *Multiface* unit itself must be plugged into your Amstrad to allow reloading of a program it saved.

Multiface II must be the cleverest hardware device at present – a necessity for disk owners who thought they were stuck with loading from tape every time.

AMSTRAD ACTION JANUARY 1987

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