

# Home Computing WEEKLY

An Argus Specialist Publication

NEW

No. 1

March 8-14, 1983

35p

## PLOT TO KILL DRAGON

Colour Genie boss Alan Whitford is just back from talks in Hong Kong on how to slay the Dragon.

His problem is that, at £199 for 32K of RAM, the Welsh-made Dragon 32 has twice the memory of the standard Colour Genie, priced at

£224, although his company, Lowe Electronics, says the Genie has far more features.

There is, however, a higher priced 32K Colour Genie, or 16K can be added internally for about £39.

The answer Mr Whitford brought back from makers EACA was: we can add more memory as standard if more Colour Genies are sold, so bringing down production costs.

Since the November launch, 2,500 Colour Genies have been purchased and a £150,000 advertising campaign begins in June with a new advertising agency, chosen from a list of 18.

Mr Whitford, who will now be holding talks with his fellow directors, faces a second difficulty — the increasing value of the Yen is making imports more costly.

He said: "It may be done in two stages. We can add 16K as standard now without any other changes. Going to 48K or even 64K would mean a re-design job and would be a MkII version.

"I'm a little worried that this might not happen for two to three months."

Mr Whitford visits Hong Kong every year, along with distributors from Germany, Spain, Sweden and Italy. As well as three lengthy meetings, they attended a spring banquet with EACA's 1,000 employees to mark the Chinese New Year.

He brought back with him samples of two plug-in games

## Trouble for computer ads

Complaints about advertising claims by three home computer companies have been upheld.

All three, Sinclair, Dragon and Acorn made amendments, says the Advertising Standards Authority.

Two people objected to an advertisement for the Sinclair ZX81 which showed three cassettes but failed to point out that a 16K RAM memory expansion was needed to run them.

Another complaint was about the phrase: "All you need... is a portable cassette recorder." Several makes of

recorder are not compatible with the ZX81. Sinclair said it did not claim all recorders could be used and that it would supply a list of those which did work if a customer requested it.

One complainant wrote in about a claim that the Dragon 32, with 32K was twice as powerful as its competitors and included the 16K Spectrum in a comparison.

Dragon told the ASA that at the time they understood the 48K Spectrum was not readily available so it could not be compared.

The complaint faced by Acorn was about a brochure for its Atom which said any UHF TV set could be used. Acorn agreed some TV sets were incompatible.

## INSIDE

ZX

Microfair:  
first report  
Pages of  
news

Reviews of  
programs  
for ZX81,  
Spectrum,  
VIC-20, BBC  
Programs  
to type in  
for:

VIC-20, BBC,  
TI-99/4A,  
Oric-1

Articles on  
VIC-20, Atari  
Profile of  
software  
house

★ **ARCADIA** ★  
★ **SCHIZOIDS** ★  
★ **WACKY** ★  
★ **WAITERS** ★

**Three  
mind benders  
from**



For details please ring 051-236 6849

Continued on page 3

**WIN 15 SPECTRUMS (48K) + PRINTERS + £2500 OF QUICKSILVA SOFTWARE**

**New software to sell?  
New shop opening?  
Hardware for sale?  
Advertise it here!  
Ring Coleen or Barry on  
01-437 1002 NOW**

**IN BRIEF**

Arcade game fans ignore the software they don't know, even though it may be better.

That's the experience of Ian Sinclair, managing director of Blackpool-based IJK Software.

He said: "We've done arcade games like space invaders and Atlantis and Beebunch and they sell like hot cakes. People will buy them without seeing them.

"Some we have made which are better are just not bought because they have never seen them in the arcade parlours."

*IJK Software, 9 King Street, Blackpool.*



Salamander Software, a Brighton-based partnership of six graduates, is working on a series of programs for the Oric-1.

Until now the group has specialised in software for the Dragon.

Oric Products has commissioned software for its micro and Salamander is working on backgammon, an Othello-type game, a utility programme, a collection of four games, Trek, graphics, maze, and the first in a series of adventures.

*Salamander Software, 17 Norfolk Road, Brighton, East Sussex. BN1 4AA*



Software author John Diggle, who appears as a chef at computer shows, is bringing out two more programs in his Diggle's Kitchen range.

Running on the VIC-20 and ZX81, and later the Jupiter Ace, they are priced at £4.99 and cover Chinese and Indian meals.

*Micro Computer Software, Unit 06, Pear Industrial Estate, Stockport Road, Lower Bredbury, Stockport. SK6 2BP*

# Home Computing WEEKLY

**News.....5-6 10-11**

All the latest — new software, new micros

**ZX Microfair: .....8**

Two pages of what's new for the Spectrum and ZX81

**VIC-20 program: Memory maze. 14**

You have only got seconds to memorise the maze

**BBC and TI-99/4A programs: Bomber.....17**

Two versions of the classic arcade game to type in

**ZX81 reviews .....21**

Don't buy another program . . . until you have read our reviews

**Profile: Imagine Software .....24**

Who is behind a leading software house, and how they plan to sell £2.6m-worth of games — in their first year

**Oric-1: Junior Mathematician ..28**

Another program to type in

**Atari graphics .....30**

We show you how to use the hidden features of the Atari

**Competition.....33**

We've got 15 48K Spectrums, with printers and programs, and £2,500-worth of software waiting to be won.

**Atari: Sub Hunt.....34**

Take charge of your own submarine and torpedo enemy subs

**BBC: Money .....38**

Sort out your money — by typing in our useful BBC program

**Reviews: arcade games.....40**

Our team of reviewers tells you what's best for the Spectrum, BBC micro and the VIC-20

**VIC-20 graphics .....42**

Give your programs more class — we have tips and listings  
*downloaded from [www.ti99iuc.it](http://www.ti99iuc.it)*

<b>Editor:</b> Ron Harris <b>News Editor:</b> Paul Liptrot	<b>Advertisement Manager:</b> Coleen Pimm <b>Assistant Advertisement Manager:</b> Barry Bingham  <b>Managing Director:</b> Jim Connell
---	--

Argus Specialist Publications Ltd.  
145 Charing Cross Road, London WC2H OEE. 01-437 1002

Home Computing Weekly is published on Tuesdays. Distribution by Argus Press Sales and Distribution Ltd, 12-14 Paul Street, London EC2A 4JS. Printed by Alabaster Passmore & Sons Ltd, of London and Maidstone, Kent. Design and origination by MM Design and Print, 145 Charing Cross Rd., London WC2H OEE

**BUY THIS SPACE**

**To advertise  
your latest products!  
Ring Coleen or Barry on  
01-437 1002 NOW!**

*Continued from Front Cover*  
cartridges — Genie Invaders and Fire Bird — due on sale here in about six weeks, with more to follow.

Coming soon is another cartridge for enhanced graphics and diagnostics which will be priced at £20-£30. Cartridges for 16K of extra RAM and for the Forth language are also on the way at similar prices.

They also discussed disc drives — EACA has three already designed. Mr Whitford is thinking of importing, at a "competitive" price, a slimline model with one 5¼in single-sided floppy drive with space inside to add a second.

One of his meetings was on future Genie models.

They discussed a £99 computer, aimed at the Spectrum market and compatible with present Genie software. All agreed it should have a typewriter-style keyboard like existing Genies.

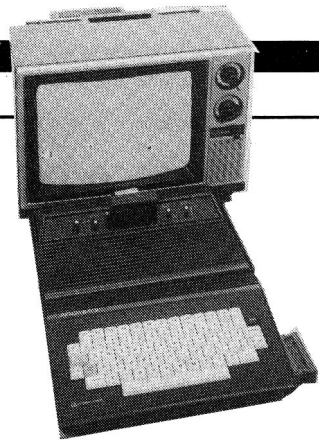
EACA now produces its own keyboards, so there should be no question of paying extra to buy them in from sub-contractors as other makers are often forced to do.

The low-price computer would appear on the market at the end of this year or early 1984, probably with 48K of RAM as memory prices will then have dropped further.

Mr Whitford, who emphasised that no-one should delay buying a computer because of the promise of future models, said: "To stay ahead in this business you must be thinking of new models even before the first has been launched. The next generation of computers will see us offering more for less."

He said it was ironic that one survey showed there were 35 games available for the Dragon, but the fact that there were 45 programs on sale for the Colour Genie had gone unpublished.

*Lowe Electronics, Chesterfield Road, Matlock, Derbyshire DE4 5LE*



## Suddenly it's a computer

Turn your Atari video game player into a home computer for just under £100.

That's the offer from managing director Clyde Roberts, whose company, Hales, is importing the Entex 2000 Piggyback Computer from America.

It plugs into Atari's 2600 and 2600A games players and the colour and design are the same.

Mr Roberts, who reckons he's got a captive market of 750,000 here, said: "Half the marketing has been done for us. We are saying: 'Why spend hundreds of pounds to get your toe wet in computing?'"

"We have heard that other machines which do the same are on the way, but we've yet to see them.

## Plug in a computer — the Entex 2000 Piggyback

"I was at the Las Vegas consumer electronics show in November and no-one had one. We are going to be the first by about six months."

Mr Roberts, whose company is part of the £25m turnover Adam Leisure Group, expects his first imports — re-named for the UK — to be on dealers' shelves at the end of the next month.

It has 70 full-size keys, including nine function keys and four cursor keys, 8K of Microsoft-like BASIC, 3K of RAM, expandable with a 16K cartridge at £29.95, 32 by 16 character display and optional industry standard RS-232 interface. Software comes in cartridges at £19.95-£24.95.

Mr Roberts has got another marketing plan up his sleeve. His company markets Imagic cartridges for the Atari games players and many buyers belong to the Numb Thumb Club. They will get a mail shot telling them of the new product.

And he added: "We've got two more computers to come for later this year."

*Hales, 33 Harrowbrook Road, Hinckley, Leics LE10 3DN*

## Spectrums everywhere

Sinclair ZX Spectrums, now being turned out at 50,000 a month, are now on sale in some branches of Boots, Currys, Greens and John Menzies, as well as W.H. Smith.

Other stores, including John Lewis, House of Fraser, Rank Xerox and smaller

retailers, are being supplied by Sinclair's distributors.

By Easter the company — which recently announced it has sold its millionth computer — expects to be selling 12-15,000 Spectrums a week while the ZX81 is now selling 30,000 a month.

*Sinclair Research, 25 Willis Road, Cambridge. CB1 2AQ*

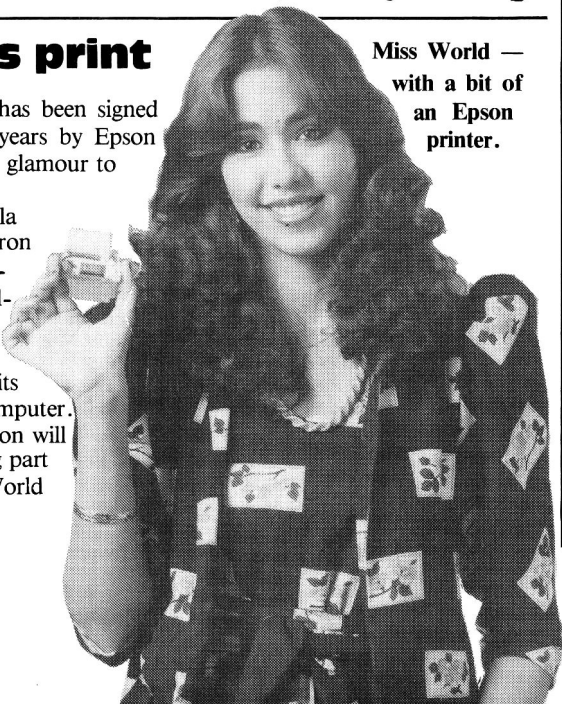
## Miss print

Miss World has been signed up for two years by Epson to add some glamour to its products.

Mariasela Alvarez Lebron will be appearing in advertisements for Epson's printers and its small HX computer.

And Epson will also be taking part in the Miss World finals.

Miss World — with a bit of an Epson printer.



## TI: Buy a second micro

Now, the two-computer family. Texas Instruments says its new £75 basic computer, designed for novices, could be the home's second micro.

TI announced two computers within four days — the other one is a £170 model for professionals and on sale by the end of the month.

The company says it believes that its basic model, the TI-99/2, is the first 16-bit computer at such a low price.

It would be available after October, along with low cost add-ons and software that will also work with the TI-99/4A.

The company says it believes that its basic model, the TI-99/2, is the first 16-bit computer at such a low price.

It would be available after October, along with low cost add-ons and software that will also work with the TI-99/4A.

TI's William Turner said: "The TI-99/2 will be targeted primarily at the technical enthusiast, engineer or student in the home."

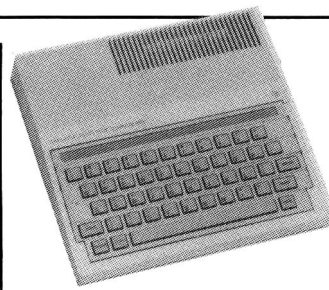
"Additionally, we expect the computer to be purchased as the first computer in the home for those who are just beginning their experience with a computer system, or as a second computer..."

It has 48 rubber-like keys, 4K of user RAM — expandable to 36.2K — black and white display and a port at the back for TI's add-ons, including RS-232 interface, its Wafertape drive and printer/plotter.

Two software cartridges, Learn to Program and Learn to Program BASIC, will be on sale followed by more. And 20 cassettes will be available when the computer is launched here, including educational, household and games. They will also run on the TI-99/4A.

TI's Compact Computer 40 runs on batteries, has a 31-character liquid crystal display and occupies about the

TI Compact Computer 40 — first of a series of portables for professionals



## Texas Instruments' TI-99/2 — cheapest 16-bit computer?

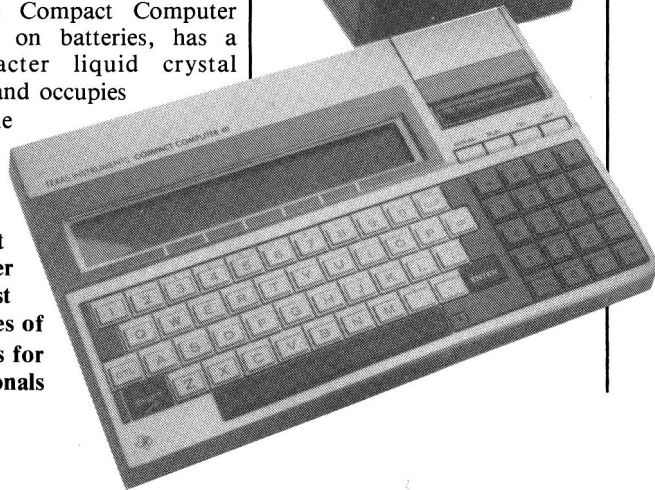
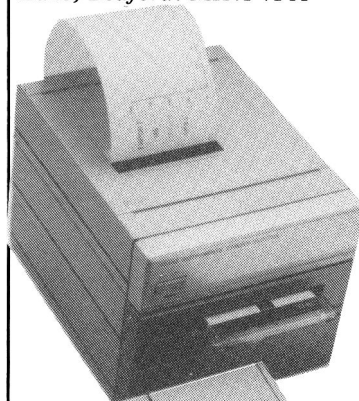
same space on a desk-top as a telephone.

Mr Turner said it was aimed at white collar workers who needed a small personal computer and data communication. It has 32K of ROM, occupied by BASIC, 6K of user RAM, which can be expanded to 16K with plug-ins. It will run the same peripherals as the two other micros with more to come later in the year.

These include a bar code reader, modems, printer and a black and white TV interface. Twenty-two software packages — cartridges and Wafertapes — are promised by the end of March at £34.95-£125.95 and mainly for business. Another 53 are due by November.

The CC-40 measures 9½in by 5¼in by 1in, weighs 22 oz, has a QWERTY keyboard with numeric keypad, batteries for 200 hours and can run off the mains with a £15 adaptor.

*Texas Instruments, Manton Lane, Bedford. MK41 7PA*





# **Bombs away – and you're in the pilot's seat**



In my Bomber program you are the pilot of a crippled jet and the only way to land safely is to destroy the towers to clear a landing strip.

You are given the choice of three skill levels, each giving you a different number of bombs.

When you have chosen the game screen will be set up with your bomber at the top of the screen and a set of towers of random heights at the bottom.

Press any key to start the bomber moving. Engine trouble means you are losing height.

To destroy the towers, press key B to release your bombs. The bombs travel at an angle of 45 degrees and destroy buildings if they hit the roofs.

On levels two and three you can only release two bombs for every pass across the screen. If you hit a building your bomber will be destroyed.

The game can then be replayed or you can end.

### **How it runs:**

10-110 define characters  
120-270 set colours, level, variables

## **Here's two versions of the classic arcade game, Bomber.**

**First John Power presents his program for the TI 99/4A and then Mark Bowyer describes his version for both models of the BBC micro**

280-450 set layout of screen and bombs counter  
460-630 set random height, pattern of towers and prints them  
640-910 move bomber, check if B is pressed, updates score  
910-1200 move bomber and bomb, check if bomb hits tower  
1210-1270 erase tower, sounds explosion  
1280-1330 routine to print score  
1340-1570 bomber crashed, prints info on score, option to run or end  
1580-1830 mission successful, then as above

1840-2240 starting sub-routine, set variables according to level, print text

Apart from some unusual graphics commands, TI Basic is mostly standard. The Texas machine will not accept multiple assignments, nor multiple line statements. Room could be saved on other machines which have these facilities, especially in the case of long variable lists.

The CALL CHAR statement re-defines characters over the ASCII range 32-159. The characters take the form of an

eight by eight grid square split vertically into two four by eight halves. Therefore one hexadecimal number refers to one pattern in one of the four by eight blocks. The character is defined left to right, from the top.

CALL HCHAR is used to position the character on the 32 by 24 screen, and repeat it horizontally. This can be replaced by a poke to the screen, or similar statement on other machines.

CALL VCHAR repeats a character vertically. CALL GCHAR returns the ASCII value of the character present on the screen at the given co-ordinates. This can be used to detect collisions, and can be replaced by peek on other machines.

CALL CLEAR clears the screen, CALL SCREEN sets the screen colour, and CALL COLOR sets character color, the arguments being character set number (on the TI ASCII codes are split into 16 blocks of eight codes) foreground color, background color. CALL SOUND speaks for itself, and is easily replaced by a similar command on another machine.

## BBC AND TI99/4A PROGRAMS

### Variables:

OBR — Bombs (original)  
 BMS — Bombs  
 RW — Row (on screen)  
 CL — Column (on screen)  
 CHO — Original bomber position  
 SH — Shots made per line  
 RS — Random tower pattern  
 TW — ASCII value of character

RH — Random height of towers  
 COL — screen positions of towers  
 SL — Skill level  
 Z — Row of printed message  
 V — Col of printed message  
 TC — Variable holding ASCII char value found by GCHAR  
 TH — same as above  
 CT — Col position of bomb  
 RT — Row position of bomb

### Bomber for the TI 99/4A

```

10 REM ***BOMBER J.POWER 15/1/83***
20 CALL CHAR(96,"55AA55AA55AA55AA")
30 CALL CHAR(97,"0F0F0F0F0F0F0F0")
40 CALL CHAR(98,"FF00FF00FF00FF00")
50 CALL CHAR(104,"209098FE7F181020")
60 CALL CHAR(105,"0000207020000000")
70 CALL CHAR(99,"00000000000000FF")
80 CALL CHAR(112,"00000000183C7EFF")
90 CALL CHAR(100,"00FF000000000000")
100 CALL CHAR(107,"829254EE54928200")
110 CALL CHAR(120,"FFFFFFFFFFFFFF")
120 CALL COLOR(9,2,15)
130 CALL COLOR(12,15,6)
140 CALL COLOR(10,2,6)
150 CALL COLOR(11,5,6)
160 CALL CLEAR
170 REM **STARTING ROUTINE**
180 GOSUB 1840
190 REM **RETURN FROM STARTING ROUTINE-WITH DATA
200 CALL CLEAR
210 FOR QQ=3 TO 8
220 CALL COLOR(QQ,2,15)
230 NEXT QQ
240 OBR=BMS
250 RW=CHO
260 CL=2
270 SH=0
280 FOR X=1 TO 3
290 CALL HCHAR(X,1,120,32)
300 NEXT X
310 CALL HCHAR(23,1,120,32)
320 CALL HCHAR(24,1,120,32)
330 CALL SCREEN(6)
340 M$="BOMBER"
350 Z=2
360 V=6
370 GOSUB 1290
380 CALL HCHAR(1,7,99,6)
390 CALL HCHAR(3,7,100,6)
400 M$="BOMBS="+STR$(BMS)
410 Z=2
420 V=18
430 GOSUB 1290
440 CALL HCHAR(1,19,99,8)
450 CALL HCHAR(3,19,100,8)
460 REM **SET UP TOWERS**
470 COL=7
480 FOR RTD=1 TO 20
490 RANDOMIZE
500 RS=INT(RND*3)+1
510 IF RS=1 THEN 520 ELSE 540
520 TW=96
530 GOTO 590
540 IF RS=2 THEN 550 ELSE 570
550 TW=97
560 GOTO 590
570 IF RS=3 THEN 580 ELSE 500
580 TW=98
590 RH=INT((HL-LL+1)*RND)+LL
600 CALL VCHAR(22-RH,COL,112)
610 CALL VCHAR(23-RH,COL,TW,RH)
620 COL=COL+1
630 NEXT RTD
640 REM **BOMBER MOVEMENT**
650 CALL KEY(O,K,S)
660 CALL HCHAR(RW,CL,104)
670 CALL HCHAR(RW,CL,32)
680 IF S=0 THEN 650
690 CALL HCHAR(RW,CL,104)
700 CALL KEY(O,K,S)
710 IF S=1 THEN 720 ELSE 760
720 IF K<>66 THEN 760
730 IF (SL=2)+(SL=3) THEN 740 ELSE 750
740 IF SH=2 THEN 760 ELSE 750
750 IF CL>=32 THEN 760 ELSE 910
760 CALL HCHAR(RW,CL,32)
770 CL=CL+1
780 IF CL>32 THEN 790 ELSE 870
790 M$=STR$(BMS)+"X"
800 Z=2
810 V=24
820 GOSUB 1290
830 SH=0
840 CL=1
850 RW=RW+1
860 IF RW=23 THEN 1580
870 CALL GCHAR(RW,CL,TC)
880 IF TC=112 THEN 1340 ELSE 890
890 CALL HCHAR(RW,CL,104)
900 GOTO 700
910 REM **BOMB AND BOMBER MOVEMENT**
920 RT=RW+1
930 CT=CL+1
940 IF BMS=0 THEN 700
950 BMS=BMS-1
960 SH=SH+1
970 CALL GCHAR(RT,CT,TH)
980 IF TH=112 THEN 1210 ELSE 990
990 CALL HCHAR(RT,CT,105)
1000 CALL SOUND(-100,-5,2)
1010 CALL HCHAR(RW,CL,32)
1020 CL=CL+1
1030 IF CL>32 THEN 1040 ELSE 1070
1040 CL=1
1050 SH=0
1060 RW=RW+1
1070 CALL GCHAR(RW,CL,TC)
1080 IF TC=112 THEN 1340 ELSE 1090
1090 CALL HCHAR(RW,CL,104)
1100 CALL HCHAR(RT,CT,32)
1110 CT=CT+1
1120 RT=RT+1
1130 IF RT>=22 THEN 700 ELSE 1140
1140 IF CT>32 THEN 700
1150 CALL GCHAR(RT,CT,TH)
1160 IF TH=112 THEN 1210 ELSE 1170
1170 IF (TH=96)+(TH=97)+(TH=98) THEN 700
1180 CALL HCHAR(RT,CT,105)
1190 CALL SOUND(-50,2000,20)
1200 GOTO 1010
1210 REM ***TOWER ERASE***
1220 CALL HCHAR(RT,CT,107)
1230 CALL SOUND(-750,110,2,-6,0,192,2)
1240 CALL VCHAR(RT,CT,32,23-RT)
1250 Z=2
1260 V=24
1270 GOTO 700
1280 REM *** "PRINT AT" ROUTINE***
1290 FOR LOS=1 TO LEN(M$)
1300 CODE=ASC(SEG$(M$,LOS,1))
1310 CALL HCHAR(Z,V+LOS,CODE)
1320 NEXT LOS
1330 RETURN
1340 REM *****BOMBER CRASHED*****
1350 CALL HCHAR(RW,CL,107)
1360 CALL SOUND(-1250,196,2,-7,0,110,2)
1370 FOR X=1 TO 250
1380 NEXT X
1390 FOR QQ=3 TO 8
1400 CALL COLOR(QQ,2,8)
1410 NEXT QQ
1420 CALL CLEAR
1430 CALL SCREEN(8)
1440 GOSUB 2170
1450 PRINT TAB(3);"YOUR BOMBER HAS CRASHED.":
1460 PRINT TAB(5);"YOU HAD";BMS;"BOMBS LEFT-":
1470 PRINT TAB(4);"OUT OF YOUR ORIGINAL";OBR
1480 PRINT ::
1490 GOSUB 2200
1500 PRINT ::

```

## BBC AND TI99/4A PROGRAMS

```

1510 CALL KEY(O,K,S)
1520 IF S=0 THEN 1510
1530 IF K<>80 THEN 1550
1540 GOTO 180
1550 IF K<>69 THEN 1510
1560 CALL CLEAR
1570 END
1580 REM ***MISSION SUCCESSFUL***
1590 CALL SOUND(200,370,2,440,2,294,2)
1600 CALL SOUND(600,392,2,494,2,294,2)
1610 CALL SOUND(800,391,2,494,2,292,2)
1620 CALL SOUND(800,294,2,440,2,370,2)
1630 FOR QQ=3 TO 8
1640 CALL COLOR(QQ,2,8)
1650 NEXT QQ
1660 CALL CLEAR
1670 CALL SCREEN(8)
1680 GOSUB 2170
1690 OBRZ=OBR
1700 BL=OBR-BMS
1710 PRINT "CONGRATULATIONS, YOUR MISSION":
1720 PRINT TAB(9);"WAS SUCCESSFUL.":
1730 PRINT TAB(7);"YOU USED";BL;"BOMBS,":
1740 PRINT TAB(5);"FROM YOUR ORIGINAL";OBRZ
1750 PRINT :
1760 GOSUB 2200
1770 CALL KEY(O,K,S)
1780 IF S=0 THEN 1770
1790 IF K<>80 THEN 1810
1800 GOTO 180
1810 IF K<>69 THEN 1770
1820 CALL CLEAR
1830 END

```

```

1840 REM **STARTING ROUTINE**
1850 CALL CLEAR
1870 PRINT "PRESS:":
1880 PRINT TAB(5);"1 FOR LEVEL 1-30 BOMBS":
1890 PRINT TAB(5);"2 FOR LEVEL 2-24 BOMBS":
1900 PRINT TAB(5);"3 FOR LEVEL 3-22 BOMBS":
1930 CALL KEY(O,K,S)
1940 IF S=0 THEN 1930
1950 IF K<>49 THEN 2020
1960 SL=1
1970 HL=6
1980 LL=4
1990 BMS=30
2000 CHO=4
2010 GOTO 2150
2020 IF K<>50 THEN 2090
2030 SL=2
2040 HL=7
2050 LL=4
2060 BMS=24
2070 CHO=4
2080 GOTO 2150
2090 IF K<>51 THEN 1930
2100 SL=3
2110 HL=7
2120 LL=3
2130 BMS=22
2140 CHO=6
2150 RETURN
2210 PRINT "*PRESS: P TO PLAY *
2220 PRINT "* E TO END. *
2230 RETURN

```

Bomber for the BBC micro is also based on the idea of destroying a skyline to land your aircraft.

The program displays the instructions in Mode 7 and plays the game in Mode 5 using programmable characters.

Here's an explanation of some of the commands used in the program:

\*FX 15,0 in line 120 clears the contents of the keyboard buffer.

\*FX 4,1 allows the cursor keys to give their codes rather

than their specialist functions. The codes used are: hex 8A down arrow, hex 8B up arrow, decimal 70 F key.

\*FX 4,0 returns the cursor keys to their normal functions.

The SOUND commands in lines 70 and 280 create short explosion-type noises, the one in 280 being slightly louder and longer than the one in 70.

\*FX 11,14 sets the auto repeat speed.

\*FX 12 returns all keyboard associated attributes to normal.

VDU 23 in lines 610-650 define character codes as follows: 250 checkered black, 251 tail section of bomber, 252 centre sec-

tion, 253 front section of bomber, 254 the bomb.

DEF FNS(X,Y)...in line 760 returns the first byte, of eight, of a character at co-ordinates (X,Y). It is used in line 70 to detect whether the bomber has hit the skyline block and in 730 to detect whether the bomb has hit a skyline block. This function works only in Mode 7.

The PROC sub-routines:

PROCINSTRUCTIONS prints instructions in Mode 7.

PROCINIT initialises variables and prints a randomly generated skyline.

The movement of the

bomber takes place in lines 60-220.

PROCBOMBINIT initialises the bomb position and prints it.

PROCBOMB erases the bomb, checks to see if a skyline row has been completely destroyed or checks to see whether a bomb has absorbed four blocks of skyline.

PROCLANDED prints a 'landed' message in yellow and passes control to the 'Another game' routine in lines 350-440.

PROCCRASH does the same as PROCLANDED, except it prints a crash message instead along with an explosion covering the bomber.

### BBC micro version of the Bomber

```

10 MODE 7
20 PROCINSTRUCTIONS
30 MODE 5
40 PROCINIT
50 FOR X=0 TO 19
60 K=H
70 IF ?FNS(X+2,H)>0 OR ?FNS(X,H)>0 THEN L=L-1: SOUND 0,-7,5,5
80 PRINTTAB(X,H):CHR#251:CHR#252:CHR#253:
90 PRINTTAB(12,25):"FUEL:";FL: " "
100 PRINTTAB(1,25):"LIVES:";L: " "
110 IF L=0 THEN PROCCRASH:GOTO350
120 A=INKEY(0):*FX 15,0
130 IF A=70 AND F=0 THEN PROCBOMBINIT
140 IF A=8B AND FL>0 AND H>3 THEN H=H-1:FL=FL-1
150 IF A=8A THEN H=H+2
160 IF F=1 THEN PROCBOMB
170 FOR T=0 TO 5:NEXT
180 PRINTTAB(X,K): " "
190 IF H=19 THEN PROCLANDED:GOTO350
200 NEXT
210 H=H+1
220 GOTO 50
230 DEF PROCLANDED
240 COLOUR 2
250 PRINTTAB(3,28):"YOU'VE LANDED"
260 ENDPROC
270 DEF PROCCRASH
280 SOUND 0,-5,6,45
290 FOR Q=0 TO 120
300 ?FNS(X,H)+RND(48)-1=RND(255)
310 NEXT:PRINTTAB(X,H): " "
320 COLOUR 2
330 PRINTTAB(3,28):"YOU'VE CRASHED"
340 ENDPROC
350 FOR T=0 TO 5000:NEXT
360 COLOUR 3
370 PRINTTAB(4,30):"REUN V/N ?"
380 *FX 12
390 A=#GET#
400 IF A=#V THEN RUN
410 IF A=#N THEN GOTO430

```

```

420 GOTO390
430 *FX 4,0
440 MODE 7:END
450 DEF PROCBOMB
460 PRINTTAB(G,J): " "
470 IF M=4 THEN M=0:F=0:ENDPROC
480 IF J=20 THEN M=0:F=0:ENDPROC
490 J=J+1:GOTO730
500 DEF PROCINSTRUCTIONS
510 *FX 4,1
520 PRINTCHR#12:"CHR#83 CHR#8D " SKY-LINE DEMOLITION"CHR#83 CHR#83
530 SKY-LINE DEMOLITION"
530 PRINT"" The object of this game is to destroy ""the city. You are the pilot of a small ""bomber & you can use bombs (released ""by the 'F' key) to demolish the city."
540 PRINT"" To control your height use the keys ""marked with the arrows."" How ever each time the 'up' key is used ""a unit of fuel is lost."
550 INPUT"" Enter the speed at which you wish the ""bomber to travel (20-hard , 100-easy):"";D
560 PRINT""CHR#83"" PRESS ANY KEY TO BEGIN THE GAME .":2:GET:ENDPROC
570 DEF PROCINIT
580 *FX 11,14
590 UDU 23:8202:0:0:0:
600 L=4:F=0:M=0:FL=40
610 UDU 23,250:$AA,$55,$AA,$55,$AA,$55,$AA,$55
620 UDU 23,251:$FF,$FF,$7F,$3F,$3F,$7F,$FF,$FF
630 UDU 23,252:$00,$FF,$FF,$4A,$4A,$FF,$FF,$00
640 UDU 23,253:$00,$00,$00,$FF,$FF,$00,$00,$00
650 UDU 23,254:$00,$0A,$0A,$04,$0E,$0E,$04,$04
660 FOR X=0 TO 19
670 FOR V=3+RND(17) TO 20
680 PRINTTAB(X,V):CHR#250:
690 NEXT:V=V+3
700 ENDPROC
710 DEF PROCBOMBINIT
720 J=K:G=0:F=1
730 IF ?FNS(G,J)=8AA OR ?FNS(G,J)=855 THEN M=M+1
740 PRINTTAB(G,J):CHR#254:
750 ENDPROC
760 DEF FNS(X,V)=HININ+(V*40+(2*X))*8

```

# HOME COMPUTING WEEKLY CLASSIFIED

Lineage:

20p per word — Trade  
15p per word — Private  
Semi display: £6.00 per single column centimetre  
Ring for information on series bookings/discounts.



01-437 1002  
EXT 213.

Send your requirements to:  
Bridgette Sherliker  
ASP LTD.  
145 Charing Cross Road,  
London WC2H 0EE

All advertisements in this section must be prepaid.  
Advertisements are accepted subject to the terms and conditions printed on the advertisement rate card (available on request).

## ACCESSORIES

### JOYSTICKS

Easy-build kits or ready made. Full instructions and software. Suits most computers, ZX81 SPECTRUM or any with parallel port. Prices from £14.95. SAE for details.  
Dr D Malone, 1 Roslyn Terr,  
Glasgow, G12 9BRC.

### BROKEN YOUR TV/ COMPUTER JOYSTICK

Inside your joystick handle is a white plastic insert. (The main cause of failure.) Stronger insert replacements now available. Supplied with full fitting instructions allowing you to be back in action in seconds. Send £2.50/pair inc. p&p to:



Computer Supplies, 146  
Church Road, Boston,  
Lincs. PE21 0JX

**DUST COVERS** available for any computer, printer, etc. BBC, TI, Epson, £3.95; Dragon, Atari, Vic20, £2.95; Sharp MZ-80A-K, £4.95. For others please phone or write to Sherborne Designs, Victory House, 8A The Rank, North Bradley, Trowbridge, Wilts. Tel: 02214 4425. Also made-to-measure service. Dealer enquiries welcome. Access and Barclaycard.

### TEXAS TI 99/4A CASSETTE LEADS

£4.95

including post and packing  
Single Recorder only  
Orders to:  
Clares, 222 Townfields Road,  
Winsford, Cheshire CW7 4AX.  
Tel: Winsford 51374

### ORIC 1 CASSETTE LEADS

WITH MOTOR CONTROL  
DIN to DIN or DIN to JACKS  
£2.50

Orders to:  
Clares, 222 Townfields Road,  
Winsford, Cheshire CW7 4AX  
Tel: Winsford 51374

**COMPUTER ADDICTS.** At last, a purpose built trolley for the home computer and accessories. So convenient to keep your equipment tidily on a mobile unit. How have you managed without one. Solid wood frame recessed upper & lower shelves. Prices from £14.95 + p&p. Send now for further information to Setcraft Sussex Ltd., 32 Walpole Ave., Worthing, Sussex BN12 4PL.

## ADD-ONS

**Tangerine owners 40K CMOS RAM** card, new options, including kit form and prices. For details TH Microelectronics, phone 0602 392965. Evenings.

**DRAGON GAME CARTRIDGE** PCB (plated through hole, double-sided). Accept two 2516, 2532, 2564, 2716, 2732 or 2764. Eprom copying service provided for only £1 each. Also available: DC-DC converter (5v input to 25v output, current output 50mA maximum, ripple level pk-pk 80mV, measuring only 35mm x 40mm x 19mm. Game PCB £5.50 (full instructions provided, please specify 25 or 27 series). DC-DC converter, £10 (with full specification). Price inclusive of VAT, P&P 60p. K.H. P'ng, 30 Queensbury Road, Alperton, Middlesex HA0 1LU. Tel: Egham (0784) 34300 ext. 208 or 01-997 9708 evenings.

**ZX81 VIDEO INVERTER.** Saves your eyes, increases safe level, displays sharp white characters on solid black background screen. Kit £4, built £5 (includes VAT and P&P, instructions). Send cheque/postal order to D. Fritsch, 6 Stanton Road, Warrington, Cheshire WA4 2HR.

**GREEN SCREENS** — 11"x9". Suit TRS80, £5.45 inc P&P. Other sizes up to 15"x12", £6.95 inc P&P. Safe size required. P.A. Young, Church End, Sheriff Hutton, York.

**SPECTRUM ADAPTORS**  
ADAM-16K RAM capability, ADAM II as above + memory mapped ports etc., '64' 32K RAM can be added. 'EVE' as ADAM II for 48K spectrums. 'STRAIGHT' 64K I/O when using printer/keyboards. RZ1-ZX81/Spectrum tape (programmable) control. All adaptors £9. RZ1 £20 (two tape £25). STEPHEN ADAMS, 1, Leswin Road, London. N16 7NL

**ZX81 High Res Graphics Unit**  
£32 (excl. VAT)  
Tel: William Haynes 01-969 0819  
Tools for Living  
Notting Dale Technology Centre  
191 Freston Road, London. W10  
6TH  
cheque/PO (add 15% VAT)  
plus 75p p + p

## BOOKS

**PARAPHYSICS JOURNAL** Russian translations; Psychotronic Generators, Kirlianography, gravity lasers, telekinesis. Details: S.A.E. 4x9" Paralab, Downtown, Wilts.

**ZX81/1 REGISTER** lists 700 suppliers, 550 programs, 250 peripherals, 100 publications, £3.95. Youngs Computer Publications, 2 Woodland Way, Gosfield, Halstead, Essex. Includes new supplement.

### DRAGON 32 or TANDY TRS-80 Colour?

Lots of programs — lots of useful hints and information EVERY single month in "RAINBOW" an exciting new 200-page magazine from U.S.A. Send £1.95 (plus large 56p s.a.e.) for sample issue to ELKAN ELECTRONICS (Dept HCW), FREE-POST, 11 Bury New Road, Prestwich, Manchester M25 6LZ or telephone 061-798 7613 (24 hour service).

## CLUBS

### JUPITER ACE USERS CLUB

Newsletter, software (both games and utilities), adapter for ZX81 add-ons.  
SAE for details.  
Remsoft, 18 George Street,  
Brighton BN2 1RH

## FOR HIRE

### DRAGON 32 SOFTWARE LIBRARY

★ Selected quality tapes  
★ Suppliers permission  
★ Free programming aid  
Cotswold Computers,  
Hook Norton, Oxon. Tel H.N.  
737472 SAE for details.

### MONSTER SOFTWARE CLUB

Software library for the  
DRAGON 32  
Top Quality Cassettes  
FOR HIRE  
All tapes used with the  
Manufacturers Permission  
SAE For details  
Monster Software Club,  
32, Lennox Drive, Lupset Park,  
Wakefield, West Yorks.

## HARDWARE

Second Hand Computers and Peripherals bought and sold. Apple II required immediately. Ring for quote. Bracknell (0344) 84423.

**COLOUR MONITORS NOT MODIFIED TV** sets, specifically designed for use with micros. Best quality, full guarantee, £289. Micro-Tech Leeds Ltd, Derwent Breary Lane, East Bramhope, Leeds. Tel: 0532 679964.

**Tangerine Micron 8K** with Basic, XBUG Graphics, Invert, Video, cased keyboard Hex, keypad, manuals and games tapes £300 o.n.o. Tel 061 794 9005 After 5pm.

COMMODORE 64 £264 + VAT  
VIC20 £113 + VAT

Programmes plus accessories available. SAE for details

### ENFIELD COMMUNICATIONS

135 HIGH STREET  
PONDERSEND  
ENFIELD, MIDDLESEX. Tel:  
8057434

### WHY PAY MORE???

We offer good-as-new machines at 2/3 regular price.

Or rent from us for as little as £10 per month.

Software for sale at rock-bottom prices.

Business Education Limited  
103 Great Russell Street, London  
WC1  
Tel: 01-636 9612

**Impact Printer (Base-2)**, intelligent, 4 interfaces (RS232, IEEE, c-loop, centronics) hardly used £150 (ono).

Also teletype ASR33 (includes printer, keyboard, tape) £95 (ono), private sale.  
Tel 0234-751010 (Bedfordshire).

## NEWBRAIN

The professional micro computer for the price of the hobby machine. Delivery free. Models A and AD in stock. Call us for prices. Mail Order/Access accepted. Ring us on Stevenage (0438) 812439 anytime, for the latest details of NEWBRAIN hardware, software, user groups etc.

Angela Enterprises, 4 Ninnings Lane,  
Rabley Heath, Welwyn, Herts AL6 9TD.

**Tangerine Microtan** rack system with Tanex and 16K. Tanram. List £650. Will accept £300 o.n.o. also willing to sell parts of system. Offers/requirements to Box no H.C.W. 100, ASP Ltd., 145, Charing Cross Road, London WC2.

## GAMER YOUR HOME COMPUTER SPECIALISTS

### ATARI PACKAGE DEALS

400 (16K) + RECORDER + BASIC + JOYSTICK + 5 BLANK CASSETTES + DEMO CASSETTE.....£239  
400 (48K) + ALL ABOVE ITEMS.....£324  
800 (48K) + ALL ITEMS.....£485  
SPECTRUM (16K).....£125  
(48K).....£175  
ORIC (48K).....£169  
DRAGON 32.....£199  
VIC 20.....£129  
+ SHARP + GENIE +  
EPSON + ACE + ZX81

ALL PRICES INC. VAT

24 GLOUCESTER ROAD BRIGHTON 698424



## NATIONWIDE SHOPS & DEALERS

### WEST DEVON ELECTRONICS

15, Station Road, Horrabridge, Devon  
Tel: Yelverton (0822) 853434  
Dragon sales and service.  
All repairs carried out in our own workshop

### SQUARE DEAL

375 Footscray Road, Eltham.  
Tel: 01-859 1516.  
Commodore 64, VIC 20, Oric, Lynx, Texas, Sinclair.

Visit the Computer Junk Shop at 10, Waterloo Road, Widnes Halton, Cheshire. Tel. 051-420-4590.

Computer and Chips Ltd, Feddinch Mains, Andrews, Fife. Tel. (0334) 76206. Stockists of the lotec 'Iona'. Colour Genie etc.

IMO Computer Centre 39-43 Stan-dish St. Burnley. Tel. 54299. Open 6 days. Specialists in home and business computers. ACT Sirius/Canon/Transtec/BBC/Acorn/-Atom/Oric and others and peripherals for most micros.

### HOBBYISTS LTD.

3 The Broadway, Manor Hall Rd., Southwick.  
Tel: (0273) 593345.  
Open 6 days 10am-7pm (Wed + Sat 5.30pm) Epson HX 20 portable computer, Apple IIe, coming soon the Oric 1.

### GRAVESEND HOME COMPUTERS LTD.,

39, The Terrace, Gravesend.  
Tel. 0474 50677.  
Stockists of: ZX81, Spectrum, Dragon, Oric and Vic software. Colour computer news.

### STEVE'S COMPUTER COMPANY LTD

45 CASTLE ARCADE, CARDIFF.  
Tel: 0222 - 41905  
OPEN: Mon - Sat. 9 - 5.30  
FOR COMPONENTS TO COMPUTERS

## RECRUITMENT & COURSES

### COMPUTER STAFF REQUIRED

Due to the expansion of our chain of computer shops we require additional staff

- ★ Computer Shop Sales Managers  
For our: Milton Keynes branch.  
Rickmansworth branch.  
Ealing branch
- ★ Computer Shop Sales Assistants  
For our: Surbiton branch.

The positions include the selling of home and personal computers. Therefore all applicants must have retail experience  
Written applications should be addressed to:

Mr P.F. Klecha,  
3D Computers,  
230 Tolworth Rise South  
Tolworth,  
Surbiton,  
Surrey KT5 9MB

**3D COMPUTERS**

## AGENTS REQUIRED

to sell popular computer books, software and magazines to micro-dealers, bookshops and newsagents. Including "RAINBOW" and other new magazines from U.S.A.

Generous commission levels.

**ELKAN ELECTRONICS**  
11 Bury New Road, Prestwich,  
Manchester M25 8LZ.  
Tel. 061-798 7613 (24 hours)



## PROGRAM WRITERS READ THIS

OCP is a fast growing and highly successful software house specialising in top quality machine coded Programs for the ZX Spectrum.

We are now looking to expand our catalogue of Programs to take full advantage of the exploding home computer market. Perhaps you can help us and we can help you?

We offer a variety of Payment terms depending on your individual circumstances; this can be as a royalty Per Program sold, straight Purchase or some combination of the two. In any case you get full advantage of our Pack design and marketing expertise which we are rather proud of.

So, if you think that you have skills and Programs that set you apart from the ordinary and want to share our proven success contact us now at the address below. If you're good you won't regret it.

Ring Bill Richardson on 0753 888866

or write to:

**OXFORD COMPUTER PUBLISHING LTD.**  
P.O. BOX 99, OXFORD,  
ENGLAND.

Caledonian Computer Consultants provide programming consultancy and training courses in Basic held regularly for beginners upwards. 292 Caledonian Road, London N1 1BA. Tel. 01-607-0157

## SERVICES

**T-SHIRTS.** "I'm user friendly", "Have you seen my peripherals?" £3.50 white or blue s.m.l. one per cent screens. 12 Star Lane, Great Wakering, Essex.

### ZX81 REPAIR SERVICE AT LAST NO NEED TO WAIT FOR WEEKS

Send your faulty ZX81 for fast reliable repair. We will repair any ZX81 KIT or READY BUILT UNIT Only £15.95 fully guaranteed + p+p Please state the nature of problem. Send cheque or postal order to **NEXT COMPUTER SYSTEMS, 88 HARVEST RD, ENGLEFIELD GREEN, SURREY. TW20 0QR.**

## SOFTWARE APPLICATIONS

### SPEC-A-DRAW

The original Pools Prediction Program for the 48K Spectrum.  
"A boon for those interested in winning the Pools" — Interface, December 1982.

Program on cassette with instruction manual ..... £4.95  
Database Tape (Optional, but contains data on over 6000 matches) ..... £13.50  
Program and Database together ..... £17.50  
or SAE for details.

B.S. McAlley Dept HCW, 1, Cowleaze, Chignor, Oxon. OX9 4TD

**MZ-80A MZ-80K PROGRAMS.** Business, utility, games, educational. List SAE: DCS, 38 South Parade, Bramhall, Stockport.

### DATABASE £4.95 INC P&P.

4 ZX81 10W or 64W a flexible filing system. Fast M/C search and sort. Uses: cross index, books, magazines, L.P.'s etc, club memberships, tel no's, addresses, stock control, freezer or wine cellar catalogue etc. With demonstration data list/states of the U.S.A. or steam locos (state which). CADSOFT, 24, St. James St., Cheltenham, Glos.

**Pools Prediction Database.** We can supply English football league results 1977-82 in computer format, with starter analysis programs — Disc/tapes £15 (2 year tapes £7.50). Sinclairs, BBC, PET, VIC, TRS, IBM etc. Selec Software, 37, Councillor Lane, Cheadle, Cheshire. 061-428-7425. (Access/Barclay welcome)

**BBC Oxfite,** the Triple Database for text data, input, sorting, printing and mail addressing. S.A.E. for details or £20 for complete package. David Lewis Computer Services, 141, Upper Road, Kennington, Oxford OX1 5LR. Tel. Oxford 735360. Also available Oxford W.P. — Please enquire.

## SOFTWARE BUSINESS

Sinclair ZX81/Spectrum Business Programs: Mailing Lists, Stock Control Accounts, Reports etc. SAE details — Datafax (H.C.W.) 287-291 High Stret, Epping, Essex.

### SPECTRUM SOFTWARE

- FLEXICALC - Versatile spreadsheet program. all usual features + you control number of rows & columns + edit your formulae at any time. Full manual. (48K only) 9-95  
Consolidation & report generator. 6-95
- FIGARO II - Business graphics + forecasting + statistics + fast data entry + data utilities. Powerful but easy to use. (48K only) 14-95

### Maxon Computing

3, St. Catharines Drive, Leconfield, Beverley, Humberside.  
Phone Access or Barclaycard orders to 040150087

## SOFTWARE EDUCATIONAL

**WORLD INFO** a data base of information about the modern world. Use your 48k Spectrum as a reference book on Heads of State, Wars, Types of Regime, Human Rights and much more.  
It's a datafile for use with Campbell Systems Masterfile, the standard database system for Spectrum. £5. Send SAE for more details.  
PHONES keeps track of your

phone bill. Times calls, costs them. Good for flat sharers or several people sharing the same phone. From WIMSOFT, (HCW) 20 Brookside Road, Wimborne, Dorset BH21 2BL.

### DRAGON LIVE & LEARN

Find out about British geography, zoo animals, desert survival, music notation and how to use high resolution graphics  
**Over 100K of instruction and quizzes, with full use of colour, sound, graphics.**  
Send cheque/PO for £6 to **SHARDS SOFTWARE, 10 Park Vale Court, Vine Way, Brentwood, Essex CM14 4UR.**  
SEND SAE FOR OUR SOFTWARE LIST

**BBC(B) Music Maker** — Hear/save your favourite pieces. Many instruments, extensive range of editing commands. Package only £5.50 including demonstration pieces. Goldsoft, 11, Belsize Avenue. London NW3 4BL.

## SOFTWARE GAMES

**UNEXPANDED VIC 20 gamestate** contains Pacmen, Roadracer, Dodgem and Fruit, all give exellent play value with fast action colour and sound, "real Arcade action with excellent graphics" Sole U.K. distributor P. Adler Software. Available now at £5 per cassette from P. Adler Software (Dept. 8), 83 Cranley Gardens, London N10 3AB.

**SCRUNCH, ZX81 16K.** Brilliantly simple new graphics game, plus free maths program. Cassette £2. Jeanette Fenner, 237 Overdale, Scarborough YO11 3RE.

### SOFTWARE FOR THE SPECTRUM

#### TAPE ONE CONTAINS FOUR GAMES PROGRAMS

Maze, find your way out of the maze with the least number of turns.

Hole, lure the aliens down the black holes before you are killed yourself.

Missile, fire a missile at the alien, it's very hard to hit him.

Lander, land your space craft on any of four planets.

Tape one programs use graphics and sound.

Tape two contains two programs for the gambling man. Use your Spectrum to shorten the odds in dog racing or horse racing.

Tape one is £3.99 including VAT and p+p. Tape two is £3.50 including VAT and p+p. We require Spectrum programs to buy outright or on handsome royalties (please enclose S.A.E. for return)

Cheques/P.O.'s to I.E. Applications Ltd., 177, Castleton Road, Nottingham. SE9 4DE

### TEXAS T199/4A

The software with the reputation. All programs feature full graphics and sound.

**WARGAME** Play the computer or another player. Features random terrain, tanks and artillery. Strategy, tactics and real-time skill. Highly recommended £6.00

**GERMAN WHIST/FOUR IN A ROW** Two programs based on traditional games. Practise trick taking or vertical strategy as you play a clever computer. £6.00

**GRAPHICS PAIRS** Based on pelmanism, but with a difference. Use your memory to beat the computer in a crazy car race. The TX skill meter means it is suitable for all ages and abilities £5.00

**BATTLEFRONT** Three arcade-type games, but you need the Extended Basic module. £6.00

All prices are fully inclusive

**TX SOFTWARE, 109 ABBOTSWELD, HARLOW CM18 6TQ**

**Fly the Dragon.** Flight simulation program for the Dragon 32. Full colour and instrumentation. Cassette only £5.95. Mr Ratcliffe, Church Lodge, Tibenham, Long Stratton, Norfolk.

HOME COMPUTER

TEXAS INSTRUMENTS



TI-99 ITALIAN USER CLUB

WWW.TI99IUC.IT

INFO@TI99IUC.IT

*Thanks to 99'er:*

*David J. Smith*

*for the Scan of this magazines.*

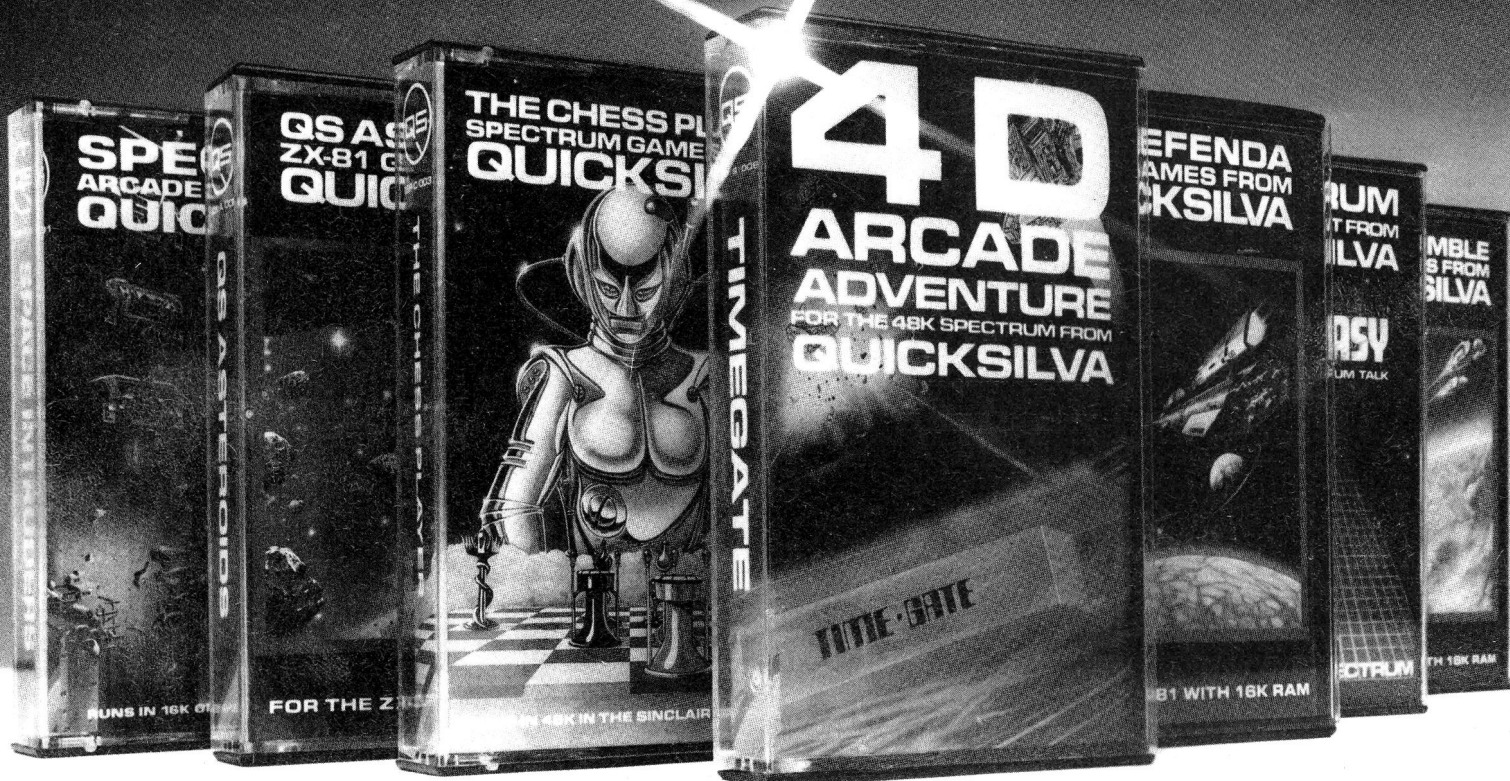
*Rework by:*

*TI99 Italian User Club in the year 2021  
(info@ti99iuc.it)*

*Downloaded from www.ti99iuc.it*

# QUICKSILVA

THE ULTIMATE IN COMPUTER GAMES SOFTWARE



**SPECTRUM SOFTWARE  
TIME-GATE**

3D Space/time adventure in fast moving graphics. 48K  
£6.95

**THE CHESS PLAYER**

With Speech and personality. 48K  
£6.95

**METEOR STORM**

With speech and Hi Res Graphics. 16K or 48K.  
£4.95

**MINED-OUT**

With 9 levels of minefield. 48K  
£4.95

**SOFTWARE FOR THE VIC20  
TORNADO**

Full colour Hi Res Graphics, sound and scoring. £5.95

**SPACE INTRUDERS**

With mutants and Hi Res Graphics. 16K or 48K.  
£4.95

**SPEAKEASY**

Add speech or music to your programs. 48K  
£4.95

**SOFTWARE FOR THE ZX81 WITH 16K RAM**

**QS ASTEROIDS**

"... very good ..."  
"... addictive game!"  
(C.&V.G.) £3.95

**QS DEFENDA**

"... better than any other arcade game I've seen."  
(Sync.) £3.95

**QS SCRAMBLE**

"... amazing, fantastic!"  
(P.C.W.) £3.95

**QS INVADERS**

"... just like the real thing!" (C.&V.G.) £3.95

**MUNCHEES**

Features 1 to 4 Ghosts, 3 Munchees, Power pills etc.  
£3.95

**CROAKA-CRAWLA**

With Frogs, Lorries, Logs, Turtles, Flies, Crocodiles.  
£3.95

**GALAXIANS & GLOOPS**

Features two types of swooping Galaxian.  
£4.95

"...nicest games I've played on the ZX81."  
(WHICH MICRO & S.R.)

"...better than any other arcade game I've seen."  
(C. & V.G.)

For details of our expanding range —  
Phone Southampton (0703)20169