Home Computing WEEKLY

An Argus Specialist Publication

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FREE magazine

No. 68
June 26-Jul 2, 1984

45p

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Sir Clive's ads promise

Sir Clive Sinclair has given his personal assurance that he will not advertise delivery times he cannot meet.

He gave the undertaking to Sir Gordon Borrie, director-general of the Office of Fair Trading, following 81 complaints within three years.

As well as Sir Clive's own assurance — which covers any of his companies — an undertaking was also given by the managing director of Sinclair Research, Nigel Searle.

The 81 complaints had been made to trading standard officers about the ZX80, ZX81 and the Spectrum. There have also been three county court judgements against Sinclair Research and one hearing

Continued on page 5

Show of strength

New technology is helping first time disabled drivers discover their strengths and weaknesses, and modify their cars accordingly.

Banstead Place Mobility Centre is running a programme, with the financial support of Ford Motor Company, to assess disabled clients and calculate the alterations necessary on a standard car.

The three-year project is costing £100,000 and is being sponsored by Ford. The mobile simulator unit is the only one of its kind in the UK, and is

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ANIROG

BONGO

Space Pilot

Flight Path 737

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Bongo

Enjoy the hilarious antics of the comical mouse as he collects the lost diamonds. He climbs ladders, slides down chutes, use transporter and trampolines to jump across the divide. Multi screen game with three levels of difficulty.

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Our exclusive guide to best-selling arcade and non-arcade software, plus Top 10s for six home computers

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BBC 12
Save your eyesight... with this useful utility for enlarging letter sizes

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Defend yourself against the anti-matter clones and be prepared for the supernova

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Search out words and see them grow — two useful programs to type in

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Transform your keyboard into a musical instrument and play it again

HOME COMPUTING WEEKLY
BRITAIN'S BRIGHTEST

MSX COMPUTING

In the second issue of our FREE magazine devoted to the new MSX range of micros you'll learn:

- How to program in MSX BASCI, including the first listing in a UK magazine
- The plans by the big software houses for MSX games
- What the retailers' leader thinks of the new computers

● All the listings in Home Computing Weekly are tested for quality and checked for accuracy. You'll find programs for these micros in this issue

SOFTWARE REVIEWS

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Games for the Commodore 64 star-rated by our team

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Educational programs for the Spectrum

Focus on the BBC 29
New software — see what our reviewers think before you buy

Time for some fun! 33
Games for the Spectrum, Dragon and TI-99/4A

Readers: we welcome your programs, articles and tips

Software houses: send your software for review to the editor. And contact him for competitions and other promotions, too

Editor: Paul Liptrot
Assistant Editor: Liz Graham
Designer: Bryan Pitchford

Managing Editor: Ron Harris
Group Editor Elspeth Joiner

Advertisement Manager: John Quinn
Assistant Advertisement Manager: Stuart Shield

Divisional Advertisement Manager: Coleen Pimm
Classified Advertising: Debra Stupple
Chief Executive Jim Connell

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UNIVERSITIES
- University of Leicester, Department of Psychology
- The Finance & Estates Officer, University College of Swansea
- University of East Anglia, School of Biological Science
- Westfield College, University of London
- Westfield College, Department of Zoology, University of London
- School of Physics, University of Newcastle upon Tyne
- Oxford University Computing Service
- The University of Warwick
- University of Aberdeen, Department of Geography
- The University of Sussex
- University of Bristol
- Heriot-Watt University Dept. of Civil Engineering
- The New University of Ulster
- The University of Strathclyde
- The University of Southampton
- University of Liverpool
- The University of Aston in Birmingham
- University of Keele
- University of Surrey
- University College of London
- The University of Dundee, Microcomputer Centre

POLYTECHNICS
- Thames Polytechnic
- Polytechnic of the South Bank
- Coventry (Lanchester) Poly
- Dept. of Applied Chemistry Coventry (Lanchester) Poly
- Newcastle upon Tyne Poly
- Manchester Polytechnic
- Hatfield Polytechnic Dept. of Psychology
- The Polytechnic
- Leeds Polytechnic
- Kingston Polytechnic
- City of Birmingham Polytechnic
- Middlesex Polytechnic
- Plymouth Polytechnic
- Portsmouth Polytechnic
- Ulster Polytechnic
- Liverpool Polytechnic

COLLEGES
- Chelsea College, University of London
- Guildford C.C. of Technology
- Kings College, London
- University College of Swansea
- Statistics Department, Computer Centre Building, University College of Swansea
- Nene College, Computer Services
- Cambridgeshire College of Arts and Technology
- London Borough of Havering, The Principal Havering Technical College
- Blackpool and Fylde College
- Jordanhill College of Education
- Bromley College of Technology
- Guildford County College of Technology
- Kilmarnock College
- Wearside College of F. Education
- Wearside College of F. Education, Dept. of Electrical & Mining
- Newark TC School/College
- National College of Agricultural Engineering
- Bradford & Ilkley Community College
- Goldsmiths College
- College of Arts & Technology
- Head Craft, Design & Tech.
- South London College
- St. Columbus College
- Robert Gordon's Institute of Technology
- Chelmer Institute of Higher Education
- Southwark College, Maths/Physics Department
- Newark Technical College
- Matlock College of Higher Education
- Wakefield District College
- Barnsley College of Technology
- The College of St. Paul & St. Mary
- Thanet Technical College
- Ballymena Technical College
- Cannock Chase Technical College
- Lancaster & Morecambe College of Further Education
- Uxbridge Technical College
- New College Durham
- Bath College of Higher Education
- North Trafford College
- Dept. of Educational Resources
- Southampton College of Higher Education
- Bournemouth and Poole College of Further Education
- Harrow College of Higher Education
- Southall College of Technology
- Shirecliffe College
- Southwark College
- Dewsbury & Batley Technical & Art College
- Tresham College
- Ware College
- Thurrock Technical College
- Chicklade College, Dept. Science & Technology
- Redbridge Technical College
- South Thames College
- York College of Arts & Tech.
- Somerset College of Arts & Technology
- Borough of Trafford, North Trafford College
- North Trafford College
- Thurrock Technical College
- Thurrock Technical College, Computer Department
- Fairham Community College
- Mid College of Higher & Further Education
- East Ham College of Technology
- Seale-Hayne College
- Homerton College
- Uxbridge Technical College
- North Oxfordshire Technical College & School of Art
- Ealing College of Higher Education
- Welsh National School of Medicine
- Lord Mayor Treloar College
- South East London College
- Farnborough (Sixth Form) College
- Wigston College of Further Education 'Annex'
- Strode's College
- Dundee College of Education
- Isle of Wight College of Arts and Technology
- Kendal College of Further Education
- Wigan College of Technology
- Chippenham Technical College
- South Devon College of Arts & Technology
- South Shields Marine & Technical College

SCHOOLS
- Camborne School of Mines
- Longton High School
- Berry Hill High School
- Camborne School of Mines Management Department
- School of Physics
- Queen Philippa's School
- Carter Lodge School
- Ashfield School
- All Hallows School
- Mead Vale Primary School
- Vincent Thompson High School
- St. Aubyn's School
- Imberhorne School
- Newham School for the Deaf
- Dorcan School
- Beaumont School
- Billericay School
- Exeter School Computer Department
- Clarendon School
- The Lavinia Norfolk Unit
- St. John's C of E Primary School
- St. Peter's High School
- Rock Ferry High School
- Stoke on Trent Language Centre
- Connah's Quay High School
- Buckhurst Hill County High School
- Harlington Upper School
- Heath Comprehensive School
- The High School Ballynahinch
- Bishop Hedley High School
- Clwyd Lea School
- Monks Dyke High School
- King Edward's School, Bath
- The Godolphin & Latymer School
- Frances Bardsley School
- Shaw House Comprehensive
- New Parks School
- St. Paul's Way School
- Larkman Middle School
- Rushcroft High School
- Training and Educ. Management
- High Green School
- Ogmore Comprehensive School
- Brakenhale School
- Oxford International Business School
- Hampstead School

GOVERNMENT DEPARTMENTS
- Hertfordshire County Council Advisory Unit for Computers
- Leicestershire County Council
- The Director of Finance & Administration, Cambridgeshire County Council
- The National Institute for Medical Research
- Department of the Environment Building Research Establishment
- Kent County Council Education Department
- Ministry of Defence
- Basildon Council Accounts Department
- Department of Trade
- Devon County Council Committee, Department of Electrical Eng, College of Further Education
- Strathclyde Regional Council,
- County Borough of Sunderland
- Kent County Council
- Nottinghamshire County Council
- Basildon District Council
- City of Newcastle upon Tyne Education Committee
- Hampshire County Council
- Buckinghamshire County Council, Education Services
- Cambridgeshire Education Committee
- Metropolitan Borough of Gateshead
- Cleveland Education Committee, Guisborough Teachers Centre
- Metropolitan Borough of Rochdale, Education and Training Centre
- Leicestershire Education Committee
- Department of Industry & Trade
- Leicester Info. Tech. Centre
- Solihull Education Department
- Manpower Services Commission, Training Services Division
- Skill Centre Training Agency
- Powys County Council
- Information Technology Centre
- East Berkshire Health Authority
- Devon County Council Ed. Comm.
- Mid Surrey Health Authority
- Epsom District Hospital
- Scottish Council for Educational Technology
- Clwyd County Council
- Norfolk Education Committee
- Agricultural & Food Research Council
- Mid Glamorgan County Council Education Department
- Kent County Supplies Centre
- London Borough of Barnet
- West Midlands Regional Health Authority
- Scottish Community Education Council
- The Scottish Adult Basic Education Unit
- Birmingham Social Services
- Microelectronics Education Programs
- Greater London Council
- Doncaster Metropolitan Borough Council
- United Kingdom Atomic Energy Authority

COMPANIES
- Cambridge Applied Micros
- Sirton Computer Systems
- Assurance Sun Life Court
- Radala & Associates
- Computer Services
- Laser Systems Ltd
- National Physical Laboratory
- Central Trade Exchange Ltd
- Software Invasion
- Argonaut Systems
- Integrex Ltd
- British Telecommunications
- B.T. Research Labs Accounts
- Windsor Wine Supplies
- Jannerlow Ltd
- Ibbotsons Design Software
- H.C.C.S. Association Ltd
- Molspin Ltd
- Fisons Pharmaceuticals, Pharmaceutical Division
- Information Technology Marketing
- Steele Microsystems Ltd
- The Television Centre
- Education & Microtech Unit
- British Telecom Enterprises
- Display Distribution Ltd
- Northern Gas
- Spencer Source Trading
- BBC Publications
- M.S. Simnett Computers Ltd
- Rosville Timothy Ltd
- M.E. Electroncis
- Microstore
- Eastern Region Info. Centre
- The Video Palace
- Laser Creations Ltd
- Lasermation
- Custom Video Productions
- BBC TV South
- Kellogg Company of Great Britain Ltd
- The British Library
- Walter Computer Systems
- Standard Telecommunications Laboratories Ltd
- Granada Computer Services Ltd
- Applied Systems Knowledge Ltd
- Cipher Systems and Communications Ltd
- Cogwell, Cornick Associates
- Ashfield Project Centre
- Andrew Shyte & Son Ltd
- Acornsoft
- Robot Technology Ltd
- British Shipbuilders (Training, Ed. & Safety) Ltd
- Boston Computers Handelsges
- Fisher Controls Ltd
- Timex Corporation
- Robot Technology Ltd
- United Kingdom Atomic Energy Authority
- British Aerospace Public Ltd
- Salam Group Ltd
- Plessey Avionics & Comm.
- Elite Software Co. Ltd
- Computer Advisory Unit, Chelmer-Institute
- Intec (Inverclyde) Ltd
- Universal Sonar Ltd
- Digital Equipment Scotland Ltd
- Edward Davies Chemical Labs.
- Pyramid Services Ltd
- Philips Research Laboratories
- Kingsway-Princeton College
- Microtronix S.A.R.L.
- Thomas Law Associates
- Transvideo Productions Ltd
- Dash Electrical & Electronic Services
- Aaken Engineering
- The Electricity Council
- Triptych Publishing Ltd
- ZX Data
- Octocon Data
- North Wales Newspapers Ltd
- Janssen Pharmaceutical Ltd
- National Coal Board
- Five Ways Software Ltd
- Edeta Ltd
- John Elmer Office Equipment
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- Central Electricity Generating Board
- Guernsey Computers Ltd
- Currah Computer Components Ltd

BRITISH MICRO

A HEGOTRON GROUP COMPANY. Unit 02, Penfold Works, Imperial Way, Watford, HERTS WD2 4YY. TEL: (0923) 49222. TELEX: 946024

Buy computers and peripherals at trade prices

Adverts

From front page

for breaching the Trades Description Act.

An OFT spokesman said that the QL was not included in the evidence, although there had been complaints about its delivery too.

The advertising Standards Authority has upheld 20 complaints about the QL.

The undertakings were given to Sir Gordon under part three of the Fair Trading Act which means that, if breached, a court order can be obtained. And if that is not obeyed it would be contempt of court — a serious offence.

A spokesman said the OFT wanted there to be realistic delivery dates with customers given the option of getting back their money if they did not wish to wait.

Waiting times varied according to type of product, but generally it would be 28 days.

Sinclair Research said it regretted what had happened and said it had been extremely difficult to judge demand.

The company had sold 40,000 computers in 1980 and this had risen to 800,000 just three years later. Total computers sold by all companies in the UK had grown from 50,000 in 1979 to 1.4m in 1983.

As soon as the company saw the problems it had stopped advertising. And customers were given the opportunity of getting back their money. Most, however, were prepared to wait.

A spokesman denied a suggestion that the company used mail order to finance production.

The reasons for selling by mail order in the early days of a product's life were to better judge supply against demand and to build a base of interest in the product before retail sales began.

Computer and software companies come in for criticism in the latest report from the advertising watchdogs.

In three out of four cases the problem was that advertised goods were not available.

These are the details:

● A buyer of an **Atari** 5¼in disc drive found it would store only 88K instead of the advertised 127K. It had Disc Operating System II rather than DOS III.

The ASA considered the advertisement acceptable after hearing that the advertisers were aware that the 1050 double density disc drives would first be available with DOS II and that a heading said: "These peripherals will be available soon". There was also an address for further details.

But the authority said it would have been helpful to indicate that the version of the drive available at the time of the advertisement's appearance was to a different specification.

● A Melbourne House program was not available two-and-a-half months after advertisements began to appear, said a complainant.

The advertisement, for the graphics games designer H.U.R.G., said it would be available at the end of October and went on: "Get your order in now, and reserve your copy so that you can be among the first with this revolutionary software."

Programming difficulties had delayed release, said the advertisers.

The ASA said it was concerned that the advertisements had been placed before the company was entirely sure that the product would be on sale.

It was given an assurance that in future only products actually available would be advertised.

● Another complainant visited many dealers in a vain attempt to find a Commodore 64 package deal at £239.99, a saving of "over £40".

The ASA was shown stock details and instructions issued to member stores by **Spectrum (UK)**, a distribution company.

The panel said it was satisfied that Spectrum had not acted unreasonably in offering the goods, but noted that there would have been a period after the appearance of the advertisements during which there would have been a shortage of the interface included in the package. It also noted that stocks became available after only a short delay.

● The authority took advice over an advertisement by **Lerm** that a program was "Microdrive compatible".

Lerm said the phrase was to indicate that it could be used while a Microdrive was connected. It could not, however, copy to a Microdrive.

This was not clear enough, said the ASA, noting that a revised program, which did copy to a Microdrive, had since been brought out. Advertisements had been amended.

Advertising Standards Authority, Brook House, Torrington Place, London WC1 7HN

Strength

From front page

probably the most technically efficient unit in Europe.

A Hewlett-Packard computer times the client's reactions to common road hazards shown on the wrap around simulation screen. It also determines the strength, co-ordination and joint range in each limb.

"Disabled drivers face a number of problems," said a spokeswoman for Banstead Place Mobility Centre. "First they have to get into the car. Then they have to switch on the ignition, steer, accelerate and brake. The unit assesses each person's strengths and prints out the adaptations which would be necessary on a standard car.

"For example, a car could be modified to include a combined lever for accelerating and braking if a person was unable to use the foot pedals," she continued.

"Some companies manufacture these adaptations and others fit them. The advantage of this system over our old one is that the reactions are timed automatically. Before, we used to have a person standing behind the driver timing all his or her reactions. Now the computer does all the hard work for us, and more scientifically and accurately too."

The mobile computer-controlled unit had its first appointment last week in Norwich. It will be travelling the country, giving disabled people nationwide the opportunity to increase their mobility.

The driving assessment unit is staffed by a full-time therapist and a driving instructor. "We would like to be able to offer disabled people full day driving assessments from our mobile unit," said a spokeswoman for Banstead Place. "If people have had strokes or similar problems, they come to our unit for testing. We have on site at Banstead a doctor, orthoptist and a pyschologist, who evaluate each client's problems. Ideally, we would like to be able to offer this service in future from our mobile unit."

"The program written for the Hewlett-Packard in our unit is a very easy one from the operator's point of view," she went on. "It's also very rewarding that the driver can turn round and watch his or her progress on the computer, so there is some feedback. This unit is really intended to show first time drivers how they can drive, and to make them more mobile."

The computer simulation unit is housed in a 7.5 metre long van, providing easy access to wheelchair passengers by a tail lift. The dashboard is based on that of a Ford Escort, and the interior is fully carpeted and furnished. Test results are provided immediately from a high-speed printer.

If the disabled driver has driven previously, a specially-equipped Ford Escort is available for practical experience and road tests. This car has power-assisted steering, hand controls, a wheelchair lift and car chair installation.

The mobile unit makes driving assessments accessible to those who live outside the Surrey area. If you are disabled and wish to make an appointment for a personal driving test while the mobile van is in your area, call 07373 51674.

Future dates for the mobile unit include Devon and Cornwall in July, Carlisle and South Wales in September and Warwickshire, Birmingham and Scotland before the end of the year.

Banstead Place Mobility Centre, Park Rd, Banstead, Surrey SM7 3EE

Quicksilva branches out

Quicksilva is branching out in several directions — into education, a licensing deal with Atari and converting children's books into software.

Managing director Rod Cousens made the announcements, his first since the company was bought by the Argus Press Group.

● Education is to be handled by a new arm of QS called QED — Quicksilva Edutainment Dimension. The aim is for games with a serious educational content, said Mr Cousens.

The first, out in autumn, will be for pre-school and early learning ages and then extended to all age groups.

Discotechnology is introducing to the UK discs and disc drives at reduced prices. If you want to buy 50 single sided, double density discs in a storage box, you'll pay £57.50. Or you could pay £129.50 for a half-height, direct drive for the BBC. This drive incorporates an automatic track sensor and includes cables and manual.

Discotechnology, 20 Orange St, London WC2H 7ED

DLComputer

The Wheel of Fortune 32K BBC £9.95

Epic, 10 Gladstone St, Kibworth Beauchamps, Leicester

Epic prides itself on producing high quality adventures for the BBC only, concentrating effort on producing superior games. I must agree. Technically this game surpasses any I have seen for the BBC.

After spinning the Wheel of Fortune you find yourself in a different world. In the bottom half of the screen, your position information is given. The top half displays a picture of your surroundings using Mode 7 graphics. You move around the area picking up objects and meeting a policeman and a beggar. The interesting thing about these characters is that they both move independently from you and treat you in the same way as you treat them.

There are 250 different locations, with pictures drawn instantly. You can type in commands in every-day English of up to 254 characters. The function keys can be set up with common commands and there is the usual SAVE feature.

The game itself is nothing new and as usual it doesn't understand that many sentences. However it is of good quality and is carefully written. **D.B.**

instructions	80%
playability	80%
graphics	90%
value for money	75%

★ ★ ★ ★

Chess II Oric 1/ Atmos 48K £9.99

Tansoft, Techno Park, Newmarket Rd, Cambridge

Chess II is an update of Tansoft's earlier Oric Chess. In computer chess you pit your wits against the computer, which can be programmed to respond at various levels. The higher the level, the longer Oric takes to plan its next move. Response times vary from 5 seconds to 5 hours. In Chess II you may change the level during play and even change sides.

Various options are available. To allow a particular problem to be analysed the board may be set up in a predetermined pattern. The game may be saved on tape for future continuation and if you have a printer, the moves can be produced in hard copy.

Another option is voice output. The computer announces its moves and various other messages audibly. I find the need for this rather dubious and the voice sounds more like a badly tuned walkie-talkie, but of course you can turn it off.

I was not very impressed with the screen display and found some of the text difficult to read, but if you fancy an evening in with a friend, give it a chance. **P.S.W.**

instructions	85%
ease of use	70%
display	65%
value for money	70%

★ ★ ★

Thoynan Warlock/ Destroy Base X TI-99/4A £5.99

Solid, 35 Melville Rd, Bispham, Blackpool FY2 9JF

These two programs are on different sides of one cassette. Destroy Base X is a waste of time — the less said the better. It's not only boring; nothing seemed to happen, whether played or left to run and watched.

In contrast, the main program, The Times and Treasures of Thoynan Warlock is an ideal game for the unexpanded TI. Your objective is to survive in the mystical castle of wizard Thoynan, gathering treasure. Strange creatures and gargoyles guard his wealth, so different types of spells must be collected to combat these fellows or their attack will sap the explorer's strength, leading to his eventual demise.

Remembering how to use these spells takes time, that is when you've determined their meaning from the instructions. Whilst play was in progress there was a great deal of shouting done round our computer. One person desperately battled at the keyboard whilst another frantically sifted through paragraphs to find which spell would work on what — and how. The resulting confusion compensated for any slowness of TI BASIC, inevitable where two or more characters chase around the screen. **J.W.**

instructions	80%
playability	55%
graphics	60%
value for money	50%

★ ★ ★

Find the key, solve the mystery

Keys, spells, treasure — all must be located before these games are resolved. Join the adventure and start off on the quest

Danger Ranger Atari £8

Microdeal, 41 Truro Rd, St Austell, Cornwall PL25 5JE

Danger Ranger is one of the best games I have seen in a long time. Fancy a real challenge? Then this is for you.

Danger Ranger starts in the Chamber of Pasha and his object is to collect 10 keys located here. He is under constant assault from various enemies including floating urns and radioactive bats. Once he has got the keys he enters the Acid Chamber. Avoiding falling drops of acid, he must collect all of the treasure chests and eliminate the four demons on guard.

In this brilliant game you will need all your wits about you even on the easiest of the five skill levels. Thank heavens for the practice facility. Here DR is allowed to wander around totally immune from the surrounding dangers. In the limited time I had playing the game I found this to be the only way I could ever complete it.

The game is played with the joystick and you have the option of one or two-player game. Sound effects and graphics are really first class. Danger Ranger is a real winner and a game that I totally recommend. **D.W.L.**

instructions	70%
playability	85%
graphics	90%
value for money	85%

★ ★ ★ ★

Lionel and the Ladders TI-99/4A £7.95

Intrigue, Cranbrook Rd, Tenterden, Kent TN30 6UJ

Another princess captured! But good old Lionel sets off to her rescue. His adventure takes him to a crumbling castle, where he explores by climbing ladders, jumping across holes in the floor — and on occasion, monsters.

Scattered through the castle are doors leading deeper into the maze. These are all locked, so Lionel must start by finding keys which, once taken, will be hidden again. After a door is opened it changes colour. If it changes to red, the door is an entrance only and cannot be re-entered.

All Lionel's movements must be carefully planned. A fear of heights means he can only climb up ladders, although a fall may prove a fortuitous escape, providing there's a floor to land on.

Lionel has only three lives, but can win a bonus life. Patience sometimes runs short, especially when Lionel is grabbed by a monster before even having the chance to start, or sometimes after landing safely on the floor he then falls right through it. Still, with a high enough score, there's consolation in the Hall of Fame. Needs Extended BASIC. **J.W.**

instructions	85%
playability	75%
graphics	75%
value for money	70%

★ ★ ★ ★

DJ Computer Services

Tel: 0344 427317

AUTOMANIA

WALLY WEEK is here!

FOR COMMODORE 64 AND 48K SPECTRUM

PJCOMPUTERS.CZ

CHARTBUSTERS

BRITAIN'S SOFTWARE CHARTS

by the ASP Market Research Group

ARCADE

1	Jet Set Willy	Software Projects	Spectrum (2)
2	Sabre Wulf	Ultimate	Spectrum (-)
3	Fighter Pilot	Digital Integration	Spectrum (-)
4	Beach-Head	US Gold	CBM 64 (7)
5	Cosmic Cruiser	Imagine	CBM 64 (-)
6	Antics	Bug Byte	Spectgrum (-)
7	Les Flics	PSS	Spectrum (-)
8	Psytron	Beyond	Spectrum (3)
9	Cavelon	Ocean	CBM 64 (-)
10	Trashman	New Generation	Spectrum (-)

NON-ARCADE

1	Mugsy	Melbourne House	Spectrum (1)
2	Golf 64	Abrasco	Spectrum(-)
3	Flight Path 737	Anirog	CBM 64 (2)
4	Snooker	Visions	CBM 64 (4)
5	Fall of Rome	APS	Spectrum (3)
6	Fall of Rome	APS	CBM 64 (3)
7	Solo Flight	US Gold	CBM 64 (8)
8	Twin Kingdom Valley	Bug Byte	CBM 64 (6)
9	Classic Adventure	CDS	ZX 81 (-)
10	Blockbuster	Clever Clogs	Spectrum (-)

ojcomputers.cz

Compiled with the assistance of Britain's leading software distributors, including: Pinnacle, SDL, PCE, Websters, PCS and Software Centre.

SPECTRUM

1	Jet Set Willy	Software Projects (2)
2	Sabre Wulf	Ultimate (-)
3	Fighter Pilot	Digital (-)
4	Psytron	Beyond (3)
5	Jack and the Beanstock	Thor (-)
6	Antics	Bug Byte (-)
7	Les Flics	PSS (-)
8	Atic Atac	Ultimate (9)
9	Scrabble	Psion (-)
10	Trashman	New Generation (6)

COMMODORE 64

1	BMX Racers	Mastertronic (2)
2	Space Walk	Mastertronic (5)
3	Manic Miner	Software Projects (1)
4	Beach Head	Centresoft (-)
5	Snooker	Visions (-)
6	Black Hawk	Creative Sparks (3)
7	Colossus Chess	CDS (-)
8	Space Pilot	Anirog (4)
9	Chuckie Egg	A&F (-)
9	Revelation	Softek (-)

DRAGON 32

1	Buzzard Bait	Microdeal (-)
2	Cuthbert In Space	Microdeal (2)
3	Dragon Chessl	Oasis (3)
4	Hungry Horace	M. House (5)
5	Bug Diver	Mastertronic (-)
6	Eightball	Microdeal (4)
6	Spritemagic	Knight (-)
8	Dungeon Raid	Microdeal (-)
8	Skramble	Microdeal (8)
10	Mr Dig	Microdeal (-)

Compiled by W. H. Smith and Websters. Figures in brackets are last week's positions.

VIC-20

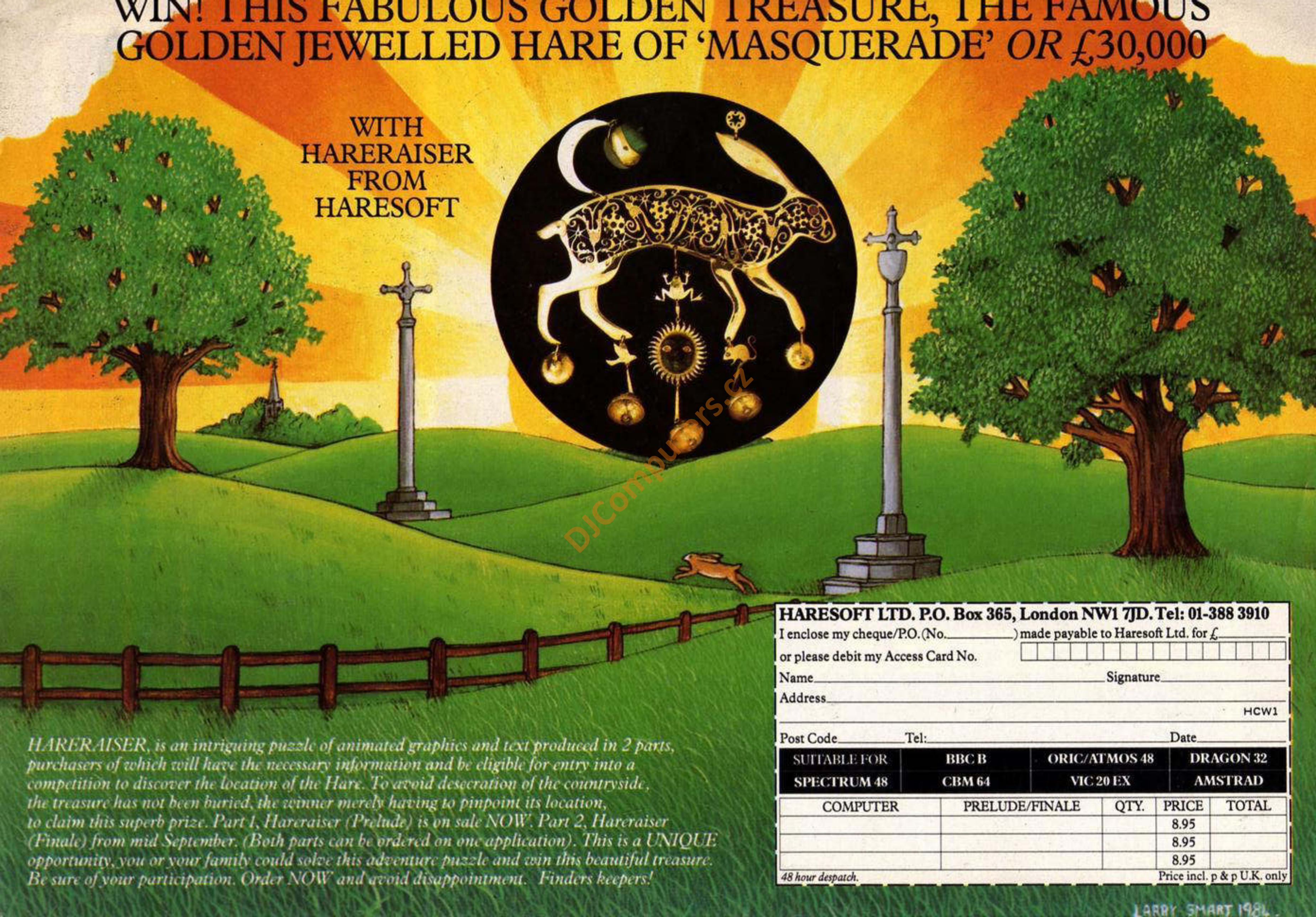
1	Duck Shoot	Mastertronic (1)
2	Tank Commander	Creative Sparks (3)
4	Snooker	Visions (-)
5	Computer War	Creative Sparks
6	Charlot Race	Micro Antics (4)
7	Vegas Jackpot	Mastertronic (-)
8	Phantom Attack	Mastertronic (-)
9	Sub Hunt	Mastertronic (-)
10	Games Designer	Galactic (-)

BBC

1	Aviator	Acornsoft (1)
2	Spitfire Command	Superior (9)
3	OverDrive	Superior (3)
4	Fortress	Pace (-)
5	JCB Digger	Acornsoft (2)
6	Snooker	Visions (-)
7	Battle Tank	Superior (4)
8	Chess	BBC (-)
9	Q Man	MRM (5)
10	Twin Kingdom Valley	Bug-Byte (-)

ZX81

1	Alien Reign	CRL (9)
2	Krypton Ordeal	Novus (2)
3	Planet Raider	Novus (4)
4	Walk the plank	Novus (3)
5	Black Crystal	Carnell (7)
6	Flight Simulation	Sinclair (8)
7	Mothership	Sinclair (-)
8	Reversi	Sinclair (-)
9	Sabotage	Sinclair (-)
10	City Patrol	Sinclair (-)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This game is slow and gets boring very quickly.

You have to destroy puny little creatures which wander around the screen trying to catch you. When they do you lose a life. For your protection you are given lasers but you can only use four on the screen at any one time, which means certain death when you have five or more creatures, otherwise known as Cyborgs, closing in on you.

The instructions have had more time spent on them than the game, and the loading describes the game accurately, simple!

A word of warning should you intend buying the game: disconnect your Datasette once the game has loaded, because the motors keep running.

The game can be played using one or two joysticks and not keys. This may be a good thing. The sound deserves credit, and is a good standard. You get the chance to join the Cuthbert Club. **G.J.**

instructions	80%
playability	50%
graphics	30%
value for money	25%

★

Wallie goes to Rhymeland
£7

Interceptor Micros, Lindon Hse, The Green, Tadley, Hants

Your task is to guide Wallie through Rhymeland while avoiding contact with various obstacles on the way. You may attack the nasties by spitting chewing gum at them. Not a very original idea; a similar concept was used in Revenge Of The Mutant Camels. However Wallie seems to be slightly more playable.

The graphics are very clear and quite large. This is a good point for anyone who has an older television which makes small shapes unclear.

The game follows a similar pattern every time you play it. This makes it possible to master section by section. This is quite a relief because it's a tough game. I haven't completed all the levels yet but find it addictive so far.

You need a joystick. This leaves you with an unbashed keyboard for programming.

The cassette claims to be fast loading. I thing that Interceptor is trying to pull a fast one because it seems to take quite a long time. I wasn't very impressed with loading — on occasions the game didn't start, it just reset itself. **K.I.**

instructions	10%
playability	75%
graphics	70%
value for money	70%

★★★

Pegasis
£12.50

Audiogenic, P.O. Box 88, Reading, Berks

This disc is based on the myth of Pegasus the flying horse, brought to life by Perseus. You control Pegasus and must conquer the black riders and other foes.

You use the fire button to control the rate of wing flapping and the joystick to move left or right. You destroy the black horses by jumping on them from above. When you succeed the rider falls to the ground. You can gain extra points by following him and trampling on him. Should a black horse land on Pegasus you lose a life. As the levels progress things get nastier and new opponents appear.

Graphically the game is excellent and uses nice effects. I liked the use of raster interrupts to generate bands of colour. Both the design and animation of the horses are brilliant. No music is used but the sound of flapping horses is most realistic. Graphically there are few British games to rival Pegasis (it's American... who else would mis-spell Pegasus?).

This game is of the highest quality but, in my view, over-priced. Knock £3 off and that's about right for a disc-based game. **M.W.**

instructions	80%
playability	95%
graphics	95%
value for money	75%

★★★★★

Caught in a trap

One of these games features you as a spider, luring flies into your web. The others star flying sheep and horses, Cyborgs and chewing gum missiles

Spider and the Fly
£7.00

Interceptor Micros, Lindon House, The Green, Tadley, Hants

This game has an interesting and original concept behind it. Your objective is to draw a web around some flies to trap them and gain points. To hinder your progress there is a hand which floats around the screen. If you touch this, you die and lose a spider. If the hand comes into contact with the web then you fall to the ground and have to try again.

As the game gets harder more and more insecticides appear and spray at you, with the predictable result of you being killed.

The graphics are not over-exciting. The screen is black; you trail a web behind you while shapes float around aimlessly. I can't say that the program made any use of the CBM 64 sound facilities either.

I found the game quite interesting for the first half hour of play, but after the initial novelty wore off it started to get very repetitive and uninteresting. There does not seem to be much lasting interest in this game. **K.I.**

instructions	40%
playability	50%
graphics	30%
value for money	40%

★★

Sheep in Space
£7.50

Llamasoft, 49 Mt Pleasant, Tadley, Hants

This must be the largest load of sheep dip Llamasoft has produced so far.

The game involves flying a sheepoid through space and firing at objects flying towards you. To survive you must keep your stomach full, although if you eat too much you will explode.

To eat something you may either collide with floating blobs or land on the grass and have a feast. If you move too close to the surface when landing you will die. This makes landing quite hard. A point to remember is that flying through space is faster than walking on the planet surface.

Sheep in Space is recorded in turbo format to make loading quite fast. No extra hardware is needed to utilize this.

The instructions are very well written and explain very fully all the various screen areas and functions.

This game has absolutely no appeal for me. It is an adaptation of Scramble and Defender minus their good points. Perhaps Jeff Minter should pull his socks up and produce quality and not quantity. **K.I.**

instructions	90%
playability	25%
graphics	65%
value for money	30%

★★

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DJCOMPUTERY.CZ

Don't strain your eyes!

Make your text easier to read with this useful program for enlarging letter sizes. Shingo Sugiura, HCW regular, has written this utility to save your eyesight

MODE2 and MODE5 are often used for games or other programs because they offer a wide range of colours. However, because their screen format is 20 x 32, the characters are rather squat and difficult to read.

I decided that if I made them double height, they would be much easier to read.

A few double height character generators have been published before, but they were usually written in BASIC and were, as a consequence, very slow. So I decided to write in assembly language but I made the utility so that the machine code is called from a procedure and thus easy to use.

To use the double height utility in your own programs, you must type in lines 120 to 560. Alternatively you can merge it on top of your program if you have already typed it in and saved it (see BBC user guide page 402 on how to merge programs).

You can call PROCedure double from anywhere in your program in the format PROC-double (string,x co-ordinate,y co-ordinate) where string is the characters you want to print at the cursor position x co-ordinate. Remember that the characters take up two rows and the procedure uses user defined characters 224 and 225. It's as simple as that!

The demo (lines 70-100) illustrates just how fast the procedure is. The string is printed on the screen almost instantly and thus can be used in your instructions if you wish.

How it works

10-30 REM statements
50 call the procedure which assembles machine code routine
60 selet MODES (in fact, this utility works in any mode)
70-100 print message in double height
110 end of program
120-150 procedure which prints string in double height
130 move cursor to specified position
140 call machine code routine. Notice how string is passed to machine code routine via the powerful CALL statement (passing parameters to machine code routines is difficult, so for more details see user guide)
160 beginning of procedure which assembles machine code routine
170 save space for machine code routine and workspace
180 define OS calls
190 define variables
200 loop
210 start of machine code
230-270 set various information about the string
280 reset counter (string length)
290 push Y-register on the stack for later use
300-310 point to control block
320 get information about the characters of the string using OSWORD call with accumulator set to &A
330-380 define top half of double height character
390-440 define bottom half of double height character
450-480 print double height character (two user defined characters, 224 and 225)
490 get Y-register (used as a counter) from stack and increment it
500-510 compare with string length and if not the same go back to beginning
520 end of subroutine. Return to BASIC
550-560 function which returns low and high byte of a 16-bit number

Variables

code space for machine code
block space for information re character
oswrch, osword operating system calls
end end of machine code routine

```
 10 REM Double height utility
 20 REM By Shingo Sugiura
 30  REM
 40
 50 PROCassemble
 60 MODE5
 70 PROCdouble("HOME COMPUTING",2,6)
 80 PROCdouble("WEEKLY",6,12)
 90 PROCdouble("For  all",5,17)
100 PROCdouble("Micro  Users",3,22)
110 END
120 DEFPROCdouble(string$,x_co%,y_co%)
130 PRINTTAB(x_co%,y_co%);
140 CALLdouble,string$
150 ENDPROC
160 DEFPROCassemble
170 DIM code 200,block 8
180 osword=&FFF1:oswrch=&FFEE
190 parameter=&600:temp=&70:address=&72:length=&80
200 FOR pass=0 TO 2 STEP2:P%=code
210 [OPT pass
220 .double
230 LDA parameter+1:STA temp
240 LDA parameter+2:STA temp+1
250 LDY#0:LDA (temp),Y:STA address
260 INY:LDA (temp),Y:STA address+1
270 INY:INY:LDA (temp),Y:STA length
280 LDY#0
290 .loop TYA:PHA
Store Yregister on stack
300 LDA (address),Y:STA block
310 LDA #&A:LDX #FNlo(block):LDY #FNhi(block)
Point to control block
320 JSR osword
330 LDA #23:JSR oswrch
VDU23
340 LDA #224:JSR oswrch
VDU224
350 LDA block+1:JSR oswrch:LDA block+1:JSR oswrch
Define top half
360 LDA block+2:JSR oswrch:LDA block+2:JSR oswrch
Ditto
370 LDA block+3:JSR oswrch:LDA block+3:JSR oswrch
380 LDA block+4:JSR oswrch:LDA block+4:JSR oswrch
390 LDA #23:JSR oswrch
VDU23
400 LDA #225:JSR oswrch
VDU225
410 LDA block+5:JSR oswrch:LDA block+5:JSR oswrch
Define bottom half
420 LDA block+6:JSR oswrch:LDA block+6:JSR oswrch
Ditto
430 LDA block+7:JSR oswrch:LDA block+7:JSR oswrch
440 LDA block+8:JSR oswrch:LDA block+8:JSR oswrch
450 LDA #224:JSR oswrch
Print top half
460 LDA #10:JSR oswrch:LDA #8:JSR oswrch
Move cursor
470 LDA #225:JSR oswrch
Print bottom half
480 LDA #11:JSR oswrch
VDU11
490 PLA:TAY:INY
End of string?
500 CPY length:BEQ end
End of string?
510 JMP loop
No. Go back to beginning
520 .end RTS
Return to Basic
530 ]NEXT
540 ENDPROC
550 DEFFNlo(number)=number MOD 256
560 DEFFNhi(number)=number DIV 256
```

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COMPETITION

We're giving away over £1,000-worth of games from UNIQUE

Win a Unique game in this week's wordsquare — and save yourself some money.

Unique is giving away Bully, a brand new game, to each of 170 top winners and all competition entrants will automatically become members of the Unique That's Different club. Your free membership entitles you to monthly updates of what's new at Unique, as well as special reductions on any of Unique's four games — Clerky, Sand Scorchers, Whizz Kid and Bully.

To whet your appetitie, here's a description of each Unique game.

Feel the sun beating down on the desert in Sand Scorchers. You're behind the wheel of a sand scorcher and you're tearing over the dunes. Your life is made uncomfortable by the unrelenting sun, the glare and the dust, and endangered by hostile sand buggies. I don't know what you've done, but they're out to get you. You can block their path with a trail of heat from your engines — but beware; they'll do the same to you.

Clerky is a busy office clerk, who's overworked and underpaid. All his working days are spent scuttling round the office trying to instil order by filing all the correspondence. His colleagues aren't very co-operative though; they amuse themselves by firing inkpots and rubbers at him. Poor old Clerky has to dodge these trajectiles or else he won't be allowed into his local for a well-earned pint and a bit of peace and quiet.

In Whizz Kid you have only nine minutes to reconstruct a 3D colour-coded grid system. This is a game of logic and clear thinking. The less moves you make, the higher your score, but you'll have to think fast — the minutes are ticking away!

Play darts on your computer with Bully. You can play any games you could play on a dartboard. You'll have to concentrate and keep a steady aim, as there's big money and a world championship title at stake.

Whizz Kid is for both Spectrums, while the other three games are for the 48K Spectrum.

Unique is a new software house based in Buckinghamshire. John Willan, the proprietor, was formerly with the Rabbit sales team. "I'm an old hand at this business," he said. "I've been working in the industry since 1982.

"We have six in-house and two freelance programmers," he continued. "Unique wants to be known for its original, different games. We're incorporating everyday articles to provide interest and amusement.

"We spent a long time writing our first few games and they're good value for money. We intend to produce up to date games which keep up with the newest technological advances."

Now's your chance to win a great Unique game and join the club. All you have to do is find all the computing words in the wordsquare.

How to enter

Look closely at the wordsquare — in it you will find a number of words associated with computing. Ring each word clearly with a ballpoint or semi-opaque felt tip pen. Complete the coupon clearly and fully — if you are a winner it will be used as a label. Send wordsquare and coupon to us.

Important: write the number of titles you found on the back of the envelope.

Send your entry to Unique Competition, Home Computing Weekly, No.1 Golden Square, London W1R 3AB. Closing date is at first post on Friday July 13.

You may enter as many times as you wish, but each entry must be on an official coupon — not a copy — and sealed in a separate envelope.

Please follow clearly the guidelines on entering. Incomplete coupons and entries in envelopes with no numbers on the back cannot be considered.

Senders of the first 170 entries opened at random will receive Bully from Unique. The prizes will arrive from Unique within 28 days of the publication of the issue containing the results of the competition.

The rules

Entries will not be accepted from employees of Argus Specialist Publications, Unique and Alabaster Passmore & Sons. This restriction also applies to employees' families and agents of the companies.

The How to Enter section forms part of the rules.

A	P	G	U	Q	Y	B	Z	S	B	A	Y	R	A	M	P
V	B	R	X	Y	A	R	C	A	Z	C	B	O	Z	G	H
C	W	A	X	Z	Z	S	D	F	D	Y	A	M	D	L	M
X	D	P	W	W	D	Y	E	E	N	E	X	Z	K	E	J
P	O	H	E	X	I	V	F	M	F	C	B	W	E	F	D
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T	M	O	I	T	T	T	J	I	H	I	T	G	A	O	D
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N	L	Q	G	N	N	S	O	F	T	W	A	R	E	S	C
J	M	M	F	O	D	Q	P	Z	N	M	B	O	C	B	T
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Enter this week's competition and you could win a great game from Unique. Your bonus for starters is free membership of a money-saving club

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Will you survive the holocaust?

Defend yourself against the anti-matter clones and be prepared for the supernova — when the sun explodes and frazzles everything in range. Great graphics in this game by A.J. Cooney

The story so far: For five generations the war against aliens from the Andromeda galaxy raged. Earth finally won the victory, but at an immense cost to human life.

As a final act of rage the aliens created a clone which had the power to reproduce itself. The two clones head towards the sun with their cargo of anti-matter bombs, in a last ditch attempt to win the war.

This is where you come in. Only one starship is left on earth after the bitter struggle. You must control this and use it to save the world. Meanwhile a fleet of ships is escaping towards the edge of This drains power which you need for your laser, and your range of fire gradually lessens.

Try to destroy more aliens each time they attack, otherwise they will cause the sun to explode and your whole fleet will be vaporised. If you can, make the jump to light speed. You must decide whether to operate Code 1 or Code 2; Code 1 transfers all power to your shields in an effort to protect yourself, and Code 2 abandons the shields, shifting power to enable you to make the jump to light speed.

The choice is yours: stay where you are and pray your shields will withstand the onslaught, or let out the throttle and make a beeline for the end of the galaxy.

the solar system. They are counting on your protection.

The clones turn to pursue the escaping earthlings. You must prevent them getting past you and reaching the fleet. If they make contact with your ship they will erode it. Repairs must be made during the battle by your onboard computer systems.

Useful hints

Take care when putting in the high score routine, as it also contains the random trigger for the supernova — when the sun explodes — in lines 810 and 890.

There are several of these triggers in this game. Look out for them. If you get one wrong the game will stop.

The ship repair sequence is in lines 650-690. Don't be tempted to try and loop back to the original draw sequence in lines 260-320. It might save you some typing but it will interrupt your game and reset some important variables.

Note the use of motor on-off and audio on-off in the supernova sequence. This allows you to put your own sound effects on the supernova. Use a C30 good quality tape and record supernova on the first part. Check it is there and then you can use the rest to record explosions. Create the sound of the supernova according to your imagination.

Once the game is loaded and running it will switch the sound through to the TV. You will hear an explosion every time you are zapped by a supernova until the tape runs out.

If you want to play it safe, record your game on both sides of the tape so that if it does snap you can splice it and retrieve it.

Don't forget to leave the play button pressed on your cassette to get the sounds through to the TV monitor.

How it works

10-100 title sequence and instructions
110 set arrays
120-130 select page for graphics
150-220 print set display
250 set most variables
260-330 draw border line, ship, radar cones, sun, put stars in sky
340 put aliens on screen
350-360 randomise starting point for aliens
370-750 check keyboard, move and fire gun including at 650-690 trigger, redraw ship
760-820 score routine, including at 810 random trigger for terminating attacks
830 clear screen
840-890 check and print score; if less than high score, triggers supernova in 890
900-920 repeat routine
1060-1450 instructions
1460-1760 supernova
1770 random for survival
1780-1830 non-survival and replay routines
1840-1900 survival and replay routines

```
100 GOTO1060
110 DIMA(8,8):DIMB(12,8):DIMC(12,8):DIMZ(8,8):DIML1(8,8),L2(8,8),L3(8,8),L4(8,8)
,L5(8,8)
120 PMODE4,1
130 SCREEN1,1
140 PCLS4
150 GET(1,1)-(8,8),Z
160 GOTO940
170 POKE1536,24:POKE1536+32,24:POKE1536+64,24:POKE1536+96,153:POKE1536+128,255:P
OKE1536+160,153:POKE1536+192,153:POKE1536+224,153
180 GET(1,1)-(8,8),A
190 PCLS
200 POKE1536,60:POKE1536+32,126:POKE1536+64,235:POKE1536+96,126:POKE1536+128,106
:POKE1536+160,129:POKE1536+192,66:POKE1536+224,36
210 GET(0,0)-(8,8),B
220 POKE1536,60:POKE1536+32,36:POKE1536+64,60:POKE1536+96,126:POKE1536+128,255:P
```

DRAGON PROGRAM

```
OKE1536+160,36:POKE1536+192,66:POKE1536+224,66
230 GET(1,1)-(8,8),C
240 PCLS
250 D=20:A=170:M1=20:B4=100:BB=100
260 DRAW"BM0,20;R255
270 DRAW"BM0,180;R255
280 DRAW"BM0,168;R255
290 CIRCLE(180,168),28,,1,.5,1:PAINT(180,156)
300 CIRCLE(245,10),9,1:PAINT(245,10)
310 CIRCLE(12,168),50,,1,.5,1:PAINT(12,164)
320 LINE(0,128)-(0,192),PRESET:LINE(0,192)-(76,192),PRESET
330 FORI=1TO50:PSET(RND(255),RND(168),5):NEXT
340 PUT(1,8)-(8,16),L1:PUT(10,8)-(17,16),L2:PUT(19,8)-(27,16),L3:PUT(29,8)-(36,1
6),L4:PUT(38,8)-(45,16),L5
350 B1=RND(30)*8:C1=30
360 B=RND(30)*8:C=30
370 PUT(BB,CC)-(BB+7,CC+7),Z
380 PUT(B,C)-(B+8,C+8),B
390 PUT(B4,C4)-(B4+8,C4+8),Z
400 PUT(B1,C1)-(B1+8,C1+8),C
410 BB=B:CC=C:B4=B1:C4=C1
420 IF(C>=172)THENPUT(D,182)-(D+8,190),B:PUT(B,C)-(B+8,C+8),Z:D=D+20:GOSUB740:AL
=AL+1
430 IF(C1>=172)THENPUT(D,182)-(D+8,190),C:PUT(B1,C1)-(B1+8,C1+8),Z:D=D+20:GOSUB7
50:AL=AL+1
440 IFAL=10THENGOTO830
450 GOTO590
460 M1=M1+1:MM=M1
470 IF(A+2=B+4)AND(MM<C)THENMM=C
480 IF(A+2=B1+4)AND(MM<C1)THENMM=C1
490 FORDL=1TO5
500 LINE(A+2,168)-(A+2,MM),PSET
510 LINE(A+2,168)-(A+2,MM),PRESET
520 PLAY"O2L255CFC"
530 NEXTDL
540 LINE(A+2,168)-(A+2,MM),PSET
550 PLAY"O5T250CDEDCDEDCD
560 LINE(A+2,168)-(A+2,MM),PRESET
570 IF(A+2=B+4)AND(MM=C)THENPLAY"V15O3T200CDEFGCDEFGCDEFGCDEFG":PUT(B,C)-(B+7,C+
7),B,NOT:GOSUB740:SH=100:GOSUB760:PUT(B,C)-(B+7,C+7),Z
580 IF(A+2=B1+4)AND(MM=C1)THENPLAY"O4T200V15CEGO5CO4CEGO5CO4CEGO5CO4CEGO5C":PUT(
B1,C1)-(B1+7,C1+7),C,NOT:GOSUB750:SH=50:GOSUB760:PUT(B1,C1)-(B1+7,C1+7),Z
590 IF(AA<>A)THENPUT(AA,170)-(AA+7,177),Z
600 PUT(A,170)-(A+7,177),A
610 AA=A
620 A$=INKEY$
630 A=A+16*(A<240)*(PEEK(344)=223)-16*(A>16)*(PEEK(343)=223)
640 IFA$=CHR$(32)THEN460
650 R=RND(15):IF R=RND(15)AND A$=CHR$(8)THEN660ELSE700
660 DRAW"BM0,180;R255
670 DRAW"BM0,168;R255
680 CIRCLE(180,168),28,,1,.5,1:PAINT(180,156)
690 CIRCLE(12,168),50,,1,.5,1:PAINT(12,164)
700 REM
710 C=C+4:B=B+8*(B>22ANDB<240)*(RND(3)-2)-(8*(B<=22))+(8*(B>=240))
720 C1=C1+2:B1=B1+8*(B1>22ANDB1<240)*(RND(3)-2)-(8*(B1<=22))+(8*(B1>=240)):GOTO3
70
730 B=B-8:C=C+8*(RND(3)-2):GOTO370
740 B=RND(31)*8:C=30:RETURN
750 B1=RND(31)*8:C1=30:RETURN
760 SCORE=SCORE+SH+MM
770 IFSCORE>5000ANDQ1=0THENM1=20:Q1=1
780 IFSCORE>10000ANDQ2=0THENM1=20:Q2=1
790 IFSCORE>15000ANDQ3=0THENM1=M1-100:Q3=1
800 PP=10*INT(SCORE/1000):IFPP>9THENPUT(PP+30,8)-(PP+38,16),B
810 K=RND(15):IF K=RND(15)ANDA$=CHR$(32)THEN 830
820 RETURN
```

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```
830 PMODE0,1:SCREEN0,1:CLS
840 IF(SCORE>HI)THENHI=SCORE
850 PRINT" ******SUPERNOVA******"
860 PRINT:PRINT:PRINT:PRINT"  YOUR SCORE="SCORE
870 PRINT:PRINT" HIGH SCORE="HI
880 FORTL=1TO2000:NEXT
890 IFSCORE<>HITHEN GOTO1460
900 PRINT:PRINT:PRINT"  PRESS enter TO PLAY AGAIN"
910 FORTL=1TO3000:NEXT
920 E$="":E$=INKEY$:IFE$<>CHR$(13)THEN920
930 SCORE=0:AL=0:GOTO120
940 POKE1536,0:POKE1536+32,126:POKE1536+64,66:POKE1536+96,96:POKE1536+128,30:POK
E1536+160,66:POKE1536+192,126:POKE1536+224,0
950 GET(1,1)-(8,8),L1
960 PCLS
970 POKE1536,0:POKE1536+32,0:POKE1536+64,126:POKE1536+96,66:POKE1536+128,64:POKE
1536+160,66:POKE1536+192,126:POKE1536+224,0
980 GET(1,1)-(8,8),L2
990 POKE1536,0:POKE1568,0:POKE1600,126:POKE1632,66:POKE1664,66:POKE1696,66:POKE7
28,126:POKE1760,0
1000 GET(1,1)-(8,8),L3
1010 POKE1536,0:POKE1568,0:POKE1600,124:POKE1632,66:POKE1664,124:POKE1696,68:POK
E1728,66:POKE1760,0
1020 GET(1,1)-(8,8),L4
1030 POKE1536,0:POKE1568,0:POKE1600,126:POKE1632,64:POKE1664,120:POKE1696,64:POK
E1728,126:POKE1760,0
1040 GET(1,1)-(8,8),L5
1050 GOTO170
1060 REM**INSTRUCTIONS**
1070 CLS:PRINT@68," ###### SUPERNOVA ######";:PRINT@130,"ASSEMBLED FOR THE DRAGO
N32/64";:PRINT@233,"BY A.J.COONEY.";:PRINT@331,"18-5-84";
1080 PRINT@421,"PRESS space TO PLAY";
1085 FORT=100TO200STEP25:SOUNDT,2:NEXTT
1090 E$="":E$=INKEY$:IFE$=""THEN1090
1095 SOUND120,2
1100 CLS:PRINT"##ALIENS ARE ATACKING THE SUN##";:PRINT:PRINT" YOUR ON THE STARSH
IP CONDORE   YOUR MISSION IS TO HOLD THEM OFF
1110 PRINT" SO THE SURVIVERS OF EARTH CAN   ESCAPE IN THEIR FLEET OF SHIPS"
1120 PRINT:PRINT"              warning          "
1130 PRINT:PRINT"ONLY TEN ALIENS HAVE TO PASS YOU TO DESTROY THE UNDEFENDED FLEE
T"
1140 PRINT:PRINT:PRINT" PRESS ANY KEY TO CONTINUE"
1150 E$=INKEY$
1160 PRINT@266,"WARNING":FOR DL=1 TO 100:NEXT:PRINT@266,"warning":FOR DL=1TO100
:NEXT
1170 IFE$=""THEN1150
1180 SOUND120,2
1190 CLS
1200 PRINT"   ****** SUPERNOVA ******"
1210 PRINT:PRINT:PRINT" USE ARROW KEYS TO CONTROL"
1220 PRINT" MOVEMENT AND SPACE TO FIRE"
1230 PRINT" THE LASER FROM YOUR SHIP"
1240 PRINT:PRINT" THERE ARE TWO TYPES OF ALIEN,"
1250 PRINT"ONE SCORES MORE THAN THE OTHER."
1260 PRINT:PRINT" THE ALIENS ARE WORTH MORE THE"
1270 PRINT" NEARER THEY ARE TO YOUR SHIP."
1280 PRINT:PRINT" PRESS SPACE TO CONTINUE"
1290 E$="":E$=INKEY$:IFE$=""THEN1290
1300 CLS:SOUND120,2
1310 PRINT"YOU MUST BETTER YOUR SCORE EACH TIME"
1320 PRINT:PRINT:PRINT"IF YOU DONT THE SUN WILL TURN      #####SUPERNOVA#####
1330 PRINT"EACH GAME IS OF RANDUM DURATION"
1340 PRINT:PRINT"ENTER CODE1OR2 AND THEIR IS"
1350 PRINT"A REMOTE CHANCE OF SURVIVING"
1360 PRINT:PRINT"PRESS space TO CONTINUE"
1370 E$="":E$=INKEY$:IFE$=""THEN1370
1375 SOUND120,2
```

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```
1380 CLS:PRINT" FOR EVERY 1000 POINTS SCORED"
1390 PRINT" AN ALIEN WILL SHOW ON THE TOP  LINE."
1400 PRINT:PRINT"FOR EVERY 5000 POINTS SCORED"
1410 PRINT"FUEL RESERVES ARE REPLENISHED"
1420 PRINT"   AND YOUR FIRING RANGE IS      RESTORED TO MAXIMUM"
1430 PRINT:PRINT:PRINT"PRESS SPACE TO START GAME"
1440 IFINKEY$=""THEN1440
1445 PLAY"T255V3105CGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCT5V3101CCCCCCO5CCO4CCO3C
CO2CCO1CC"
1450 GOTO110
1460 CLS
1470 FORE=1TO20
1480 I=RND(255):J=RND(9)-1
1490 CLS J
1500 PRINT@268,"red alert";
1510 SOUNDI,2
1520 NEXT E
1530 CLS4
1540 PRINT@234,"supernova";:PRINT@266,"in45seconds";:PLAY"T45V31CBCCBCBCBCBCBCBC
BCBCBCBCBCBCBCBCBCBCBCBCBCBFGFGFGFGFGFGFGFGFGFGFGFGFFGFFFGFGFFGFGFCCBCBCBCBCBCBCBCBC
BCBFGFGFGFGFGFGFGFGFGFGFFGGFGFGFG"
1550 CLS7
1560 PRINT@36,"SHIPS COMPUTER PLOTTING";:PRINT@65,"COURSE FOR JUMP TO LIGHT SPEE
D";: PRINT@132,"shialds are up captain";:PRINT@482,"DEEP SPACE SCANNER ACTIVATED
";
1570 FORHL=1TO30
1580 PRINT@268,"STANDBY";:FORDL=1TO100:NEXT:PRINT@268,"standby";:FORDL=1TO100:NE
XT
1590 NEXTHL
1600 CLS0
1610 PCLEAR 8:PMODE3,4:PCLS
1620 INPUT"ENTER CODE NOW!!";M:ON M GOTO1640,1640
1630 S=1:GOTO1660
1640 MOTORON:AUDIOON:S=2:GOTO1660
1660 FOR P=1TO8STEP S:PMODE M,P:PCLS
1670 CLS5
1680 CIRCLE(128,96),((P-1)*35):PAINT(128,96):FORI=1TO50:PSET(RND(255),RND(180),5
):NEXT
1690 SCREEN1,1:FORI=1TO100:NEXTI,P
1700 FOR E=1TO30:FOR P=1TO8STEP S:GOSUB1730:NEXT P
1710 IFM>2THEND=4:S1=3ELSED=7:S1=S

1720 FOR P=D TO 1STEP-S1:GOSUB1730:NEXT P:NEXT E:GOTO1750
1730 PMODE M,P:SCREEN1,1
1740 RETURN
1750 CLS1
1760 MOTOROFF:AUDIOOFF
1770 CH=RND(3):IFCH=RND(3)AND M=1ORCH=RND(3)ANDM=2 THEN1840
1780 PRINT@70,"****YOU WERE VAPERIZED";:PRINT@102,"BY A SUPERNOVA****!!!";
1790 PRINT@268,"game over";
1800 PRINT:PRINT:PRINT"  PRESSenter to play again"
1810 PLAY"O1T2L4DFABB-":FORDY=1TO2000:NEXT
1820 E$="":E$=INKEY$:IFE$<>CHR$(13)THEN1820
1830 GOTO110
1840 PRINT@70,"####you survived####";:PRINT@97,"SO DID THE FLEET/BUT DONT GET";:
PRINT@130,"COCKY KID!/TRY AGAIN";
1850 PRINT:PRINT:PRINT"  press enter to play again"
1860 PRINT@205,"#";:PRINT@236,"###";:PRINT@267,"#####";:PRINT@298,"########";:PRI
NT@329,"##########";:PRINT@360,"############";
1870 PRINT@386,"#######SUPERNOVA#######";
1880 PLAY"T303L4CEFGECEDCFCGFAGF":FORDY=1TO2000:NEXT
1890 E$="":E$=INKEY$:IFE$<>CHR$(13)THEN1890
1900 GOTO110
```

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No, Robin you're wrong

In reply to Robin Elworthy's letter in HCW 61, I hope many readers will join with me in totally disagreeing with him.

For a start, what is it to him if people choose to spend their money on models like the BBC rather than £60 machines of a much inferior quality?

As for his ludicrous statements about the state of software piracy, either he must be mad or it was a slip of the pen. To say that there is not as much software piracy now as there used to be and that software houses lose a relatively small amount of money through piracy is complete rubbish. There are now many times more computers than last year, and therefore, more copies are made.

As for prices: if software companies like Ultimate and Melbourne House keep up their consistently high standards then they get my money any day.

And to fuel my anger I read that this person refers to programming as a "sidekick". Most home computer owners in my class are good with their machines.

Is this writer trying to destroy the software industry altogether?

Toby Raphael, Cornaa, Isle of Man

VIC book moan

May I, through your columns, have a little grouse. Everyone else seems to be doing so.

I started to take HCW when VIC Computing became Commodore User and virtually condemned VIC-20 owners to the scrapheap by being totally biased towards the Commodore 64.

I take HCW mainly for the VIC-20 programs but am keenly interested in your articles and letters page. Why are there so many grouses about the Commodore 64? Surely someone is satisfied with the model. I suppose that if you are happy with your micro you don't dash off letters to the media.

Anyway, now for my grouse. I recently purchased a book published by Pan Books entitled Sixty Programs for the VIC-20, written by Robert Erskine, Humphrey Walwyn, Paul Stanley and Michael Bews. I have yet to type in a program that works to my satisfaction.

Any VIC-20 user knows that the minimum number of characters to a line is 88. Some of the lines are 96 characters long, even using the VIC abbreviations. There are also variables in some lines which are not used in the program. There are even reverse characters that I am unable to reproduce on the VIC.

There is a line in the introduction to the book which says "Their selfless devotion to accuracy inspired us." Well, here is one person who is not inspired.

Is there anyone out there who has any ideas on this subject or better still anyone want to buy the book from me?

RT Goodwin, Stockingford, Nuneaton

Shorten your programs

Here is a helpful routine for the Dragon 32. In BASIC programs, testing for a key response before continuing program execution requires the laborious INKEY routine.

If you place EXEC 41194 where you would put your INKEYs routine, a cursor will be placed on the screen and when a key is pressed, program execution will continue.

The use of this routine can cut down the number of lines in a program drastically.

Steven Spittle, Sutton Coldfield, W Midlands

Don't waste your money

After reading One Child's View (HCW 61) I was extremely pleased to see that others agree with me that 90 per cent of home computers are now being used solely as games machines.

In my class at school one boy owns a Commodore 64 but he uses it mainly for games; another boy owns a Dragon 32 but he too uses his micro for games playing.

Boys pester their parents for computers like the BBC, Commodore 64, VIC-20, and Dragon 32 and 64, with promises of learning the BASIC for that particular machine and using the computer to its best ability. But those promises slip away after the micro has been purchased.

The £300 or £400 computer is then turned into a games machine.

ZX81s only cost £39.95 and are ideal for the devoted games player. It has a wide variety of software. For £60 to £100 you can buy a Philips Videopac, Vectrex, or Intellevision.

I would like to end by saying that people who buy serious computers and just use them for games are wasting their money.

Paul Sephton, Preston

Stop CBM crackle

Unlike K. Hopps (HCW 65) I found Commodore helpful when I wrote to them after having trouble with the manual. The errata sheets came by return and from the letter it would appear these are now packed with the computers before despatch.

However, what these errata sheets do not tell you is the error in the piano keyboard program. As anyone who has tried this program will know, you get a very faint crackling sound when the television is at full volume.

To remedy this the following additional changes should be made:

Delete lines 800, 810 and 820
Add a new line 280 POKE S+24,15

You should now be able to play any desired note.

C Johnson, Shoreham-by-Sea, W Sussex

Scarce TI support in Portugal

I'm a TI-99/4A owner and I'm writing to fill you in on the situation of many TI users here in Portugal.

I buy Home Computing Weekly every week and I'm very pleased with the way you support the TI. The majority of the programs you publish are very good and I find them very addictive.

I like to read the opinions of TI users in the Letters section. I read letters in which readers complain about the difficulty in getting software for their TI but in my country the situation is much worse. There aren't any software houses making programs for my computer, whereas in England companies like Stainless, Christine Computing, Byteware and many more provide cassette software for the TI-99/4A.

Cassettes available here are mainly from magazines and most of them aren't worth the price. The Solid State Software modules are very expensive (a lot more than in the UK — the Parsec cartridge costs about £36) and some of them have already disappeared from the market. I was very disappointed when, after buying the Mini Memory (at an exceptionally good price) I realised I couldn't get the Editor Assembler User's Manual.

I expect I'll be able to buy some products from the advertisers in HCW after reading the reviews which I consider most helpful. HCW is the best English computing magazine I've seen and I'm sure you'll continue to support this wonderful machine.

I've recently bought the five-a-side Soccer cartridge and I must say it was very pleasant to see an excellent game. The only drawback is that it doesn't have a one-player option. I've got the TI Invaders and Hustle and in the former my top score is 42,013. — It took me well over 90 minutes to get and the game reached a very difficult level.

I came to London in the last week of September and I felt very frustrated as after a whole week's stay I was unable to find any cassettes for the Texas. Fortunately I bought some books.

I would like to add that I'm 15 and at secondary school. I hope you'll publish my letter as it may make English TI owners feel better.

Pedro Magatheus, Porto, Portugal

Stop MCP games

Patricia Bate's letter in HCW 65 made interesting reading. I'm a girl, I also ride a motorbike and I also find the CCS games for girls insulting. I'm not a feminist and don't have strong views on sex equality but CCS is obviously run by a male chauvinist who thinks the "little women" should stay at home.

The real point of my letter is to say that I've just escaped from Sabre Wulf by Ultimate with 73 per cent and a pathetic score of 94,895 and I've only had it five days. It took me months to get out of Atic Atac! After you've got past the keeper an advertisement for the next Sabre game appears. I hope it's not going to be as expensive as this one.

Spectrum software used to be much cheaper than Commodore, VIC-20 and BBC software. Now I hear Imagine is going to bring out a game for £30. If it's anything like Alchemist I would give 30p for it.

Speaking of which, Philip Rock (also in HCW 65) wanted to know where to find the fourth piece of scroll. The items to collect are the lamp, ring, vase and lead which you change to gold using the transform spell.

If you want to find out what happens in Jet Set Willy when Maria goes away, merge the loader then stop the tape. Change line 30 to line 20 and add line 25 POKE 34778,255 and for unlimited lives add line 35 POKE 35899,0. The first POKE was discovered by chance as I was just putting in any numbers (lucky, eh?)

I must go now as I've just bought Kosmic Kanga by Micromania.

Alison Martin, Old Doston, Northampton

Slip of the pen

In my letter Dear Pearl... (HCW 65) I railed against the games for girls published by CDS. This should of course read CCS. Sorry about this typing error, and no hard feelings, CDS!

Patricia Bates, North Walsham, Norfolk

Send your letters to Letters, Home Computing Weekly, No.1 Golden Square, London W1R 3AB. Don't forget to name your computer — the best letter could win £5-worth of software. Got a problem with your micro? We'll soon be starting a queries page, so send your technical questions to Queries at the above address.

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Spellicopter 48K Spectrum £5.95

Kerian,29 Gisburn Rd, Hessle, North Humberside HU13 9HZ

A simple program which could have succeeded with a little more thought. The basic idea is a good way of testing children's knowledge of 812 words contained in 116 sets of increasing difficulty.

After the instructions, you select a word set. A word appears screen left and a red helicopter bombs one letter from it. A black helicopter appears at screen right, to be controlled by the cursor keys to fly down to the alphabet, at screen bottom, and hover over a letter. The program takes over and flies the letter to the blank and drops it in if correct, with 'correct' appearing on screen. If wrong, the helicopter crashes through the word with screen flashes and correct letter when it reaches screen bottom: so who wants to be right?

Unfortunately, there is no facility to change or add to the lists, no hall of fame, no report card to print out and only one letter is removed even from difficult words, however, the words are matched for sounds.

T.W.

instructions	85%
ease of use	90%
display	45%
value for money	35%

★ ★

Heli Maths 32K BBC £5.95

Kerian, 29 Gisburn Rd, Hessle, Hull HU13 9HZ

This is a computation drilling program, which means that although it is likely to be sold under an 'Educational' banner it doesn't teach you anything. All a program like this can do is give you practice at something you already know; it is the equivalent of a book of sums.

The one thing that such programs offer is the motivational element which the colour, graphics and sound of the computer can give. The 'interest' in this case is a helicopter with which you select the right answer, and which lifts the answer into the sum. If you are wrong it crashes to the ground.

On the negative side: there are no difficulty levels in this program, you either work with answers up to 99 or you don't. The program gives you the right answer after two wrong attempts, but it will carry on with the sum for ever if you refuse to copy the one given.

Above all it's boring after one se sion. One to avoid I feel.

D.C.

instructions	50%
ease of use	50%
graphics	65%
value for money	30%

★ ★

Count With Oliver 48K Spectrum £7.95

Mirrorsoft, Holborn Circus, London EC1P 1DQ

Written by Marmalade, published by Mirrorsoft, Count with Oliver aims to teach your child to attach meaning to numbers, introducing addition and subtraction.

Enormous, beautifully designed graphics show Oliver looking in the toyshop window at teddies, bikes and boats. Count them correctly, and Oliver keeps them. Get it wrong, and after another try, the toys are taken back, Oliver turns puce and cries his eyes out. In the more advanced stages different colours of toys are counted. All this accompanied by well written sound routines.

The second program is very similar, featuring Oliver outside the lolly shop. This time, addition and subtraction are required, even tens and units eventually.

There is no doubt that this is very professional stuff. It is, however, rather over-ambitious. Too much is attempted in two programs for a four-year-old to take in at this pace, and the time taken is too long for the average youngster.

Another small but important gripe. The superb packaging offers nothing to the buyer in terms of instructions or convenience. Is this worth the extra £1 and £2? **D.M.**

instructions	75%
playability	95%
graphics	100%
value for money	80%

★ ★ ★ ★

Learn something new

Use your home computer to best advantage — put the games away for a while and learn to program or spell or brush up on your maths. You'll feel better for it

French Verbs 48K Spectrum £4.85

L'Ensouleiado, Old Brackenlands, Wigton, Cumbria CA7 9LA

A simply designed revision program for 'O' or 'A' level French, which can also be used for regular practice during earlier learning stages. More than 40 verbs are tested in groups of 20 questions.

Imaginative display hasn't been a top priority in this program, but educationally it is the tops. Graphics mode gives certain keys defined to give the necessary accented vowels.

Firstly, the menu offers choice of tense, etc and gives you the choice of five or three attempts and whether or not you would like a short French tune played when a correct response is made.

The questions start; correct responses are awarded five points and incorrect ones are permitted the number of tries requested. If the last attempt is wrong, you are shown the correct response — hence the value as a practice aid throughout the French course. I raised my score, which appeared at the end, from 55% to 75% — and it's more than 25 years since I learnt French!

A valuable teaching aid, and an asset to any French department. **T.W.**

instructions	85%
ease of use	85%
display	35%
value for money	85%

★ ★ ★ ★

Alien Planet 32K BBC £9.95

Honeyfold, Bath Place, Barnet, London.

This Book and Tape Learning Course is part one of a trilogy subtitled Basic Adventures in Space and is aimed at young people who want to learn programming from scratch.

The book subdivides into the story section which includes several programs in the adventure and the second section for reference use.

The story part is fairly good although heavily contrived. It should hold the interest of an under-12 very well. The bonus programs on the cassette try to make things clearer too.

It is here that I become less enthusiastic, however, as I am worried about the poor programming style which the book could encourage. I have seen the results of many self-taught programmers' efforts and they usually show bad structure and lack of logical thought. There is little mention in this book of planned programming and 'top down design'. Whether you are teaching adults or children you should encourage good habits and this book falls short in this respect: **D.C.**

instructions	75%
ease of use	80%
graphics	60%
value for money	60%

★ ★ ★

Discmeute.ca

Word Search

This program will help you find those elusive words in any word search matrix. As well as being valuable for competition addicts it also demonstrates the Spectrum's ability in string handling.

Once you have entered the program, you will be asked to INPUT the number of horizontal and vertical columns in the matrix. Next you will be asked to INPUT each row of the matrix.

Hints for conversion

The Spectrum's method of string handling is unique. A$ (I TO I) returns the letter which is in the I position in the string.

This will need to be replaced by the MID$ instruction on other micros. (For further information see HCW 58 "Converting BASIC")

If you make a mistake in entering a letter carry on to the end of the input cycle, keeping a note of the position of the error in the string and what it should be.

Each row of the matrix is displayed on the screen as you enter it and the program treats the matrix as one long continuous string.

You will now be asked to enter the word you wish to find. If you have made any mistakes, give the computer an impossible word to find such as XXXX. While it is looking for this word BREAK into the program and enter in the direct addressing mode; LET A$ (I TO I) = "C", where C is the correct entry and I the position of the letter in the string.

Do this for each of the mistakes you have made and then enter GO TO 1390. Once it has made a search the computer will tell you the row and column in which the first letter of a word is to be found and the direction in which it is to be read. Failure to find the word will bring a suitable response from the computer.

The program works by looking for a match between the first letter of the word you have keyed in and the letters of the matrix string. If a match is found, another match is looked for between the second letter of the required word and the eight letters surrounding the letter found in the matrix string. If this second match is found, a check is made to see that the required word does not exceed the bounds of the matrix. If this condition is satisfied a check is made for all the letters of the required word.

You will notice that there are a fairly large number of REM statements in the listing. These have been included to illustrate how REM statements can be used to identify program areas and subroutines. This is acknowledged to be a good programming practice. There is no need to enter these lines when typing the program, but this is worth trying out when you are writing your own programs.

By following the REM statements it is easy to see how the program works. Try and follow how the computer picks out the letters, particularly in the reverse and diagonal directions.

Variables

A number of rows
B number of columns
A$ matrix string
B$ word string
**C$** temporary string extracted from AA$ and used for comparison with B$ to preserve A$
ROW row counter
COL column counter

All other variables are used as flags, counters or INPUT string variables.

How it works

A full explanation of how the program works can be found in the REM statements and in the article above.

Double Sized Letters and Screen Display

Give your programs that extra touch of quality with an eye-catching screen display while loading. This program will allow you to PRINT letters twice the normal height and width on the screen grid while supporting the normal INK, PAPER, FLASH and PRINT AT Spectrum commands. You will then be given the option of SAVEing the screen display for later use.

It is quite easy to produce letters eight times the normal height and width. You can do this by reading the values of the eight addresses in which the characters are stored, converting them to their binary equivalents and then printing an inverse space in place of the 1s found in the numbers.

You could also form double height letters by POKEing User Defined Graphics characters. This is done by POKEing the value found in the first address of the character into both the first and second addresses of the UDG character, and so on until two UDGs have been filled.

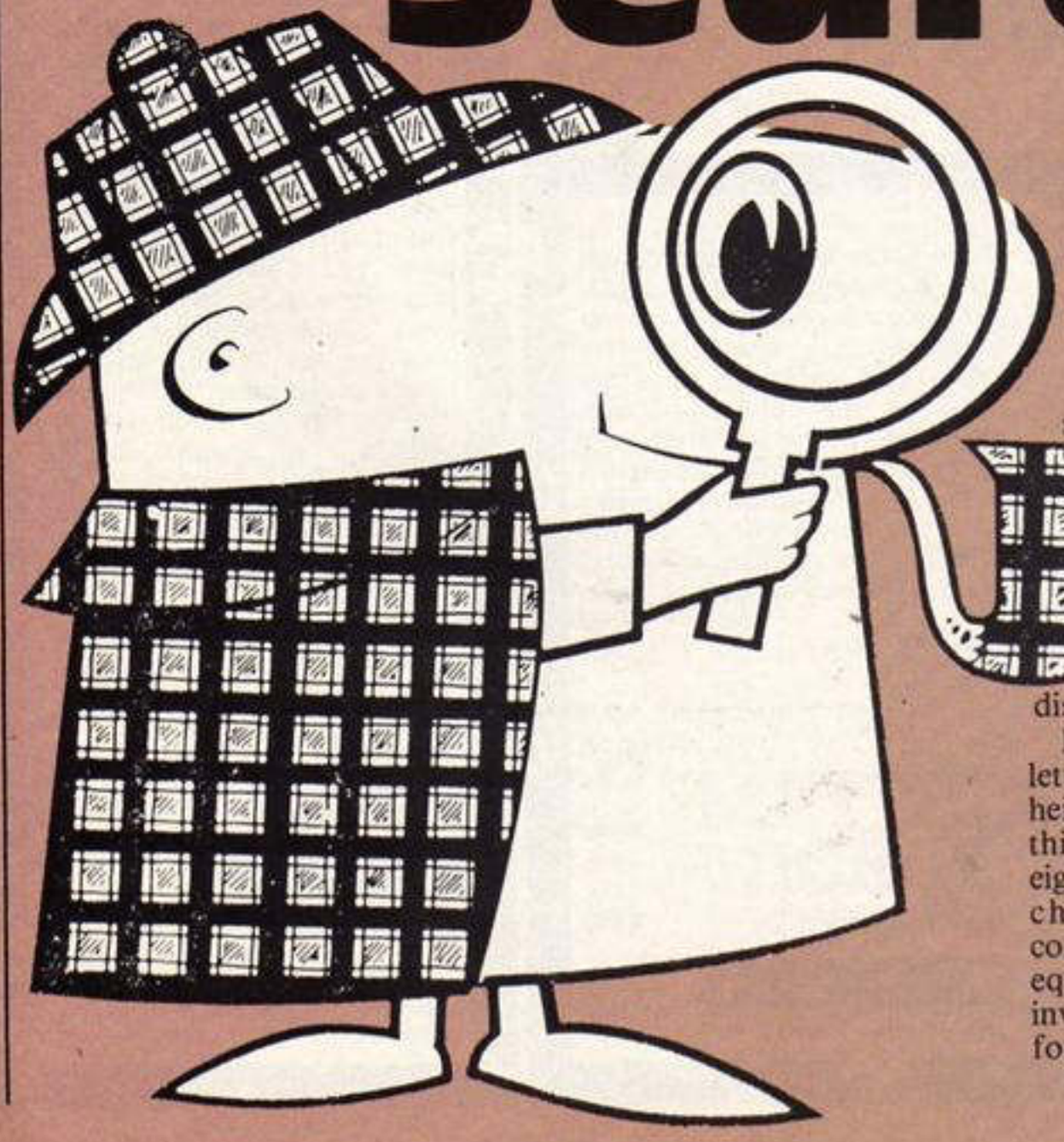
Of these two methods of creating larger letters, the first is too large to be of any practical value and the second is too distorted.

This program produces a normally proportioned letter of four times the usual area. This is achieved by taking the 8 x 8 block of binary numbers composing each character and splitting it into quarters. Each quarter is then considered individually and expanded to fill a UDG character into which it is then POKEd. When this has been done for all four quarters the four UDG characters then printed to form the large letter. Because the dimensions have been doubled, the normal Spectrum 22 x 32 screen grid is modified to an 11 x 16 grid. The Spectrum convention of numbering the first row and first column 0 is kept. The PRINT AT x,y; range is now 0 to 10 for x and 0 to 15 for y.

A display of the grid is included in the program.

Once you have entered the program into the computer you will be supplied with a number

Search out w see the



Variables

A address of first char
B$ string array; holds binary numbers defining chars
U paper colour
V ink colour
R flash flag
S psuedo x value for PRINT AT
T psuedo y value for PRINT AT
N true x value for PRINT AT
P true y value for PRINT AT
C$ input string for char to be printed
**A$** holds each char of C$ in turn for processing
D address of char in A$
L value in each address making up char in A$
D$ save/continue option input variable
K values for individual inked pixels to provide final value of H

ZXcasopis.cz

```
  0>REM WORDSEARCH APRIL 1984                BY R.A.HOULTON
 10 REM INITIALISATION ROUTINE
 20 PRINT TAB 11;"W0RDSEARCH"
 30 PRINT TAB 11;"**********"
 40 PRINT : PRINT "THIS PROGRAM WILL ALLOW YOU TO"
 50 PRINT : PRINT "FIND ANY KNOWN WORD IN A WORD-": PRINT : PRINT "SEARCH MATRI
X.   START BY FIRST"
 60 PRINT : PRINT "MAKING A COUNT OF THE ROWS (FROM": PRINT : PRINT "TOP TO BOT
TOM) AND THEN OF THE"
 70 PRINT : PRINT "COLUMNS (SIDE TO SIDE). ENTER": PRINT : PRINT "THESE NUMBERS
 AS PROMPTED AND"
 80 PRINT : PRINT "THEN THE MATRIX ROW BY ROW": PRINT : PRINT "PRESS ANY KEY TO
 CONTINUE"
 90 PAUSE 0
100 REM SET CAPS LOCK ON
110 POKE 23658,8
120 REM SET UP & ENTER MATRIX
130 INPUT "HOW MANY ROWS ?";A
140 INPUT "HOW MANY COLUMNS ?";B
150 CLS : LET C=1: DIM A$(A*B)
160 FOR I=1 TO (A*B) STEP B
170 INPUT "ROW ";(C);" ";A$(I TO (I+B-1))
180 PRINT TAB INT ((32-B)/2);A$(I TO (I+B-1))
190 LET C=C+1
200 NEXT I
210 REM ENTER REQUIRED WORD
220 INPUT "WHAT WORD DO YOU WANT TO FIND ? ";B$
230 PRINT : PRINT TAB 9;"SEARCHING FOR": PRINT TAB INT ((32-LEN B$)/2);B$: PRIN
T TAB 10;"PLEASE WAIT"
240 REM INITIALISE VARIABLES
250 DIM C$(LEN B$)
260 LET ROW=1: LET COL=1
270 REM MAIN SEARCH ROUTINE
280 FOR I=1 TO LEN A$
290 REM ROW AND COLUMN COUNTER
300 IF COL=B+1 THEN  LET ROW=ROW+1
```

words and grow

of prompts to enter colour values for INK and PAPER and values for FLASH and PRINT AT. Then you will be asked to enter the character you wish to be displayed. The program will display both upper and lower case letters, numerals and most of the other keyboard characters.

Now is the time for experimentation. Mistakes can be corrected by using PRINT AT with the correct entry.

When you have gained confidence with the program you can try SAVEing the screen for use in your own program. The routine is as follows.

You will first need a short loading program such as:

```
10 LOAD "PIC" SCREEN$
   20 LOAD "your program
   name"
```

SAVE this program using SAVE "loader" LINE 10. This will ensure an auto start on reloading.

When the OK message is shown, stop the tape. Do **NOT** REWIND. Remove the tape from the recorder and load your screen display program. Compose your screen and then accept the SAVE option.

When the Start Tape message appears, replace your tape with the loader program into the recorder and SAVE the screen display. Use the same procedure to SAVE your own program on to the same tape. When you load this tape using LOAD"" or LOAD"loader", you will see a very short normal loading sequence followed by your screen display building up on the screen.

Notice how the display builds up. This will give you a clue to how the screen is stored in the Spectrum's memory.

The program tends to run a little slowly and I am not suggesting this is the best or only way of solving this problem. Perhaps you can find a better way. If you can, then why not let HCW know?

One final hint, with PRINT AT 0,0 you can enter all 176 characters allowed in one entry. However, beware of entering a large number of characters if you have already got something on the screen. The danger here is that the screen will scroll and you may lose the tops of characters printed on the top row.

How it works

10-90 instructions
100-170 input print controls
180-280 set up array B$
310-360 pointers to UDG characters to be used
390 final print instruction
400-430 increments row and column
440-470 save or continue option
480-550 subroutine to pick out the 1s in A$, direct to subroutine and accumulate final value of H
560-590 POKEs value of H into two consecutive UDG addresses
620-650 subroutine holding values of K to form final value of H

DJCompute...ters.cz

```
 310 IF COL=B+1 THEN  LET COL=1
 320 REM LOOKS FOR FIRST LETTER  MATCH BETWEEN B$ AND A$ OR C$   AND IF FOUND DI
RECTS PROGRAM TO SUBROUTINE
 330 IF A$(I TO I)=B$(1 TO 1) THEN  GO TO 390
 340 LET COL=COL+1
 350 NEXT I
 360 REM DIRECTS THE PROGRAM TO  THE "NOT FOUND" MESSAGE
 370 GO TO 1310
 380 REM CHECKS MATRIX LIMITS    HORIZONTALLY LEFT TO RIGHT
 390 IF COL+LEN B$-1>B THEN  GO TO 450
 400 REM LOOKS FOR SECOND LETTERMATCH BETWEEN A$ AND B$
 410 IF A$(I+1 TO I+1)<>B$(2 TO 2) THEN  GO TO 450
 420 REM IF FULL MATCH BETWEEN  A$ AND B$ IS FOUND THEN  PRINTS POSITION AND DIR
ECTION
 430 IF A$(I TO I+LEN B$-1)=B$ THEN  PRINT : PRINT B$: PRINT "IS AT ROW ";ROW;"
COLUMN ";COL: PRINT "READING HORIZONTALLY FROM LEFT  TO RIGHT": GO TO 1340
 440 REM CHECKS MATRIX LIMITS    HORIZONTALLY RIGHT TO LEFT
 450 IF COL-LEN B$+1<1 THEN  GO TO 570
 460 REM AS LINE 400
 470 IF A$(I-1 TO I-1)<>B$(2 TO 2) THEN  GO TO 570
 480 REM FORMS C$ FROM MATRIX
 490 LET D=I
 500 FOR J=1 TO LEN B$
 510 LET C$(J TO J)=A$(D TO D)
 520 LET D=D-1
 530 NEXT J
 540 REM AS LINE 420
 550 IF C$=B$ THEN  PRINT : PRINT B$: PRINT "IS AT ROW ";ROW;" COLUMN ";COL: PRI
NT "READING HORIZONTALLY FROM RIGHT TO LEFT": GO TO 1340
 560 REM CHECKS MATRIX LIMITS    VERTICALLY DOWNWARDS
 570 IF A-ROW+1<LEN B$ THEN  GO TO 690
 580 REM AS LINE 400
 590 IF A$(I+B TO I+B)<>B$(2 TO 2) THEN  GO TO 690
 600 REM FORMS C$ FROM MATRIX
 610 LET D=0
 620 FOR J=1 TO LEN B$
 630 LET C$(J TO J)=A$(I+D TO I+D)
 640 LET D=D+B
 650 NEXT J
 660 REM AS LINE 420
 670 IF C$=B$ THEN  PRINT : PRINT B$: PRINT "IS AT ROW ";ROW;" COLUMN ";COL: PRI
NT "READING VERTICALLY DOWNWARDS ": GO TO 1340
 680 REM CHECKS MATRIX LIMITS    VERTICALLY UPWARDS
 690 IF ROW<LEN B$ THEN  GO TO 810
 700 REM AS LINE 400
 710 IF A$(I-B TO I-B)<>B$(2 TO 2) THEN  GO TO 810
 720 REM FORM C$ FROM MATRIX
 730 LET D=0
 740 FOR J=1 TO LEN B$
 750 LET C$(J TO J)=A$(I-D TO I-D)
 760 LET D=D+B
 770 NEXT J
 780 REM AS LINE 420
 790 IF C$=B$ THEN  PRINT : PRINT B$: PRINT "IS AT ROW ";ROW;" COLUMN ";COL: PRI
NT "READING VERTICALLY UPWARDS ": GO TO 1340
 800 REM CHECKS MATRIX LIMITS    DIAGONALLY UPWARDS FROM RIGHT   TO LEFT
 810 IF COL-LEN B$+1<1 OR ROW<LEN B$ THEN  GO TO 930
 820 REM AS LINE 400
 830 IF A$(I-B-1 TO I-B-1)<>B$(2 TO 2) THEN  GO TO 930
 840 REM FORMS C$ FROM MATRIX
 850 LET D=0
 860 FOR J=1 TO LEN B$
 870 LET C$(J TO J)=A$(I-D TO I-D)
 880 LET D=D+B+1
 890 NEXT J
 900 REM AS LINE 420
 910 IF C$=B$ THEN  PRINT : PRINT B$: PRINT "IS AT ROW ";ROW;" COLUMN ";COL: PRI
NT "READING DIAGONALLY UPWARDS FROM RIGHT TO LEFT ": GO TO 1340
```

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```
 920 REM CHECKS MATRIX LIMITS    DIAGONALLY UPWARDS FROM LEFT    TO RIGHT
 930 IF COL+LEN B$-1>B OR ROW<LEN B$ THEN  O TO 1050
 940 REM AS LINE 400
 950 IF A$(I-B+1 TO I-B+1)<>B$(2 TO 2) THEN  GO TO 1050
 960 REM FORMS C$ FROM MATRIX
 970 LET D=0
 980 FOR J=1 TO LEN B$
 990 LET C$(J TO J)=A$(I-D TO I-D)
1000 LET D=D+B-1
1010 NEXT J
1020 REM AS LINE 420
1030 IF C$=B$ THEN  PRINT : PRINT B$: PRINT "IS AT ROW ";ROW;" COLUMN ";COL: PRI
NT "READING DIAGONALLY UPWARDS FROM LEFT TO RIGHT ": GO TO 1340
1040 REM CHECKS MATRIX LIMITS    DIAGONALLY DOWNWARDS FROM LEFT  TO RIGHT
1050 IF COL+LEN B$-1>B OR A-ROW+1<LEN B$ THEN  GO TO 1170
1060 REM AS LINE 400
1070 IF A$(I+B+1 TO I+B+1)<>B$(2 TO 2) THEN  GO TO 1170
1080 REM FORMS C$ FROM MATRIX
1090 LET D=0
1100 FOR J=1 TO LEN B$
1110 LET C$(J TO J)=A$(I+D TO I+D)
1120 LET D=D+B+1
1130 NEXT J
1140 REM AS LINE 420
1150 IF C$=B$ THEN  PRINT : PRINT B$: PRINT "IS AT ROW ";ROW;" COLUMN ";COL: PRI
NT "READING DIAGONALLY DOWNWARDS    FROM LEFT TO RIGHT ": GO TO 1340
1160 REM CHECKS MATRIX LIMITS    DIAGONALLY DOWNWARDS FROM RIGHT TO LEFT
1170 IF COL-LEN B$+1<1 OR A-ROW+1<LEN B$ THEN  GO TO 1290
1180 REM AS LINE 400
1190 IF A$(I+B-1 TO I+B-1)<>B$(2 TO 2) THEN  GO TO 1290
1200 REM FORMS C$ FROM MATRIX
1210 LET D=0
1220 FOR J=1 TO LEN B$
1230 LET C$(J TO J)=A$(I+D TO I+D)
1240 LET D=D+B-1
1250 NEXT J
1260 REM AS LINE 420
1270 IF C$=B$ THEN  PRINT : PRINT B$: PRINT "IS AT ROW ";ROW;" COLUMN ";COL: PRI
NT "READING DIAGONALLY DOWNWARDS    FROM RIGHT TO LEFT": GO TO 1340
1280 REM DIRECTS PROGRAM BACK TOMAIN ROUTINE IF NO MATCH BETWEENA$ OR C$ IS FOUN
D
1290 GO TO 340
1300 REM "NOT FOUND" MESSAGE
1310 PRINT : PRINT "     SORRY, UNABLE TO FIND"
1320 PRINT : PRINT TAB INT ((32-LEN B$)/2);B$
1330 REM REPEAT WORDSEARCH
1340 PRINT : PRINT "ANOTHER WORD? Y FOR YES N FOR NO"
1350 IF INKEY$="" THEN  GO TO 1350
1360 REM SAVE MATRIX OPTION
1370 IF INKEY$="N" THEN  PRINT : PRINT "DO YOU WISH TO SAVE THE MATRIX? PLEASE E
NTER Y FOR YES N FOR NO": GO TO 1470
1380 REM CAPS LOCK ON FOR AUTO  START AFTER SAVING MATRIX
1390 POKE 23658,8
1400 REM SET UP MATRIX FOR      REPEAT WORDSEARCH
1410 CLS
1420 FOR I=1 TO LEN A$ STEP B
1430 PRINT TAB INT ((32-B)/2);A$(I TO (I+B-1))
1440 NEXT I
1450 GO TO 220
1460 REM SAVE OR STOP OPTION
1470 INPUT D$
1480 IF D$="N" THEN  PRINT : PRINT TAB 6;"GOOD LUCK AND GOODBY": STOP
1490 SAVE "WORDSEARCH" LINE 1390
```

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```
  0>REM QUADRUPLE SIZED LETTERS                    BY R.A.HOULTON
 MAY 1984
  10 CLS : PRINT AT 6,0;"THIS PROGRAM ALLOWS YOU TO PRINTLETTERS OF TWICE THE NO
RMAL     DIMENSIONS AND THEN TO SAVE THE DISPLAY ON TAPE.  IT WILL PRINT BOTH TH
E UPPER AND LOWER CASE   LETTERS,NUMBERS AND MOST OF THE SYMBOLS ON AN 11x16 GRI
D IN     CONTRAST TO THE NORMAL 22x32    SPECTRUM GRID"
 20 PRINT : PRINT "    YOU WILL ALSO BE ASKED TO   SPECIFY THE PAPER,INK AND FL
ASH VALUES YOU WISH TO HAVE PRINTED PRESS ANY KEY TO SEE THE GRID   DIMENSIONS":
 PAUSE 0
  30 CLS : FOR I=0 TO 255 STEP 16: PLOT I,0: DRAW 0,175: NEXT I
  40 FOR I=0 TO 175 STEP 16: PLOT 0,I: DRAW 255,0: NEXT I
  50 PLOT 255,0: DRAW 0,175: PLOT 0,175: DRAW 255,0
  60 LET A=0: FOR I=0 TO 30 STEP 2: PRINT AT 1,I;A: LET A=A+1: NEXT I
  70 LET A=0: FOR I=0 TO 20 STEP 2: PRINT AT I,1;A: LET A=A+1: NEXT I
  80 PRINT AT 3,7;"< Y CO-ORDINATES >": LET E$="X CO!ORDINATES": FOR I=4 TO 17:
PRINT AT I,3;E$(I-3 TO I-3): NEXT I
  90 PRINT AT 10,8;"PRESS ANY KEY TO";AT 11,12;"CONTINUE": PAUSE 0: CLS
 100 LET A=15360: DIM B$(8,8)
 110 INPUT "PAPER;(0 TO 7)";U: IF U<0 OR U>7 THEN  GO TO 0110
 120 INPUT "INK;(0 TO 7)";V: IF V<0 OR V>7 THEN  GO TO 0120
 130 INPUT "FLASH (0 OR 1)";R: IF R<0 OR R>1 THEN  GO TO 0130
 140 INPUT "PRINT AT (X CO-ORD)";S: IF S<0 OR S>10 THEN  GO TO 0140
 150 INPUT "PRINT AT  ";(S);", (Y CO-ORD)";T: IF T<0 OR T>15 THEN  GO TO 0150
 160 LET N=2*S: LET P=2*T
 170 INPUT "WORD?";C$
 180 FOR Q=1 TO LEN C$
 190 LET A$=C$(Q TO Q)
 200 LET C=CODE A$
 210 LET D=8*C+A
 220 FOR X=0 TO 7
 230 LET L=PEEK (D+X)
 240 FOR Z=18 TO 11 STEP -1
 250 LET B$(X+1)(Z-10 TO Z-10)=STR$ (L-2*INT (L/2))
 260 LET L=INT (L/2)
 270 NEXT Z
 280 NEXT X
 290 FOR I=1 TO 8
 300 NEXT I
 310 LET E=1: LET F=1: LET G=144
 320 GO SUB 0480
 330 LET E=1: LET F=5: LET G=145
 340 GO SUB 0480
 350 LET E=5: LET F=1: LET G=146
 360 GO SUB 0480
 370 LET E=5: LET F=5: LET G=147
 380 GO SUB 0480
 390 PRINT  PAPER U; INK V; FLASH R;AT N,P;CHR$ 144;AT N,P+1;CHR$ 145;AT N+1,P;C
HR$ 146;AT N+1,P+1;CHR$ 147
 400 LET P=P+2
 410 IF P=32 THEN  LET P=0: LET N=N+2
 420 IF N=22 THEN  GO TO 0440
 430 NEXT Q
 440 INPUT "CONTINUE/SAVE? ENTER C OR S";D$
 450 IF D$="C" OR D$="c" THEN  GO TO 0100
 460 SAVE "PIC"SCREEN$
 470 PRINT "SCREEN SAVED TO CONTINUE ENTER  RUN": STOP
 480 LET H=0: LET K=0: LET M=0
 490 FOR I=E TO E+3
 500 FOR J=F TO F+3
 510 IF B$(I)(J TO J)="1" THEN  GO SUB 0620
 520 LET H=H+K
 530 LET K=0
 540 IF J=4 OR J=8 THEN  GO TO 0560
 550 NEXT J
 560 POKE USR (CHR$ G)+M,H
 570 POKE USR (CHR$ G)+M+1,H
 580 LET H=0
 590 LET M=M+2
 600 NEXT I
 610 RETURN
 620 IF J=1 OR J=5 THEN  LET K=192
 630 IF J=2 OR J=6 THEN  LET K=48
 640 IF J=3 OR J=7 THEN  LET K=12
 650 IF J=4 OR J=8 THEN  LET K=3
 660 RETURN
```

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Focus on the BBC

Here's a new set of programs, mostly for the BBC. They're definitely a mixed bunch; our reviewers have studied them closely to see what they're worth

Plunder
32K BBC £6.95

Cases Computer Simulations, 14 Langton Way, London SE3 7TL

This is the first program I have seen from this company and it isn't what I expected.

This is claimed to be a strategy game based in the time of Elizabeth I when all men wanted to be salty seadogs giving the Spanish fleet a run for their money! Your aim is to stop the fleet from transferring gold from the Americas to Spain and then financing a vast Armada.

Display consists of a map of the Atlantic and your ship which is moved using cursor keys. You can dock, in which case you have to manoeuvre into the port and can then trade your ill gotten gains for men, repairs or goods. You can engage the enemy and watch the battle, deciding what to do at appropriate moments and taking their gold if you win.

The game is fairly well done and has some attractive displays but I have some reservations. Luck plays too great a part to interest the serious player who is looking for skilful strategy games. I also feel that the graphics, whilst fair, aren't up to standard. **D.C.**

instructions	75%
playability	70%
graphics	60%
value for money	75%

★ ★ ★ ★

Zoo
48K Spectrum
£4.85

L'Ensouleiado, Old Brackenlands, Wigton, Cumbria CA7 9LA

An interactive story book for the seven- to eight-year-olds, involving a walk around a zoo. Responses to questions are required for you to continue. Surely, children will be confused by sometimes having to respond with single letter answers and sometimes with words, and words which haven't appeared on screen and for which there are no clues as to spelling.

The animals seen on screen are poor plot 'n' draw approximations — the tiger cub looks like a demented bat!

Basically this is a good idea but there is no story, nor is the game educationally sound.

Why, when there are so many programmers' programs around, should young children be subjected to small, Sinclair type and such poor graphics? Children deserve the best that can be offered — and this is not it. Words used are beyond reading age 8!

Why does pressing "n" or "no" at the end cause nothing to happen?

Back to the drawing board L'Ensouleiado and construct a story — or game — that uses all the Spectrum has to offer. **T.W.**

instructions	75%
ease of use	50%
display	20%
value for money	35%

★ ★

Molecule
32K BBC £6.90

Bridge, 36 Fernwood, Marple Bridge, Stockport, Cheshire SK6 5BE

This is a version of the classic computer game, Black Box.

The game consists of an 8 x 8 grid containing invisible atoms. Your objective is to determine the position of these atoms by firing photon rays into the grid. The rays are absorbed, reflected or deflected by atoms. The entry and exit positions of rays are displayed by coloured markers which indicate the type of interaction which has occured.

To the hardened arcader, who has gone through life relying on his/her lightning quick reflexes, this may seem a little confusing. Do not despair — help is at hand. Not only are there comprehensive instructions on the cassette inlay, but the first program on side one of the cassette provides an animated description of the types of atom/ray interactions which will be encountered.

The program consists of 6K of BASIC which, no matter how hard I tried, I couldn't crash — this program must be idiot proof!

Despite the quality I couldn't help feeling that it should be have been presented along with Reversi, Nim, and Mastermind as a computer games compendium to give true value for money. **J.R.**

instructions	90%
playability	70%
graphics	40%
value for money	40%

★ ★ ★

Playbox
32K BBC £6.50

Comsoft, 7 Roman Drive, Leeds LS8 2DR

I remember going to a computer exhibition some months after the BBC was released and seeing a company selling packages such as this and in good quantities.

But we are now several years on and not many people want to buy Hangman or a memory game or word guessing quiz, and that is what you get for your money here.

All the games work well enough and are fairly interesting but in every case I have seen better examples on sale or even printed in magazines for you to type in.

The Hangman has fair graphics but an unattractive typeface, being in Mode 2; the memory game has multicoloured graphics but isn't as good as the Mr Men version, and the Brick-smash is an almost direct copy of one of the programs supplied to schools under the government scheme, and in fact isn't as well thought out.

Added to this is the lack of documentation which proves to me that this is a less than satisfactory package for the fairly high price. **D.C.**

instructions	35%
playability	40%
graphics	50%
value for money	35%

★ ★

Staircase Stampede
32K BBC £9.50

Comsoft, 7 Roman Drive, Leeds LS8 2DR

Another copy, I hear you all moan. When are we going to get something new and original?

This version of the game has a staircase instead of a pyramid and 'Horrible Harold' instead of bouncing balls. The extra excitement is provided by the wandering boot and the ticking bomb borrowed, one presumes, from the nearby 'Checkman' game.

Whilst these modifications do make a difference, they don't give the game that extra lift which something arriving this late on the market should have. In fact, I think they make the game less interesting than the original, as the snake and spinning discs need skill and dexterity if you are to overcome them properly.

Another criticism is that the game is very slow, because a good part of it is in BASIC. This is mainly a problem when the cubes are being drawn but for the price one might have expected the speed that machine code gives.

The price is a real shocker. I really cannot see how a company can try to charge this much for such a mediocre product. **D.C.**

instructions	65%
playability	60%
graphics	50%
value for money	30%

★ ★

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COMMODORE 64 PROGRAM

Play it again, Sam

Make sweet music on your computer's keys. Transform your keyboard into a musical instrument with this program by R.F.A. Brown and play on

Give us a tune on your micro — turn your Commodore 64 into a piano or synthesiser-type keyboard with this program.

There are two main sections: the BASIC section and the machine code section.

The BASIC section defines the waveform and the machine code tests for keys being depressed and plays the appropriate note. Machine code is used here because of the slowness of BASIC.

Most of the SID's special features are available through this listing, including ring modulation, synchronization, and filters. Although the sound produced is only monophonic, there is an "octaver" option which plays the note depressed and one an octave lower. As you will hear, this makes the sound much fuller.

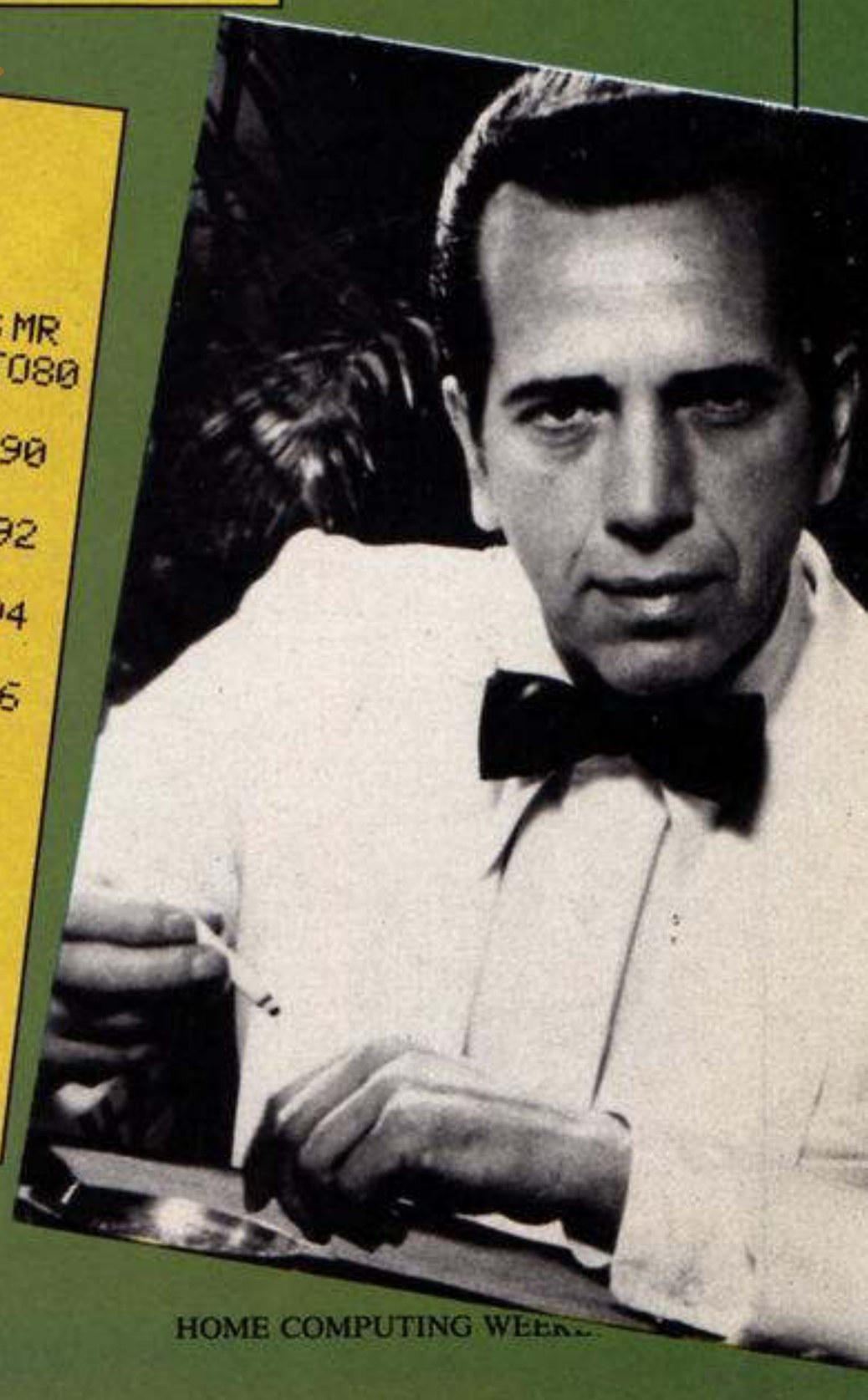
Different octaves are obtained by pressing down CTRL,C= and SHIFT keys together with various combinations. Be warned, the following ones do not work: C= + SHIFT, CTRL,C= + SHIFT and C= + CTRL only works with notes from lower C to A.

The program is fairly self explanatory.

Keys used

Z	C
S	C#
X	D
D	D#
C	E
V	F
G	F#
B	G
H	G#
N	A
J	A#
M	B
<	C
L	C#
>	D
:	D#
?	E

```
0 CLR:PRINT"J":GOSUB1000
10 S=54272:FORL=0TO24:POKES+L,0:NEXT
50 INPUT"WAVEFORM";WV$
51 IFWV$="NOISE"THENWH=128:GOTO55
52 IFWV$="PULSE"THENWH=64:GOTO55
53 IFWV$="SAW"THENWH=32:GOTO55
54 IFWV$="TRI"THENWH=16
55 IFWV$<>"PULSE"THEN58
56 INPUT"PULSE WIDTH (0-4095)";PW
57 IFPW<0ORPW>4095THENPRINT"OUT OF
   RANGE":GOTO56
58 IFWV$="NOISE"ORWV$="PULSE"ORWV$="
   SAW"ORWV$="TRI"THENGOTO60
59 PRINT"SORRY....NOT AVAILABLE":
   GOTO50
60 IFWV$<>"TRI"THEN70
61 INPUT"RING MODULATION (Y/N)";RM$
62 IFRM$="Y"THENWL=WL+4
70 INPUT"SYNCHRONISATION (Y/N)";SY$
71 IFSY$="Y"THENWL=WL+2
80 IFWL>0THENINPUT"MODULATION RATE (0-255)";MR
85 IFMR<0ORMR>255THENPRINT"OUT OF RANGE":GOTO80
90 INPUT"ATTACK   (0-15)";AT
91 IFAT>15ORAT<0THENPRINT"OUT OF RANGE":GOTO90
92 INPUT"DECAY    (0-15)";DE
93 IFDE>15ORDE<0THENPRINT"OUT OF RANGE":GOTO92
94 INPUT"SUSTAIN  (0-15)";SU
95 IFSU>15ORSU<0THENPRINT"OUT OF RANGE":GOTO94
96 INPUT"RELEASE  (0-15)";RE
97 IFRE>15ORRE<0THENPRINT"OUT OF RANGE":GOTO96
98 AD=AT*16+DE:SR=SU*16+RE
100 INPUT"BAND PASS FILTER (Y/N)";BP$
101 IFBP$="Y"THENVOL=VOL+32
110 INPUT"HIGH PASS FILTER (Y/N)";HP$
111 IFHP$="Y"THENVOL=VOL+64
120 INPUT" LOW PASS FILTER (Y/N)";LP$
121 IFLP$="Y"THENVOL=VOL+16
130 IFVOL=0THEN148
140 INPUT"FILTER CUT-OFF FREQUENCY (0-255)";FF
```



```
141 IFFF<0ORFF>255THENPRINT"OUT OF RANGE":GOTO140
145 INPUT"FILTER RESONANCE (0-15) ";FR
146 IFFR<0ORFR>15THENPRINT"OUT OF RANGE":GOTO145
147 FR=FR*16+3
148 INPUT"OCTAVER (Y/N)";O$:IFO$="Y"THENO=1:GOTO150
149 O=0
150 INPUT"VOLUME (0-15)";V
151 IFV>15ORV<0THENPRINT"OUT OF RANGE":GOTO150
155 VOL=VOL+V
160 PRINT"PRESS ANY KEY TO PLAY"
170 IFPEEK(197)=64THEN170
175 PRINT"■■PRESS RUN/STOP RESTORE TO STOP"
180 GOSUB500
190 RUN
500 REM :
501 REM PLAY MODE
502 REM:
510 POKES+2,PWAND255:POKES+3,INT(PW/256):POKES+5,AD:POKES+6,SR
520 POKE53046,WH+WL+1
530 POKES+22,FF:POKES+23,FR:POKES+24,VOL:
535 POKE53047,MR:POKE53048,0
536 IFO=1THENPOKES+12,AD:POKES+13,SR:POKES+9,PWAND255:POKES+10,INT(PW/256)
540 SYS49152
550 RETURN
999 REM [CLR]
1000 PRINT"■":POKE53280,11:POKE53281,12:POKE646,11
1009 REM[HOME][7 CRSR DOWN]
1010 PRINT"■■■■■■■■■■";
1011 PRINT"      ●●●  ●   ●  ●   ●  ●●●●  ●    ●"
1012 PRINT"     ●   ●  ● ●  ●●  ●    ●    ●    ●"
1013 PRINT"     ●      ●   ●●  ●    ●    ●    ●"
1014 PRINT"     ●      ●   ●  ●  ●   ●    ●    ●"
1015 PRINT"      ●●●   ●   ●  ●  ●   ●    ●●●●"
1016 PRINT"         ●  ●   ●  ●●  ●   ●    ●"
1017 PRINT"         ●  ●   ●  ●●  ●   ●    ●"
1018 PRINT"     ●   ●  ●   ●  ●   ●   ●    ●"
1019 PRINT"      ●●●   ●   ●  ●   ●   ●    ●"
1020 PRINT"■■■■■■■■■■■■■■■■■■BY  R F A BROWN■■■"
1021 GOSUB2000
1022 PRINT"■■■■■■■■■■PRESS SPACE BAR TO CONTINUE"
1024 IFPEEK(197)<>60THEN1022
1029 REM [CLR][3CRSR DOWN]
1030 PRINT"■■■■":RETURN
2000 FORR=49152TO49367:READD:POKER,D:NEXT:RETURN
3000 DATA216,24,165,197,201,64,240,250,32,162,192,32,50,192,76,2,192
3010 DATA162,0,221,111,192,240,6,232,224,17,208,246,96,141,51,207,138
3020 DATA10,170,189,128,192,141,53,207,232,189,128,192,141,52,207,96,173
3030 DATA52,207,141,0,212,109,55,207,141,14,212,173,53,207,141,1,212
3040 DATA105,0,141,15,212,172,54,207,140,4,212,32,193,192,165,197,201
3050 DATA64,240,11,205,51,207,240,245,32,162,192,76,50,192,173,54,207
3060 DATA41,254,141,4,212,141,11,212,96,12,13,23,18,20,31,26,28
3070 DATA29,39,34,36,47,42,44,45,55,2,48,2,86,2,122,2,158
3080 DATA2,191,2,240,3,25,3,72,3
3090 DATA126,3,181,3,235,4,36,4,96,4,172,4,244,5,60,5,130
3100 DATA32,17,192,174,141,2,240,22,24,173,52,207,109,52,207,141,52
3110 DATA207,173,53,207,109,53,207,141,53,207,202,208,234,96,173,56,207
3120 DATA240,250,173,53,207,74,141,8,212,173,52,207,106,141,7,212,140
3130 DATA11,212,96
```

DJComputer

Castle
48K Spectrum
£4.85

L'Ensouleiado, Old Brackenlands, Wigton, Cumbria CA7 9LA

An imaginative way to learn 60 specialist words associated with medieval castles and to find out where they belong in the castle. Aimed at the 11 to 15 age range, it would also be useful to adults. Accompanying the cassette is a list with 60 words and their meanings, and 9×13 outline grid, on which you can make a plan of the castle as you move around, naming each square and looking for three pieces of a gold goblet.

In order to proceed you're asked a question relevant to that part of the castle, and a correct answer allows you to proceed on your quest. A wrong answer brings a ringing tone and a guard appearing to hit you into the moat, before you restart — which can be awkward if you are deep into the castle. Small numbers appear at screen top right to let you know your position on the grid.

All spellings must be correct, and up to four variations are given for each question asked. But be careful to collect disguise, keys and light as soon as possible. **T.W.**

instructions	85%
ease of use	70%
display	50%
value for money	75%

★★★

Treasure Hunt Toolkit
48K Spectrum
£4.95

GW Components, 50 Oaktree Lane, Mansfield, NG18 3HL

This package comprises seven programs linked by a menu, designed to help you crack the word puzzles and codes found in books and competitions.

The program will accept a jumbled anagram, and juggle it in an effort to make sense of it. All you do is push the button! Or how about codes? The prog will allow you to assign numbers to letters and read off the code, or change the assignment at will in an attempt to crack someone else's, and, similarly, you can assign different letters to the alphabet in a predetermined way.

The program is written in BASIC, but is fast enough. The graphics are well thought out and clear with good use of colour and sound. They make the presentation much more professional.

Apparently the book "With Interest" by David I Betts, a story of space invaders is littered with coded puzzles. Crack the codes and you can claim a large cash prize. A percentage of sales goes to a Jimmy Savile charity appeal so this is a very worthwhile package — a really absorbing challenge. A £1 voucher is included. **D.M.**

instructions	80%
ease of use	90%
display	90%
value for money	95%

★★★★

Touchstone
Dragon 32 £8

Microdeal, 41 Truro Rd, St Austell, Cornwall PL25 5JE

A machine code graphic game for up to two players.

The object is to traverse the mazes, collecting treasure and keys and gain the secrets of the touchstone. The 11 levels consist of four distinct mazes, each about six screens long — providing a mammoth task.

Treasures are located in various chambers and high scores are acquired if you collect them. Keys are needed to open the doors towards the end of each maze.

There are zoom chambers to move you vertically. Five different monsters chase you. Luckily, you are equipped with a light ray which shoots from your eyes. Unfortunately, you can only shoot horizontally and the nasties have a habit of landing on your head if you're not careful.

The screen is divided into two parts, the top being devoted to scores etc. The lower part is the maze window which shows a screen full of the current maze.

There are many other features in this complex but thoroughly enjoyable adventure. Excellent graphics; I particularly liked the squirming snakes. One of those "must have one more try" games. **J.E.M.**

instructions	85%
playability	90%
graphics	90%
value for money	80%

★★★★★

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Sky Diver
TI-99/4A £8

Maple Leaf MicroWare, from Stainless Software, 10 Alstone Rd, Stockport, Cheshire SK4 5AH

At first this seemed a refreshing change from most of the Invader and Frogger clones which have been flooding the market. However, the promising start did not lead anywhere, and a simple bug soon appeared, making it easy to crash the program.

The aim is to make a successful parachute jump, choosing the moment to leave the plane, open the main chute — or the reserve if that fails — and control the descent towards a target.

The use of graphics is minimal, and the program seems to be very long, taking over two minutes to load and occupying some 11K when running. The keyboard is used to control the plane and parachutist, while the computer controls the heading of the wind. The forward descent of the chutist can also be controlled, although this increases the speed, and in order to land successfully this must be kept below a certain value. Points are awarded or deducted according to accuracy.

Up to four players may take turns, but I feel their interest will be short-lived. **P.B.**

instructions	90%
playability	80%
graphics	50%
value for money	20%

★★

Katerpillar 2
Dragon 32 £8

Tom Mix, 41 Truro Rd, St Austell, Cornwall PL25 5JE

A machine code arcade game in which you contend with Katerpillars, beetles and scorpions. This game is for one or two players using joysticks.

Each player starts with three bases. Your base is positioned near the bottom of the screen and a multitude of mushrooms are scattered all around you. These cannot damage you but you can destroy them. Katerpillars descend from the top of the screen and you can hit their head or body segments. Once hit, these segments turn into mushrooms. If you do not completely destroy a Katerpillar before it reaches the bottom of the screen, it starts to ascend and regenerates with head segments appearing at an ever increasing rate.

Beetles appear at frequent intervals leaving a trail of mushrooms behind them. You can destroy a beetle by hitting it twice. The mushroom-eating tarantula appears at random, as do the scorpions.

If all the segments of a Katerpillar are destroyed then you move on to the next difficulty level and the next Katerpillar.

The screen presentation is very good. The program loaded with no major problems. An enjoyable game which I shall certainly be playing again. **J.E.M.**

instructions	70%
playability	80%
graphics	85%
value for money	75%

★★★★

Dragon Computer Era

Star Wars moves into software

Sometimes I feel there isn't a person in the world who hasn't heard of George Lucas, but just in case you have been living in a deep freeze for the last 12 years, he's the man responsible for the Star Wars films.

Just recently he has started a division of his company Lucasfilm, called (he's got no imagination when it comes to names) the Lucasfilm Computer Division, and has brought out two new games called Rescue on Fractalus! and Ballblazer. The games will be distributed and sold by Atari under the newly created Atari/Lucasfilm label, and will be available in cartridge form for the Atari home computer line and video game machines as well as for other popular home computers.

The firm intends to bring the same high quality graphics craftsmanship to video games as it did to films. The games were announced for the third quarter of this year, which contradicts Atari's policy of not announcing products more than a month in advance. They apparently did this in order to avoid the snowstorm of announcements which occur each year around the time of the summer Consumer Electronics Show held in Chicago in June.

In Rescue on Fractalus! the aim is to recover stranded pilots while operating a shuttle craft. To simulate craggy cliffs, fractal geometry was used — a form of controlled random effects giving the impression of the complexity found in nature. (It also apparently gives the game its name.)

Ballblazer, on the other hand, is a futuristic soccer game (football to you). Both games feature a first person frame of reference. That is, the screen appears to be what you would see if you were there rather than the more classic type of game which has you manipulating the actions of a character on screen. Lucasfilm is planning to make at least a dozen more games in this vein.

Atari hopes that these games, and presumably others which they will develop, will restore the firm's former position of dominance and influence in the industry and of course in the marketplace. The cartridges used for the Lucasfilm games mark the first time that a ROM-style game cartridge sold for a home computer contains as much as 32K.

The games are expected to sell for about $35. By the end of this year, Atari is expected to release disc-based versions that will run on the CBM 64, IBM PC, and the Apple II family. These will be marketed under the Atarisoft label. All told, Atari expects that the new games will be able to run on a total of three to four million home and personal computers including a million or so Atari 5200 video game machines. The games, however, are not being redesigned to run on actual arcade coin-operated machines.

As a final note, some high-ranking Atari officials are a bit worried after finding out that some early versions of the new games have found their way out of the firm and into the hands of some users' groups and, of course, software pirates. Although they are worried, there doesn't seem to be much they can do about it, except hope that the final versions will be better and sell well enough to make the piracy factor insignificant.

This next bit of news will be of interest to those of you who need or want to run extensive financial modelling (spreadsheet analysis) on your Commodore 64 but have found presently available programs too limiting. Microsoft has just released a version of their powerful Multiplan program for your computer.

What makes Multiplan different from earlier (first-generation) spreadsheet programs is that is uses words for commands, rather than initials or abbreviations. Another difference is that the program allows you to refer to areas of the spreadsheet (specified by you) by name, rather than by rows and columns. You can link cells on the sheet, so that changes in one cell update related cells.

The program supports windowing, so that more than one area of the spreadsheet can be displayed on the screen simultaneously, although in practice the 40 column screen limits the usefulness of this feature. The windows can be locked together, allowing simultaneous scrolling.

After a command has been selected, the program will usually ask you a series of questions relating to the command. The questions are clearly written, and will lead you through some potentially very complex operations. If you become confused, an extensive on-line help function is available with one press of the HELP key. The program has all of the regular spreadsheet features.

In terms of performance, the program is fast when it comes to recalculating, or doing any of its other functions. It is very slow to load and save, so much so you may think something is wrong with your disc drive. Also, when you quit the program, the 64's regular operating system is laid to waste, requiring you to turn off the machine and start up again from scratch if you wish to do anything else.

The program is copy-protected, although a registered user can buy one back-up copy for a very low fee ($10 in the U.S.). The program is inflexible when it comes to disc drives; you must use the 1541 for your first drive. Also, if you wish to print the results, your printer must be 1545 compatible. This is, of course, one major disadvantage to dedicated programs which are copy-protected.

Documentation is good. The on-line help is far more useful than the 422-page document that accompanies the program. This can be somewhat intimidating, but it is clear that this complex program is not designed for the casual user. Certainly, it has not been designed to balance a personal chequebook.

Now for the good news. The product is being distributed by HES, whose support is excellent. On top of that, the list price is a mere $65 compared with the several hundred dollar price tag that accompanies essentially the same program in its larger 8-and 16-bit versions for other more expensive computers. For more details contact Human Engineered Software, Brisbane, California 94005. (415) 468-4111. Happy calcing

A short reminder about a firm called Datamost, whose products I have mentioned from time to time. It markets a complete line of home educational and entertainment software for all ages, abilities, and levels of computer sophistication, and for virtually all popular computer brands. One of its latest products is called Paint Magic. It allows users to call up and fill in basic shapes with different colours, shades or checks. It takes advantage of the CBM 64's colour abilities and is much easier to use than trying to accomplish the same tasks via BASIC programming. The program is both educational and entertaining. Contact Datamost at 8943 Fulbright Venue, Chatsworth, California 91311. (213) 709-1202.

I just had to pass this one along. Quarterdeck Software, a Santa Monica firm (near LA of course) has revealed its new marketing catch phrase which it plans to use to promote its new window-based software product called Desq. The phrase is "Do with me what you will." Hmm. Bring me my whips and chains. This promises to be one program that will be easy to whip into shape.

Looks like I'm right out of space again. See you next Tuesday.

Bud Izen
Fairfield, California

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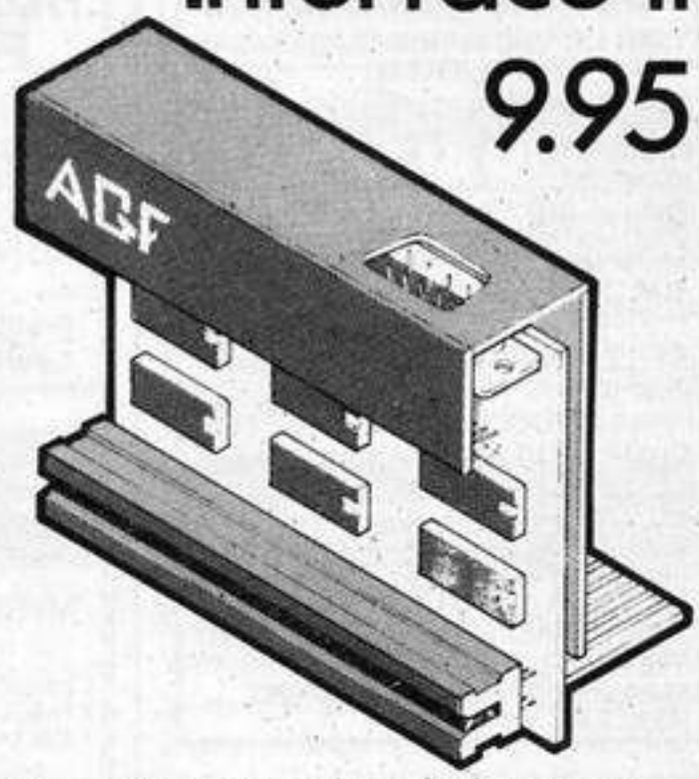

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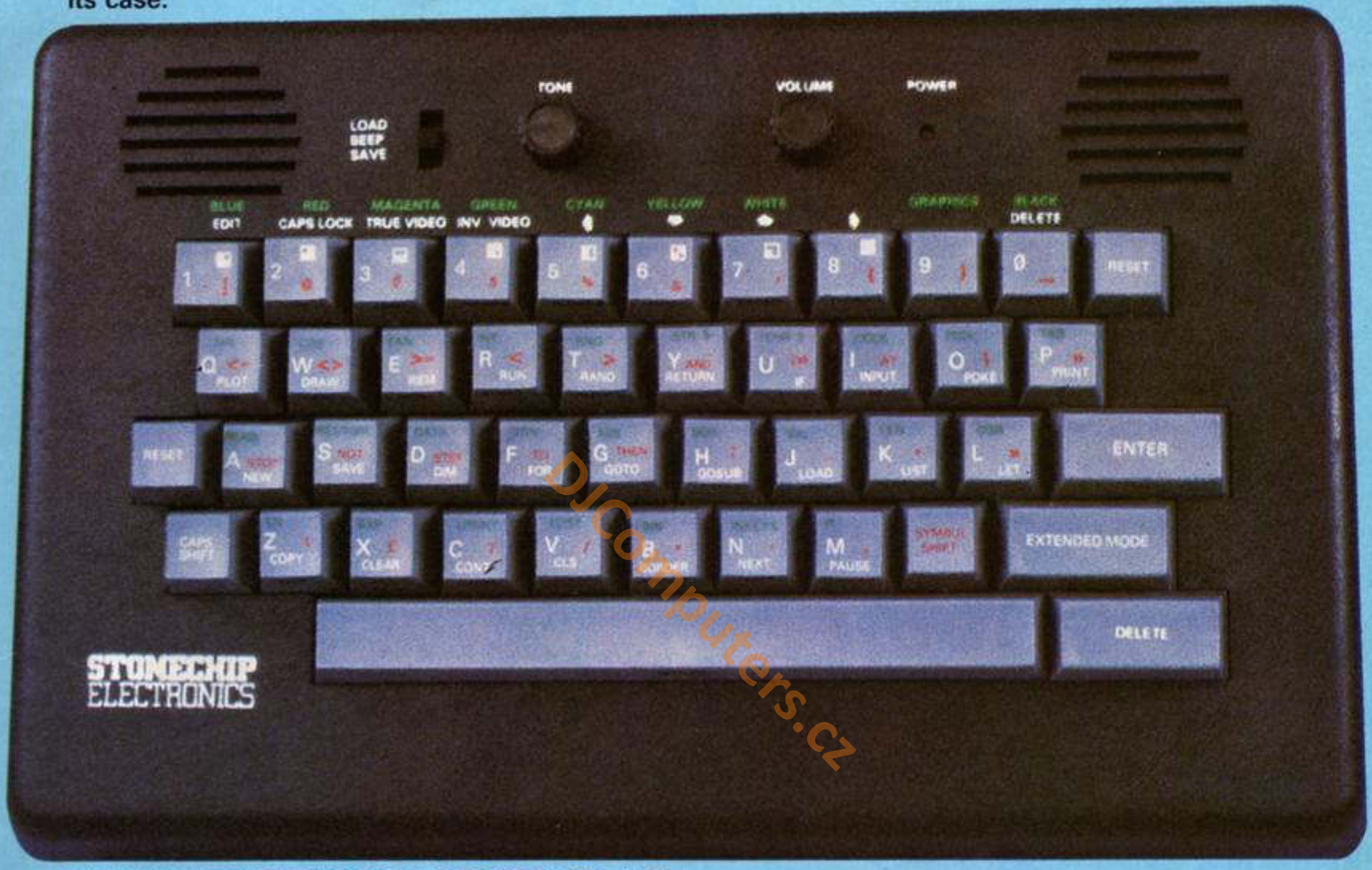

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