Personal Computing Today

SEPTEMBER 1982
65p

NEW

ATARI versus TEXAS

We compare the two-which comes out on top?

PROGRAMS FOR THE ATOM, SPECTRUM, BBC TRS-80 AND ZX81

DRAGON'S FIRST

Will it burn up its rivals?

SOFTWARE CHECKLIST

What's in store for Tandy, Atom VIC and Atari

AVOID THE ONE-DAY WONDERS WITH OUR SOFTWARE REVIEWS

HARDWARE FACTFILE

NOW VIC's 64 We Take The Wraps Off Commodore's Latest Arrival

HINTS ON CONVERSION

To run this program on another machine the following changes will have to be made. In lines 4, 10 and 24 a PRINT AT line, column; . . . statement is used, this moves the print position to the line and column number specified. Lines are numbered from 0 (at top left) to 21, and columns from 0 (at top left) to 31. If only one character is printed, as in lines 4 and 10, the statement is interchangeable with a POKE statement on other machines. However on the ZX80/1 before a position can be PEEKed or POKEd in the screen display the space must first be reserved in the screen display. In line 4 the space has not been reserved and a POKE at this point will result in the variable store being POKEd which will almost certainly result in the program crashing.

The PRINT AT statement in line 24 is slightly different because more than one character is being printed. The line updates the current score. The print position for the score could be changed by cursor controls or the line could be left out altogether and the score printed at the end of the program.

15*RND in line 6 produces a random number between 0 and 15.

Line 8 in the program checks that the cursor position is in a specified range. The arbitrary range chosen is 16 and centred about the coal. The reason for 16 is that it is twice one quarter of the screen width. Initially the marker moves at random between columns 8 and 23. When a key is first pressed the position of the coal is then fixed, the marker then moves randomly about the coal. If the key was pressed when the marker was at position 8, the marker would then move randomly between 0 and 15. The value of the variable F is the upper range of the marker's movement and the coal is located at a position 8 less than F. The value of P is the address of the first grey square in the third (or sixth) row of "earth" units, less 8, and can be found from:

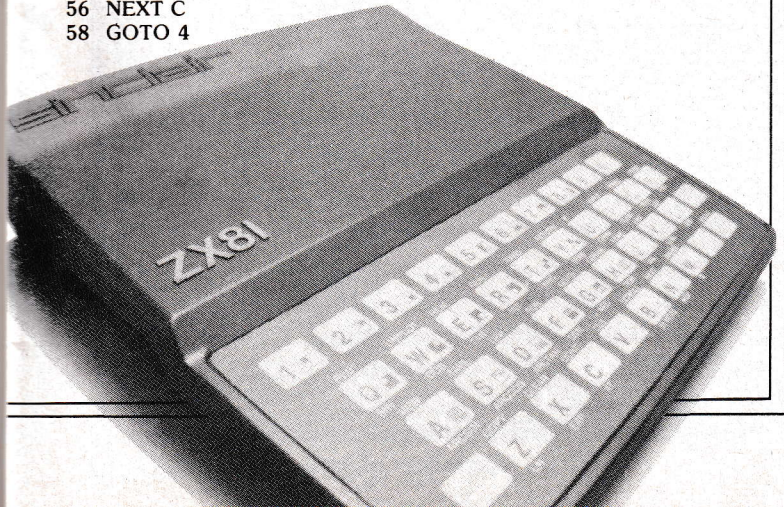
P = PEEK 16396 + 256*PEEK 16397 + 1	+ 3*33	- 8
Address of display file	three lines of screen display & newline	half of marker's movement

Thus by adding P and F the address of the coal can be found, as in line 20 when the black square representation of the coal is POKEd onto the screen.

Variables Used

C = Column in which marker is located
F = Column (+8) in which coal is located
L = Level of play
P = Address of display + 59
P = PEEK 16396 + 256*PEEK 16397 + 59
Q = Dummy variable
S = Score

```
50 LET S = 0
52 FOR C = -88 TO 7
54 PRINT "▦";
56 NEXT C
58 GOTO 4
```



THE VALLEY

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What are you . . Barbarian or Wizard?

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The Valley is a real-time game of adventure and survival. You may choose one of five character types to be your personal 'extension of self' to battle and pit your wits against a number of monsters. Find treasure, fight a Thunder-Lizard in the arid deserts of the Valley, conquer a Kraken in the lakes surrounding the dread Temples of Y'Nagioth or cauterise a Wraith in the Black Tower. In fact live out the fantasies you've only dared dream about. BET BEWARE . . .more die than live to tell the tale.

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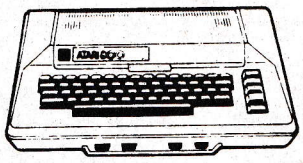

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Dear PCT
What are the advantages of high-resolution graphics and which computers have the option of using them? It seems to me that they are only much good for writing games programs with better graphics. Is it difficult to use high-resolution graphics?
M. Underwood
Bolton

High resolution-graphics usually refers to the ability of a computer to generate points or lines on the screen that are a single dot or one pixel wide. The command set of the machine will include commands such as PLOT, DRAW or POINT to allow you to use this facility.

Machines which offer this utility in their basic form are the ZX Spectrum, the Atari 400/800, the Atom, the Apple, the BBC computer, the DAI, the Sharp MZ-80B and the Tandy Colour Computer. Other micro's can have this feature added to them, such as the PET and the VIC-20.

Generally ease of use depends on the computer's command facilities. The Atari is easy to use, but the BBC's high resolution graphics are not.

Dear PCT
I am a recent proud owner of a Model B BBC Microcomputer, but as it is my first computer I am finding the going a bit slow. It struck me that I would learn a lot more about programming and computers in general if I could get together with other owners and exchange ideas.

Do you know of a computer club specially for the BBC computers or if not, how do I go about setting one up?

I am sure your feelings are shared by many microcomputer owners around the country and it is for this reason that we are running a regular club feature each month. With respect to your predicament on your BBC computer I suggest that you get in touch with Tony Latham who runs the Computer Users Club. This club has been set up to help users of the BBC machines and will be able to help you with your problems and advise you on the best way to get the most out of your machine. The address is Computer Users Club, 72 Sidmouth Road, Welling, Kent and their telephone number is 01-304 3910.

Dear PCT
I am what you might call a computer dabbler, I have a ZX81 and recently saw in another magazine something about a language called CP/M. As I haven't a clue what it means or does perhaps you could enlighten me. It's so confusing when computing people always talk in such strange terms. Help!
Edward Potter
Solihull

I quite agree with what you say about the confusion caused by computer jargon. CP/M is mentioned in our feature about the new Commodore 64. CP/M is a universal programming language which is used on micro-computers based around the Z80 microprocessor.

The theory of CP/M is that you ought to be able to run a program written in the language on any of the Z80 based machines. But don't get too excited. In practice, it doesn't always work. Although the ZX81 is based on a Z80 chip CP/M has never been used on it because it is primarily a disk based system.

PRIORITY REPLY

September 1982 Issue

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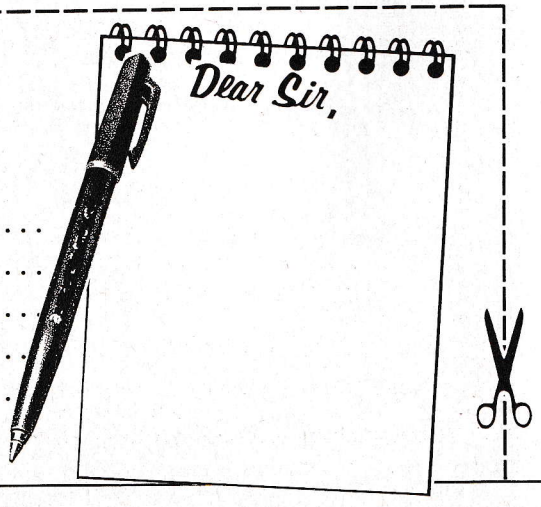

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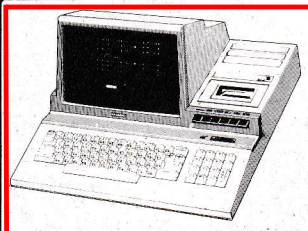

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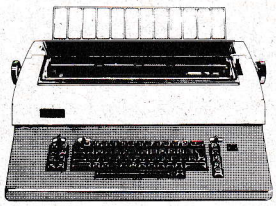

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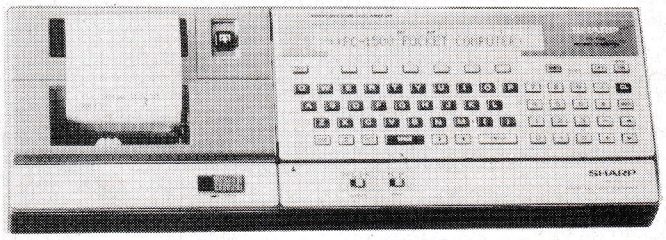

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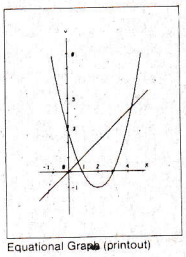
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STANDARD PACKAGE

Memory Size (RAM)	0-48K
Screen Size	25 lines of 40 or 80 character
Expansion Sockets	Parallel & serial outputs, BUS connections
Tape Included?	No
Display Unit Included?	No
Usable Domestic TV?	Yes
Size of BASIC	8-10K
Average Price	**£549**

MANUFACTURER'S EXPANSIONS

	DETAILS	PRICE
RAM	up to 48K (max)	£130
Printer	Yes	£215-1285
Monitor	Yes	£99-120
Disc Drives	Yes, single or dual	£470-685
Other Languages	Yes	£50
Multi-user Capabilities	No	—
BASIC extensions (Toolkits)	Yes	-15-50

OTHER ADD-ONS:

Olivetti disc drives, single and dual, Kram Electronics, Victoria House, 17, Highcross St., Leicester, LE1 4PF, £179-349; **A/D Board,** 10, Research Ltd, 6, Laleham Avenue, Mill Hill, London NW7 3HL, £120 + VAT; **Hobbit – mini-cassette system,** Ikon Computer Products, Kiln Lane, Laugharne, Covnathen, Dyfed, £99 + VAT; **Disc drives, single and dual,** Micro-Spares, 19, Roseburn Terrace, Edinburgh, EH12 5N9, £199-279.

NEC PC8000

IBR, Unit 57, Sutton Industrial Park, London Road, Earley, Reading, Berks.

Really only for the small business user.

STANDARD PACKAGE

Memory Size (RAM)	32K
Screen Size	25 lines of 80 characters
Expansion Sockets	Parallel output Bus Connector
Tape Included?	No
Display Unit Included?	No
Usable Domestic TV?	Yes
Size of BASIC	24K
Average Price	**£599**

MANUFACTURER'S EXPANSIONS

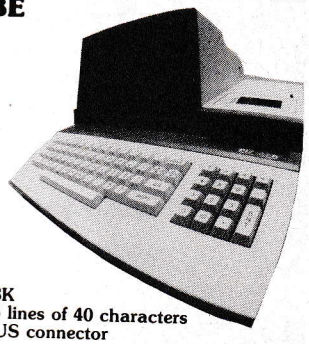
	DETAILS	PRICE
RAM	optional 32K RAM packs (up to 128K)	£109
Printer	Yes	
Monitor	Yes	£375-1450
Disc Drives	Yes, dual	£149-£549
Other Languages	Yes	£625
Multi-user Capabilities	Yes	£200-£500
BASIC extensions (Toolkits)	No	P.O.A.
		—

OTHER ADD-ONS:

None Reported

SHARP MZ-80A

Sharp UK Ltd, Thorn Road, Newton Heath, Manchester M10 9BE
Tel: 061-205 2333.



There is little to choose between this and the earlier Model K.

STANDARD PACKAGE

Memory Size (RAM)	48K
Screen Size	25 lines of 40 characters
Expansion Sockets	BUS connector
Tape Included?	Yes
Display Unit Included?	Yes
Usable Domestic TV?	No
Size of BASIC	12K
Average Prte	**£549**

MANUFACTURER'S EXPANSIONS

	DETAILS	PRICE
RAM	No	—
Printer	Yes	£450-800
Monitor	N/A	—
Disc Drives	Yes, dual	£600
Other Languages	Yes	£45
Multi-user Capabilities	No	—
BASIC extensions (Toolkits)	No	—

OTHER ADD-ONS:

None Reported

SHARP MZ-80B

Sharp UK Ltd, Thorn Road, Newton Heath, Manchester M10 9BE

As cost is often the most relevant factor in buying a computer this Sharp is suited to the dedicated business user who can afford it.

STANDARD PACKAGE

Memory Size (RAM)	64K
Screen Size	25 lines of 40 or 80 characters
Expansion Sockets	BUS connector
Tape Included?	Yes
Display Unit Included?	Yes
Usable Domestic TV?	No
Size of BASIC	16K
Average Price	**£990**

MANUFACTURER'S EXPANSIONS

	DETAILS	PRICE
RAM	Yes	£120
Printer	Yes	£450-800
Monitor	N/A	—
Disc Drives	Yes, dual	£600
Other Languages	Yes	£45
Multi-user Capabilities	No	—
BASIC extensions (Toolkits)	No	—

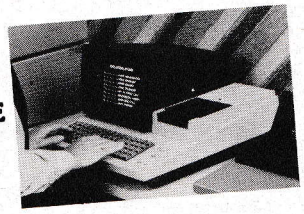
OTHER ADD-ONS:

Multi-vision and triple-vision, Datron Micro Centre, 2 Abbeydale Road, Sheffield S7 1FD, £35-79

FACTFILE REFERENCE

SHARP MZ-80K

Sharp UK Ltd, Thorn Road, Newton Heath, Manchester M10 9BE



STANDARD PACKAGE

Memory Size (RAM)	48K
Screen Size	25 lines of 40 characters
Expansion Sockets	BUS connector
Tape Included?	Yes
Display Unit Included?	Yes
Usable Domestic TV?	No
Size of BASIC	12K
Average Price	**£350**

MANUFACTURER'S EXPANSIONS

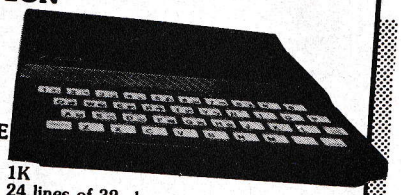
	DETAILS	PRICE
RAM	No	—
Printer	Yes	£450-800
Monitor	N/A	—
Disc Drives	Yes, dual	£600
Other Languages	Yes	£45 upwards
Multi-user Capabilities	No	—
BASIC extensions (Toolkits)	No	—

OTHER ADD-ONS:

None Reported

SINCLAIR ZX-81

Sinclair Research, 6 Kings Parade, Cambridge, CB2 1SN



STANDARD PACKAGE

Memory Size (RAM)	1K
Screen Size	24 lines of 32 characters
Expansion Sockets	BUS connections
Tape Included?	No
Display Unit Included?	No
Usable Domestic TV?	Yes
Size of BASIC	8K
Average Price	**£49.95 kit, £69.95 built**

MANUFACTURER'S EXPANSIONS

	DETAILS	PRICE
RAM	16K RAM pack	£29.95
Printer	ZX Printer	£59.95
Monitor	No	—
Disc Drives	No	—
Other Languages	No	—
Multi-user Capabilities	No	—
BASIC extensions (Toolkits)	No	—

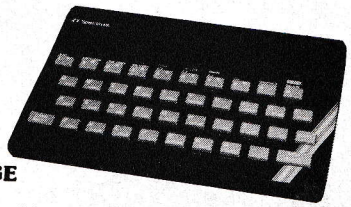
OTHER ADD-ONS:

Memory expansion unit 16K or 64K, Memotech Ltd, 3 Collins St, Oxford OX4 1XL, £39.95-79; **Key Bleep Unit,** Microtronix, 3 Buxton Avenue, Coulton, Nottingham, N94 3RR, £8.85 kit, £9.95 built; **Maximem 1.1,** East London Robotics, Finlandia House, 14 Darwell Close, East Ham, London, EB4 BT, £93.50; **Music Synthesiser + 16 line control port,** William Stuart Systems Ltd, Dower House, Billicicay Road, Herongate, Brentwood, Essex CM13 3SD, £19.50; **Full-size keyboard,** Protos Computer Systems, Frome Computing, 20 Ashtree Road, Frome, Somerset, BA11 2SF, £64.95; **ZX99 Automatic tape control,** Data-cassette, 44, Shroton Street, London NW1 6UG, £59.95.

SINCLAIR ZX-SPECTRUM

Sinclair Research, 6 Kings Parade, Cambridge CB2 1SN

Price wise this computer beats everything else.



STANDARD PACKAGE

Memory Size (RAM)	16-48K
Screen Size	24 lines of 32 characters
Expansion Sockets	BUS connections
Tape Included?	No
Display Unit Included?	No
Usable Domestic TV?	Yes
Size of BASIC	10K
Average Price	**£125 or £175**

MANUFACTURER'S EXPANSIONS

	DETAILS	PRICE
RAM	48K RAM for 16K version	£60
Printer	ZX Printer	£59.95
Monitor	No	—
Disc Drives	ZX Microdrive	TBA
Other Languages	No	—
Multi-user Capabilities	No	TBA
BASIC extensions (Toolkits)	No	—

OTHER ADD-ONS:

None Reported

SORCERER

EMG, Microcentre, 47 Lower Belgrave Street, London, SW1

Aimed at the business user this computer can either be linked up to a standard television and tape loaded, or be hooked up to a special unit consisting of a monitor and two 5· inch disc drives. Compatible software is thin on the ground from independent suppliers.

STANDARD PACKAGE

Memory Size (RAM)	56K
Screen Size	30 lines of 64 characters
Expansion Sockets	BUS connection
Tape Included?	No
Display Unit Included?	No
Usable Domestic TV?	Yes
Size of BASIC	8K
Average Price	**£790**

MANUFACTURER'S EXPANSIONS

	DETAILS	PRICE
RAM	No	—
Printer	Yes	£395-1935
Monitor	Yes	£160-330
Disc Drives	Yes single and dual	£420-599
Other Languages	Yes	£99-420
Multi-user Capabilities	No	
BASIC extensions (Toolkits)	No	

OTHER ADD-ONS:

None Reported

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