

AN ARGUS SPECIALIST PUBLICATION

Micro
UPDATE
Incorporating

JULY 1983
75p

Personal Computing Today

**BUYING A
MICRO?**
The Top 10
computers
surveyed

Pages of
Programs for
Lynx, Dragon,
Atari, Atom,
Spectrum

Atari
Graphical Text
Made Easy

VIC-20
PROGRAMS
Improve your
technique

**SOFTWARE
CHECKLIST**
Shopping at
home for your
programs



**SOFTWARE
REVIEWS**
VIC games vetted

YOUR LETTERS

This page is where you get the chance to put your opinions in print. Personal Computing Today welcomes letters from you on any aspect of microcomputing and views in general – as long as they're printable!

Please drop us a line to: The Editor, Personal Computing Today, 145 Charing Cross Road, London, WC2H 0EE.



Dear PCT,

I am an owner of a ZX Spectrum computer and find that the sound, or the lack of it, irritates me more than anything else. But now I have discovered a way of amplifying the sound through the cassette recorder. The sound coming from the computer is present but additional sound comes from the cassette recorder.

To amplify the sound through a cassette recorder the Spectrum's ear plug should be plugged into its socket on the machine. The other ear plug should be plugged into the MIC socket of the cassette recorder. The cassette recorder is then set to play and then PAUSED via a pause button on the cassette recorder. The sound output from the cassette recorder can now be controlled using the tone and volume controls.

This ability to increase the Spectrum's sound facility improves all games where sound plays a prominent part, and at times can even increase scores.

I enjoy your magazine, particularly the software reviews and the software listings, but I was disappointed that the Invisible Maze program did not work once I had typed it in. I noticed the obvious errors, for instance line 401, and 433 where a '+' sign has appeared but having corrected it, it still refuses to run. I hope that in the June issue you will attempt to rectify these errors. Besides that carry on the good work.

Yours faithfully
Sarbjit Singh Gidda

Editor's reply: There wasn't a correction in the June issue but turn to this month's Micro Answers and you'll find it there.

Dear Editor

I recently bought an Oric 1 micro computer, but found that in high resolution mode the display had a tendency to jump every time an explosion or shoot command was used, which would win any fast and furious game that was being run on the machine.

So I took the Oric back to Lasky's and they promptly gave me a replacement machine, but when I got it home I discovered it too suffered from the same defect. So back I went again and believing that this fault was inherent in the machine I exchanged it for a Sinclair ZX Spectrum and luckily haven't had any trouble with it.

Yours truly
T Tirabi
North London

Dear Sir

I really must protest about your publication of a 'piano player' program for the Sharp MZ-80B.

If you desire to play or compose music for the piano, would it not be much simpler and more convenient to use a piano? There is not one note on the Sharp which can compare for purity or clarity with a piano note. If you want to play tunes on an MZ80B, all well and good: but if you do so, you are playing a Sharp, not a piano. In any case, unless music is simply a succession of notes, played at a certain speed, I rather doubt if you will create anything worth listening to.

Yes, I have an MZ80B. It is a fantastically good machine at its price. No, I do not propose to use it as a piano (I have a piano to do that). The MZ80B is being

overworked at present, keeping various catalogues for me, developing a simple payroll/accounting program for a small local business and being used by my children to help their exam revision.

What's your next program - using an IBM as a church organ?

Yours faithfully

R H Hill

Essex

Editor's reply: We do not claim that a Sharp MZ80B could possibly reproduce the quality of notes or tones that a piano can. That wasn't the purpose of the program. The real use of programs such as this or indeed a church organ program, is as a teaching tool for those who are not very experienced in programming techniques. As *Personal Computing Today* is primarily intended for beginners in computing it makes sense for us to publish such programs.

If you would like more business oriented programs in *Personal Computing Today* may I suggest you send me your payroll/accounts program to learn about the more intricate details of programming?

Dear PCT

Being the owner of a T199/4A home computer I was very happy to find a program for it in the January 1983 edition. However, when I typed it all in, I found that the program did not work as it was supposed to. First of all, the score after hitting the first invader immediately turned to 1000 and stopped there, and also at the end the computer refused to return to the beginning of the program.

After checking for any typing mistakes and not finding any, I started gradually to work through the program and found that to make the program work I had to change lines 780 and 1000 to read:

780 CALL HCHAR (1,26,C + 1) instead of CALL
HCHAR (1,25,C + 1)
and

1000 GOTO 10 instead of GOTO 1000.

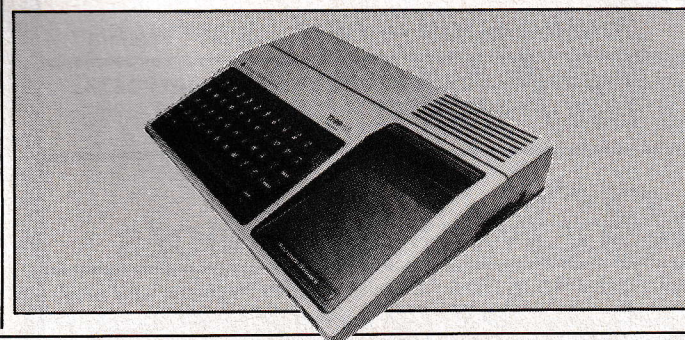
After the initial frustration and annoyance at the program not working, I realized that in the end it was actually useful, because instead of just typing the lines in I learnt what and how the various parts of the program do and work.

Yours sincerely

Dina Puvacic

Morecambe

Editor's reply: Congratulations on working the bugs out yourself. It's not the ideal way to do it, and indeed we don't go out of our way to let errors get into programs. But you are right in saying it helps you learn about programming.



Dear Sir

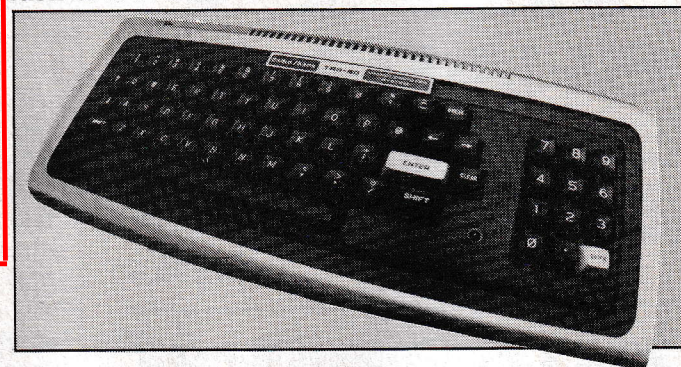
I have been reading your excellent magazine for three years now and I am pleased with it. However, for the past six months there have hardly been any programs for the TRS-80 Model 1 or III, Level 2 BASIC, 16K. I am sure many people also agree with me, especially those who have just invaded the intrepid regions of computing.

Keep it up, your magazine is great.

Yours faithfully

Toby Green

Editor's reply: I'm afraid that it is virtually impossible to keep everyone happy with the programs we publish, but I can only assure you that I try to cover as many machines as possible. Your turn will come.



Dear PCT

Listed below are some observations on advertisements and computing. They may be a source of enlightenment for people about to buy:

Fantastic Graphics	Low Res
Sound	Beep
Full Use of Sound	Beep Beep
Fast	BASIC
Very Fast	Compiled
Needs Joystick	Not Yours
Stunning Colours	Cassette Wrapper Looked Nice
Best Game I've Played	Ha!
Available Now	If You Don't All Want One
Pleash Rush Me	If You're Not Too Busy
Press Any Key	Not The Break Key
High Res	Medium Res
Coming Soon	Eight Months
Rave Reviews	Reviewers Raved
Good After Sales Service	You've Broken This
48K Spectrum Only	17K
Six Skill Levels	The Cat Won On The First 2
	I Won On The Second 2
	Fell Asleep Waiting...
Tests Your Reflexes	Need Extra Fingers
Loads with	Loads Occasionally
The Ultimate Adventure	The Last One He Wrote

Just kidding! - really.

Yours faithfully

Mike Goldberg

Liverpool

Editor's reply: It's refreshing to hear from someone with a sense of humour, although you do have a point in that some adverts can be misleading. Maybe some software suppliers will read your letter, take note and improve the standard of commercial products.

3D COMPUTERS

THE
HOME COMPUTER
SPECIALISTS

commodore 64
64K £343.85

ORIC-1
48K £169.95

SHARP
48K MZ-80A P.O.A.

BBC MODEL B
32K £399.00

DRAGON 32
32K £198.95

SOFTWARE

PROGRAM POWER
BUG-BYTE
SUPERIOR SOFTWARE
A + F
SIMON HESSEL
MOLIMERX
PHOTRONICS
ACORN SOFTWARE

PERIPHERALS

DISCS SINGLE/DUAL
TORCH Z80 DISCS
CUMANA DISCS
PRINTERS
JOYSTICKS
MONITORS B&W/COLOUR
LIGHT PENS
BBC BUGGY

Large range of Books, Diskettes,
Cassettes and Printer paper
always in stock.

Easy Parking at all Branches

TOLWORTH

230 Tolworth Rise South, Tolworth,
Surrey KT5 9NB
Tel: 01-337 4317

SUTTON

30 Station Road, Belmont,
Sutton, Surrey SM2 6BS
Tel: 01-642 2534

EALING

114 Gunnersbury Avenue,
Ealing, London W5 4HB.
Tel: 01-992 5855

RICKMANSWORTH

Greystone Works,
The Green, Croxley Green,
Rickmansworth, Herts WD3 3AJ
Tel: 0923 779250

MILTON KEYNES

Unit 1, Heathfield, Stacey Bushes,
Milton Keynes MK12 6HP
Tel: 0908 317832

NEWBURY

26 Stanley Road, Newbury,
Berks RG14 7PB
Tel: 0635 30047



GAMES — UTILITIES — EDUCATIONAL
75% CREDIT DISCOUNT SCHEME

CASSETTE 1.
£4.95 (48K)

Two games for all tastes. A fast action numbers game with high-res graphics, plus a game of logic and skill. Don't buy it unless you have a cool head under stress.

CASSETTE 2. (CHEMAL)
£8.50 (48K)

Finding Chemistry a bore? Forget those dry text books. Learn the techniques of chemical analysis and have fun at the same time with this program.

CASSETTE 3. GRASP
£6.50 (48K)

Full colour graphs, histograms and pie charts, plus text and draw modes. All you are ever likely to need for picture creation in one program.

CASSETTE 4. MATCAL
£9.50 (16K)

Matrix operations at your fingertips. Applications include multivariate trend prediction, network analysis etc.

★ ★ MANY MORE, SAE FOR CATALOGUE ★ ★

CAMEL MICROS, 33A COMMERCIAL ROAD,
WEYMOUTH, DORSET. (03057) 70092

MP

B.B.C. MICRO SOFTWARE

"FIRIENWOOD"
£6.50 + VAT

Journey on a quest for the Golden Bird of Paradise in this adventure game. Travel through caverns and a forest in a land of Monsters and Magic where death waits around every corner.

"SURVIVOR"
£6.50 + VAT

You are shipwrecked on a tropical island in this unusual adventure game. Can you survive and escape back to civilization, or will you end up in someone's cooking pot. Try it if you dare!! Written in Machine Code.

"SWAMP MONSTERS"
£6.50 + VAT

A fantastic high speed game in Machine Code with full colour and sound. Can be played with or without joysticks. Guide your robot through an alien swamp and try to destroy the monsters that inhabit it. (Model B or 32K Model A + User Port.)

"SPACEGUARD"
(New)
£6.50 + VAT

Your ship is trapped by aliens in this great space game. Your only chance is to destroy them whilst avoiding the mines they are laying. Can be played with or without joysticks. Mode 2 graphics and sound. (Model B or 32K Model A + User Port.)

"INVADERS"
£6.50 + VAT

A fast moving space game, compiled in Machine Code. It utilises Mode 2 colour graphics and sound.

All programs require 32K and run on all operating systems. Disk versions now available. Ask for details. Prices include postage within U.K. Send S.A.E. for full range of programs and price list or ask your local dealer. Trade enquiries welcome.

COMING SOON — ORIC 1 SOFTWARE

ALL PRICES INCLUDE POSTAGE: CHEQUES AND POSTAL
ORDERS PAYABLE TO:
"M P SOFTWARE"

MP

SOFTWARE & SERVICES

165 Spital Road, Bromborough, Merseyside L62 2AE
TELEPHONE: 051 334 3472

MICRO SHOWS**EXHIBITION SPECIAL**

We take a break from dealers reporting instead on recent computer shows.

This month Look Before You Leap lets the dealers take a partial rest and instead examines the goings on at some recent shows.

The Hannover Messe is possibly the biggest exhibition ever held in Europe. The computer section alone could probably swallow the NEC, Earls Court and Olympia and probably have room for more. Indeed, to attempt to cover even a fraction of the stands is an ambitious project for the single day that was available.

Germany's Front Line

Heading straight for the market opened up by the Spectrum and the Oric comes the Panasonic Alpha. This new computer features rubber keys and a single-key entry system. It comes supplied with a built in graphics set and 32K of RAM. Coming further down-market is Panasonic's JR100. This will be cheaper than the Alpha, featuring simplified operation and fewer keys. Not to be caught out, the JR100 is already complemented by an expansion unit.



Sharp are making efforts to move into the home market with their MZ-700 computer. Based around the ever popular Z80 processor, the MZ-700 contains 64K of RAM and has a full QWERTY typewriter-style keyboard. The screen display is 25 lines by 40 characters. Available as optional extras are a plug-in, four colour plotter and an on-board microcassette drive.

Casio Goes Personal

Casio, having worked their way

up from calculators to hand-held computers are now ready to have a try at the personal computer field. The FX-702P is an extended version of their VX-801P programmable calculator. It will be supplied with 16K of RAM, full keyboard and an inbuilt liquid crystal display. Peripherals will include a numeric keyboard and a four colour plotter.

On show at the Commodore stand was the new DX-64. This is Commodore's first attack at the Osborne portable market. The DX-64 is a restyled Commodore 64 fitted into a portable carrying case. Contained in the case is a half height 5¼ inch disc drive, a five inch black and white monitor and a detachable keyboard built into the lid. If everything goes according to plan the DX-64 will be previewed in Britain at the Commodore Computer Show in June. Retail price is expected to be around £800.

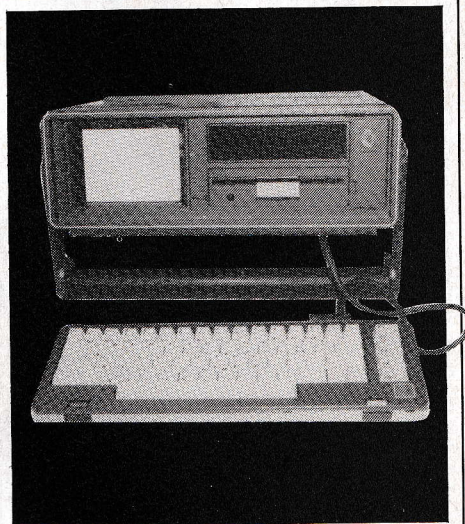
London Calling

On a slightly less majestic scale the Association of London Computer Clubs held the 4th London Computer Fair. Held in the Central Hall, Westminster, even though the show was bigger than previous years it still managed to retain the hobbist feel. The show marked the release of some interesting software titles.

Software company ASN released four titles for the under-supported Commodore 64. Brain Strain, Squares and Light Bike are all games costing £5.95. Necked is an educational game and takes the form of a multi-lingual hangman game featuring words in French, German, Italian and Spanish. Necked costs £6.95. ASN can be contacted at 17 Adelphi Crescent, Hayes Park, Hayes, Middx UB4 8LY.

E.T.'s New Home

Spectrum software company Abex released a potentially controversial new title for the Spectrum. Called ETX, it bears more than a passing resemblance to



Atari's own E.T. VCS cartridge. ETX costs £5.95 and further details are available from: Abbex, 20 Ashley Court, Great Northway, Hendon NW4.

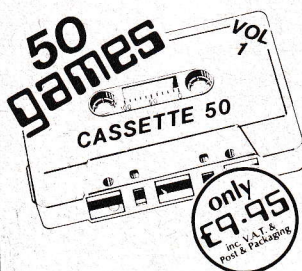
Fuller Micro Systems released some new Spectrum add-ons. First was the Printerface. This is a £30.00, RS232 interface. Using this a large range of cheap printers and communications equipment can be easily interfaced to the Spectrum. Their second new product, the Orator, will cater for the growing interest in speech synthesis among computer users. For £39.95 you can add this unit to your Spectrum and explore the intricacies of speech.

Micronet 800 were exhibiting at the show and were generating a lot of interest from computer users, especially those who own BBC Micros as they are the only people who could use the system. Already Micronet offer over 100 programs for the BBC Micro through the Tele-software side of the system and a lot of these are free.

Finally, for BBC users who want to use their machines for serious work. Braintech released a new EPROM based wordprocessor. Designed to run 1.0 and 1.2 operating system Beebpen features a display of 80 characters by 18 lines. The price will be £44.85 and Braintech can be contracted at 81 Rydal Crescent, Perivale, Middlesex UB6 8DZ.

DON'T MISS THIS INCREDIBLE OFFER! 50 GAMES £9.95!

CASSETTE 50 FOR YOUR MICRO



GALACTIC ATTACK
SPACE MISSION
LUNAR LANDER
PLASMA-BOLT
STARTREK
RADAR LANDING
ATTACKER
GALACTIC DOGFIGHT
ZION ATTACK
IVASIVE ACTION
OXO
BOGGLES
PONTON
SKI-JUMP
HANGMAN
OLD BONES
THIN ICE

MAZE EATER
ORBITTER
MOTORWAY
FORCE FIELD
NIM
TUNNEL ESCAPE
BARREL JUMP
CANNONBALL BATTLE
OVERTAKE
SITTING TARGET
SMASH THE WINDOWS
SPACE SHIP
JET FLIGHT
PHASER
INTRUDER
INFERNO
GHOSTS

SUBMARINES
ROCKET LAUNCH
PLANETS
BLACK HOLE
DYNAMITE
DO YOUR SUMS
DERBY DASH
SPACE SEARCH
UNIVERSE
RATS
TANKER
PARACHUTE
JETMOBILE
HIGH RISE
THE FORCE
EXCHANGE



U T S SOFTWARE

NOW AVAILABLE FOR

SINCLAIR
SPECTRUM
ZX81
LYNX
DRAGON
ATARI



VIC-20
ACORN
ATOM
ORIC-1
SHARP
NEW BRAIN
BBC A/B

WE BUY GAMES — CONTACT US NOW



DIRECT MAIL ORDER FORM

U.T.S.

P.O. Box 96
53 Lincoln Grove,
Harrogate,
N. Yorks HG3 2UZ

SUPPLY CASSETTE 50 FOR..... COMPUTER

I enclose cheque/P.O. payable to U.T.S.....

Name.....

Address.....

Mail Order Only..... CPT

only
£9.95
inc. V.A.T. &
Post & Packaging

SPECTRUM

24 LINE INPUT/OUTPUT PORT£18.95
(motherboard not required)
MOTHERBOARD — SIX SLOTS.....£26.50
MOTHERBOARD PCB ONLY.....£ 6.50
SPECTRUM 28 WAY CONNECTOR.....£ 3.25
MALE CONNECTOR£ 1.90
34 WAY RIBBON CABLEper metre £ 1.80

ZX81

40 KEY KEYBOARD£20.00
SPARE KEYSeach £ 0.30
MOTHERBOARD — TWO SLOTS.....£15.00
24 LINE INPUT/OUTPUT PORT£18.95
16K RAM PACK£22.95
MUSIC BOARD£18.95
23 WAY FEMALE CONNECTOR£ 2.50
MALE CONNECTOR£ 1.60
24 WAY RIBBON CABLEper metre £ 1.40
GETTING ACQUAINTED WITH YOUR ZX81£ 5.95
PROGRAMMING FOR REAL APPLICATIONS.....£ 6.95
REAL APPLICATIONS TAPE.....£11.44
MASTERING MACHINE CODE.....£ 7.50

Prices are for built items. Postage 40p under £4.00.
Export postage (surface) £1.80. Send SAE for full catalogue.
Cash with order or ACCESS

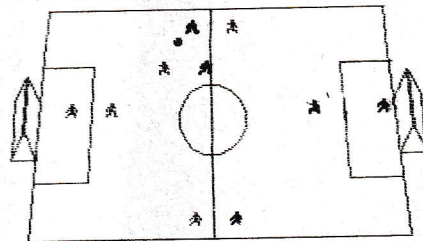
REDDITCH ELECTRONICS

PCT, 21 FERNEY HILL AVENUE,
REDDITCH, WORCS B97 4RU

ZX SPECTRUM

16K and 48K

New Football and Tennis



PICTURE FROM THE FOOTBALL GAME

New action sports games. Features a 3D view of the game. In both games you play one side. The computer plays the other side and is fast and hard to beat. Different skill levels.

FOOTBALL Each player can move, shoot etc independently. Includes fouls (if players collide), corners etc. Scale 90 minutes play. Any team names can be used
Price £5.50

TENNIS Each key plays a different stroke. All tennis rules used. Plays 3 sets. Proper scoring and serving. Animated figures
Price £5.50

TANK BATTLE 3D view from tank turret of woods, villages, attacking tanks etc. 360 degree turret movement
Price £4.50

PIN BALL Flippers, flashing lights etc.
Price £3.95

DESTROYER Planes and submarines attack your ship. Defend with guns and depth charges
Price £3.95

CAR RACE You drive one car, the computer the other. Control with steering and brakes. 2 circuits
Price £3.95

SPACE FIGHTER Pilots eye view of space. Attack aliens, refuel
£4.50

SUPER INVADERS AND MAZE MUNCHER £3.95 each

BUY ANY 4 GAMES, GET ANY GAME FREE.
Post and packing 32p per order.

WINTERS LTD

24 Swannington Close, Cantley, Doncaster.

Games of the unexpected for the unafraid...

THE WHITE BARROWS
Somewhere amid this maze of burial chambers lurks an Evil Sorcerer whom you need to trap. Trouble is, he's protected by Trolls, Dwarves, Serpents and the occasional Dragon or two! Your magic staff will block the tunnel to prevent him escaping unless, that is, he outwits you. A real brain twister, White Barrows requires both brains and brawn from its players. It's no good just hacking your way through the Barrows and hoping to fall over the Sorcerer. Eventually you'll meet a Dragon, and they don't hack easily! You'll need all your strength and cunning to survive this one for long.
THE WHITE BARROWS Only £6.50 all inclusive!

CELLS AND SERPENTS
More monsters than you ever thought could live behind your keyboard. Wander the hills in search of gold and glory but be very, very careful where you tread! There are things here that will make your wildest nightmares look like Julie Andrews. Fancy meeting a Mind Flyer, for example? Or how about shaking hands with an Asmodeus? (You'll only do that once!) Treasure is here to be found though... the hard way.
See just how good you really are at adventuring with this practically unsurvivable fantasy. Not for the faint of heart or the slow of sword.
CELLS AND SERPENTS Only £6.50 all inclusive!

**** SPECIAL DEAL ****
Both programs for only £11.45 all inclusive!

Our Adventure Series programs are available on tape for the following systems:
Commodore VIC-20 (not available for White Barrows), Commodore PET, Sharp MZ-80A and MZ-80K, Tandy TRS-80 Model 1, BBC Model B or 32K Model A, Atari 400 and 800, Sinclair 48K ZX Spectrum.

THE WHITE BARROWS Only £6.50 all inclusive!

*See just how good you really are at
adventuring with this practically unsurvivable
fantasy. Not for the faint of heart or the slow of
sword.*

CELLS AND SERPENTS Only £6.50 all inclusive!

Both programs for only £11.45 all inclusive!

Commodore VIC-20 (not available for White Barrows), Commodore PET, Sharp MZ-80A and MZ-80K, Tandy TRS-80 Model 1, BBC Model B or 32K Model A, Atari 400 and 800, Sinclair 48K ZX Spectrum.

TRADE ENQUIRIES WELCOME

PCT7

REFERENCE

SOFTWARE LISTING

DRAGON

Title	Program Type	Program Produced By	How Sold	Supplier Codes	Prices
Island Adventure	Gm	Apex S/W	32K C JT		£3.95
Invaders Revenge	Gm	Microdeal	16K C KY		£8.00
Jerusalem Adventure	Gm	Microdeal	16K C KY		£8.00
Lightpen	Ut	Microdeal	16K C KY		£12.00
Madness and the Minotaur	Gm	Dragon Data	32K C DN,KY		£7.95
Mansion Adventure	Gm	Microdeal	16K C KY		£8.00
Meteoroids	Gm	Dragon Data	32K R DN,KY		£19.95
Personal Finance	Do	Dragon Data	32K C DN,KY		£7.95
Pharaoh's Curse	Gm	Apex S/W	32K C JT		£4.95
Program Pack 1	Gm	Microdeal	16K C KY		£8.00
Program Pack 2	Gm	Microdeal	16K C KY		£8.00
Program Pack 3	Gm	Microdeal	16K C KY		£8.00
Quest	Gm	Dragon Data	32K C DN		£7.95
Racer Ball	Gm	Microdeal	16K C C		£8.00
Scarfman	Gm	Microdeal	4K C KY		£8.00
Smash	Gm	Wizard Software	32K C KU		£7.00
Space War	Gm	Microdeal	16K C Ky		£8.00
Space Monopoly	Gm	Microdeal	16K C KY		£8.00
Sirius IV	Gm	Wizard S/W	32K C KU		£6.50
Sixth Sense	Gm	Kent Computer Co	32K C Ky		£9.95
Starship Chaleon	Gm	Dragon Data	16K R KY		£19.95
Special Selection 2	Gm	Dragon Data	16K C KY		£7.95
Triplet	Gm	Wizard S/W	32K C KU		£5.50
Typing Tutor	Ed	Dragon Data	16K C KY		£7.95
3-D Maze	Gm	Apex S/W	32K C JT		£3.95
Williamsburg Adventure	Gm	Microdeal	16L C KY		£8.00
Wizard	Gm	Wizard S/W	32K C KU		£6.50
Word Processor	Bs	Juniper Comp	32K C LA		£25.00

SHARP

3-D Basic	Gm	Kuma	6K C AX,AO,AB	£6.32
3-D Space Battle	Gm	Sumlock	48K C DN	£8.00
Acrobat	Gm	Sumlock	48K C DN	£6.33
Address Book	Gm	Highlight S/W	4K C CC,AB	£4.60
Address Book	Do	DCS	48K C JQ	£3.00
Address/Telephone Book	Do	Plymouth Computers	6K C OG	£4.99
Agent 007	Gm	DCS	24K C JQ	£3.00
Air Bomber	Gm	Plymouth Computers	6K C OG	£4.99
Aladdin's Cave	Gm	Kuma	C AX,CH	£6.32
Aldebaran I	Gm	Sharpsoft	20K C CH	£5.85
Alien Attack	Gm	Sumlock	48K C DN	£6.50
Alien Attack	Gm	J Wolsencroft	24K C CZ	£4.60
Analysis Book	Bs	Microtek	48K C EQ	£95.00
Animate	Gm	Kuma	48K C AX,AB,AO	£9.20
Apollo Front Panel	Bs	Kuma	20K C AX	£14.35
Apolloword	Bs	Kuma	48K C AX,AC,AO	£28.70
Apolloword	Bs	Kuma	48K D AX,AC,AO	£63.25
Ardensoft Toolkit	Ut	Kuma	20K C AX	£40.25
Artillery/Biorhythms	Gm	DCS	24K C JQ	£3.00
Asteroids	Gm	Sharpsoft	20K C CH	£5.85
Astor Dodge	Gm	Kuma	C AX,CH	£6.32
Astor Shoot	Gm	Sumlock	48K C DN	£6.33
Auto Cross	Gm	Highlight S/W	6K C CC,AB	£4.60
Backgammon	Do	Highlight S/W	10K C CC,AB	£5.75
Bank Account	Gm	Highlight S/W	6K C CC,AB	£4.60
BASIC-C	Ut	DCS	24K C JQ	£16.00
BASIC-B	Ut	DCS	24K C JQ	£12.00
Basic Compiler	Ut	Sharp	48K C AB	£34.50
Basic Extensions	Ut	Kuma	20K C AX,AO,AB	£14.95
Basic Mod	Ut	DCS	20K C JQ	£5.00
Basic Plus	Ut	Kuma	C AX	£13.80
Battleships	Gm	DCS	24K C JQ	£3.00
Bean Feast	Gm	DCS	24K C JQ	£3.00
Bingo Caller	Gm	DCS	48K C JQ	£3.00
Bio-Rhythm	Gm	Highlight S/W	6K C CC,AB	4.60
Block QC	Gm	Sharpsoft	20K C AB	£3.50
Block Stop	Gm	J Wolsencroft	24K C CZ	£4.60
Blockade	Gm	Kuma	48K C AX,AO,AB	£6.32
Bomb Run	Gm	Sumlock	48K C DN	£7.50
Bomber	Gm	Kuma	6K C AX,AO,AB	£6.32
Breakout	Gm	Kuma	48K C AX,AO,AB	£6.32

SOFTWARE DEALERS

GP	C C Soft 83 Longfield Street Soutfields London SW18	HI	John Prince 29 Brook Avenue Levenshire Manchester M19
GQ	Microx 52 The Strand Worthing Sussex Worthing 49584	HJ	Titan Programs 83 Ashwood Road Rudloe Corsham Wiltshire SN13 0LG (0225) 810132
GR	Pro Software 121 Tyn-Y-Twr Baglan Port Talbot West Glamorgan SA12 8YE	HK	Micro Computer Sofware Unit D6 Pear Industrial Estate Stockport Road Lower Bredbury Stockport SK6 2BP 061 494 2441
GS	Sussex Software Wallsend House Pevensey Bay East Sussex	HL	Phipps Associates 99 East Street Epsom Surrey KT17 1EA
GT	Rose Cassettes 148 Widney Lane Solihull West Midlands B91 3LH	HM	Gemini Electronics 50 Newton Street Manchester M1 061 236 3083
GU	Axis 71 Brockfield Avenue Loughborough Leics LE11 3LN	HN	The Vic Centre 154 Victoria Road Acton London W3 6UL 01-992-9904
GV	PR Software 28 The Fairway South Ruislip Middx HA4 0RY	HP	R & R Software 34 Bourton Road Gloucester GL4 0LE 0452-502819
GW	Bridge Software 36 Fernwood Marple Bridge Stockport Cheshire SK6 SBE	HQ	Town Book & Toys 15 Eastgate Street Gloucester Glos
GX	Video Software Limited Stone Lane Kinver Stourbridge West Midlands Kinver 2462	HR	Screen Scene 144 St Georges Road Cheltenham Glos
GY	J M Steadman 6 Carron Close Leighton Buzzard Beds LU7 7XB	HS	Software Masters Ltd 30 Lincoln Road Olton Birmingham
GZ	Transform Ltd 41 Keats House Porchester Mead Beckenham Kent 01 658 1661	HT	John Prince Software 29 Brook Avenue Levenshulme Manchester M19
HA	Baust Computing Consultants 31 Peak Lane Fareham Hants PO14 1RX 0329 281480	HU	Nick Godwin 4 Hurkur Crescent Eyemouth Berwickshire TD14 5AP
HB	University Computers 5 St Barnabas Road Cambridge CB1 2BU	HV	A Parsons 23 Coxhill Gardens River Dover Kent
HC	Educare 139a Sloane Street London SW1X 9AY	HW	Bryants (Educational) Software 1 The Hollies Chalcroft Lane North Berstead Bognor Regis West Sussex PO21 5SX
HD	Simon Software Freepost New End Redditch	HX	Abersoft 7 Maes Afallen Bow Street Dyfed SY24 5BA
HE	Docimodus 161 Walmersley Road Bury Lancashire BL9 5DE	HY	D.C. Roberts 107a Royal George Road Burgess Hill Sussex
HF	M C Associates 4 Granby Road Cheadle Hulme Cheshire SK8 6LS	HZ	Hard & Soft 85 Snowdown Avenue Hillingdon Middx UB10 0SE
HG	Addictive Games PO Box 278 Conniburrow Milton Keynes MK14 7NE	IA	Microdeal Deal House Luxulyan Bodmin Cornwall PL30 5E 0726-850-821
HH	J K Greye Software 16 Park Street Bath Avon BA1 2TE		

SOFTWARE DEALERS

Breakout	Gm	Sharpsoft	20K	C AB	£5.75
Bridge	Gm	Highlight S/W	22K	C CC	£12.95
Broadwater Economic	Ed	BES	16K	C KX	£28.75
Simulations					
Brownian Motion	Ed	Kuma		C AX	£12.00
Bytesaver	Ut	DCS	20K	C JQ	£4.00
CPM	Ut	Chrystal	48K	C AX,AO	£172.50
Calc II	Bs	Kuma	20K	C AX,AO,FZ	£39.65
Camelot	Gm	Kuma	48K	C AX,AC,AB	
				AO,FZ	£6.32
Carols	Gm	Kuma	48K	C AX,AO,AB	£6.32
Cash Book	Bs	Microtek	48K	C EQ	£95.00
Cash Flow Projection	Bs	NCG Ltd	36K	C KW	£95.00
Castle Bloodstone Adventure	Gm	Sumlock	48K	C DN	£17.25
Casino	Gm	Kuma		C AX	£6.32
Catch 2000/Invader	Gm	Kuma	12K	C AX,AO,AB	£6.32
Cesil III	Ed	Kuma	20K	C AX	£17.20
Chase	Gm	Highlight S/W	6K	C CC,AB	£5.75
Chess	Gm	Kuma	12K	C AX,AO,FZ,CH	£12.00
Children's Maths	Ed	Kuma		C AX	£6.32
Chrystal Basic	Ut	Chrystal	48K	C AX,AO	£46.00
Code Breaker	Gm	Plymouth			
		Computers	15K	C OG	£4.99
Colditz	Gm	Sharpsoft	20K	C CH	£8.46
Combat	Gm	Highlight S/W	6K	C CC,AB	£5.75
Combat	Gm	Kuma	12K	C AX,AO,AB	£6.32
Commands	Gm	Sharpsoft	20K	C AB	£5.85
Composer	Gm	Highlight S/W	6K	C CC,AB	£5.75
Concentration	Gm	Kuma	12K	C AX,AO,AB	£6.32
Conflict	Gm	Sumlock	48K	C DN	£6.33
Connect 4	Gm	Highlight S/W	6K	C CC,AB	£4.60
Connect Four	Gm	DCS	24K	C JQ	£3.00
Cosmiad	Gm	Highlight S/W	10K	C CC,AB	£5.75
Cosmiad	Gm	Kuma	12K	C AX,AC,AO,AB	£9.20
Count and Add	Ed	Highlight S/W	22K	C CC,AB	£5.75
Cribbage	Gm	Kuma	12K	C AX,AO	£12.00
Critical Path Analysis	Bs	NCG Ltd	36K	C KW	£40.00
Cricket	Gm	Kuma		C AX	£6.32
Cursed Chambers	Gm	J Wolstencroft	48K	C CZ	£5.75
Data Bank	Ut	DCS	48K	C JQ	£6.00
Data Base	Bs	Kuma	48K	C AX,AO	£33.95
Data File	Gm	Gamer	48K	C CZ	£29.95
Defender	Gm	Plymouth			
		Computers	20K	C OG	£4.99
Deferment Allowances	Bs	DCS	32K	C JQ	£3.00
Demons Castle	Gm	DCS	48K	C JQ	£3.00
Demon Drive	Gm	DCS	24K	C JQ	£3.00
Disassembler	Ut	Kuma	20K	C AX,AO,AB	£12.00
Donky Derby	Gm	Kuma	12K	C AX,AO,AB	£6.32
Double Precision Basic	Ut	Sharp	48K	D AX	£46.00
Double Precision Basic	Ut	Sharp	48K	D AX	£46.00
Drunken Driver	Gm	Highlight S/W	6K	C CC,AB	£5.75
Dybug	Ut	Kuma		C AX	£16.65
Editor Assembler	Ut	Sharp	48K	C AB	£15.50
Editor Assembler	Ut	Sharp	48K	D AX	£51.75
Editor/Disassembler	Ut	DCS	20K	C JQ	£12.00
Election '84	Gm	Sharpsoft	20K	C CH	£8.45
Electronic Organ	Gm	Kuma	12K	C AX	£6.32
Electronic Organ	Gm	DCS	48K	C JQ	£3.00
Electrons I	Ed	Kuma		C AX	£12.00
Electrons II	Ed	Kuma		C AX	£12.00
Empire II	Gm	Sharpsoft	20K	C AB	£5.85
Enigma	Gm	Kuma	12K	C AX	£6.32
Escape Forth	Gm	J Wolstencroft	24K	C CZ	£4.60
Evasion	Gm	Kuma	6K	C AX,AO	£6.32
Executive	Gm	Kuma	6K	C AX,AB	£9.20
Exploring Africa	Gm	Kuma	6K	C AX,AB	£6.32
F DOS	Ut	Sharp	48K	C AB	£57.50
Fall Out	Gm	Kuma	6K	C AX,AO	£6.32
Finance	Bs	DCS	20K	C JQ	£3.00
Fireballs	Gm	Kuma	6K	C AX,AB	£6.32
Fishing	Gm	Sumlock	48K	C DN	£8.50
Football League	Do	Plymouth			
		Computers	10K	C OG	£4.99
Football Manager	Gm	Highlight S/W	10K	C CC,AB	£5.75
Forth	Ut	Kuma		C AX	£40.20
Foundry Package	Bs	Microtek	48K	C EQ	POA
Four in a Row	Gm	Kuma	6K	C AX,AO,AB	£6.32
Fox and Geese	Gm	Highlight S/W	6K	C CC,AB	£4.60
French Vocab	Ed	DCS	20K	C JQ	£3.00
Fruit Machine	Gm	Kuma	6K	C AX,AO,AB	£6.32
Fruit Machine	Gm	DCS	20K	C JQ	£3.00
Full Accounting	Bs	Microtek	48K	C EQ	POA
Games Pack 1	Gm	Sumlock	48K	C DN	£8.50
Games Pack 2	Gm	Sumlock	48K	C DN	£8.50
Gamestape 1	Gm	DCS	48K	C JQ	£8.00
Gamestape 2	Gm	DCS	48K	C JQ	£8.00
Gamestape 3	Gm	DCS	48K	C JQ	£8.00
Gamestape 4	Gm	DCS	48K	C JQ	£8.00
Geography	Ed	DCS	20K	C JQ	£3.00
Guess Word	Gm	Kuma	6K	C AX,AB	£6.32
Hangman	Gm	Kuma	6K	C AX,AO,AB	£6.32
Hangman	Gm	DCS	20K	C JQ	£3.00
Head On	Gm	Highlight S/W	10K	C CC,AB	£6.90
Head On	Gm	Kuma	6K	C AX,AO,AB	£6.32
Head On	Gm	Sharpsoft	20K	C CH	£5.85
Hissing Sid	Gm	Kuma		C AX	£6.32

IB	Aztec Software 25 St Mark Road Deepcar Sheffield S30 5TS	IT	I.J.K. Software 55 Fitzroy Road Bisphan Blackpool Lancs
IC	Orgre Games & Software Fantasy Department 47 Chislehurst Avenue Liverpool 25 Merseyside	IU	Aardvark Software 15 Queensbury Avenue Hartlepool Cleveland TS26 9NW
ID	Tridata Micro's Ltd Smithfield House Digbeth Birmingham B5 6BS 021-662 6085/6	IV	James Hager 7 Basset Street Cambourne Cornwall
IE	Plympton Computer Services 5 Turnbill Gardens Plympton Plymouth Devon PL7 3XF 0752-330176	IW	Simon Hessel Software 15 Lytham Court Cardwell Crescent Sunninghill Berkshire
IF	Electronics Applied 4 Dromore Road Carrickfergus Co Antrim BT38 7PJ	IX	Mayday Software 181 Portland Crescent Stanmore Middx HA7 1LR
IG	Emjay 17 Langbank Avenue Rise Park Nottingham NG5 5BU	IY	Persoft Freeport Baildon Shipley West-Yorkshire BD17 6EQ
IH	Kansas City Systems Unit 3 Sutton Springs Wood Chesterfield 0246-850357	IZ	Micro-Aid 25 Fore Street Praise-An-Beeble Cambourne Cornwall TR14 0JX
II	Serious Software 7 Woodside Road Bickley Bromley Kent BR1 2ES	JA	Hexagon Software 17 Cambridge Green Oteley
IJ	Computercat 224 Chapel Street Leigh Lancashire WN7 2DW 0942-605730	JB	N. Darwood Ltd Halfacres Stroud Petersfield Hampshire
IK	Silica Shop 1-4 The Mews Hatherly Road Sidcup Kent DA14 4DX	JC	Futura Software 63 Lady Lane Chelmsford Essex CM2 0TQ
IL	V & H Computer Services 182c Kingston Road Staines Middx	JE	Ultra-Tech Services 30a Billing Road Northampton NN1 5AZ
IM	AVC Software PO Box 415 Harborne Birmingham B17 9TT	JF	9 Franklin Road Saltcoats Ayrshire KA 21 5AT
IN	Computator 3 Thalia Close Greenwich SE10 4NA	JG	Gary Smith 'Brynllwyd' Capel Seion Aberystwyth Dyfed
IO	Omega Electronics 37 Chichester Square Carrickfergus Co Antrim BT38 8JU	JH	Aquarius Software 53 Towncourt Crescent Petts Wood Kent BR5 1PH
IP	A.V.O. Software Distribution 131 Lord Street Hoddesdon Hertfordshire EN11 8NG	JI	Precision Software Engineering 20 Shelton Avenue Newark Notts NG24 4NX
IQ	Big Softie 5 Aston Park Finaghy Belfast BT10 0JQ	JJ	Spectre Soft Dunelm Cottage Maltmans Lane Gerrards Cross SL9 8RS
IR	Adamsoft 18 Norwich Avenue Rochdale Lancs OL11 5JZ	JK	Cornhill Services 2 Penrith Way Aylesbury Bucks HP21 7JZ
IS	Microcomputer Applications 41 Queens Road Blandford Forum Dorset DT11 7LA	JM	Morris Associates (Computing) 37 St Catherines Road Baglan Port Talbot SA12 8AT
		JN	Terminal Software 28 Church Lane Prestwich Manchester M25 5AJ

REFERENCE

SOFTWARE LISTING

SHARP

SOFTWARE DEALERS

Title	Program Type	Program Produced By	How Sold	Supplier Codes	Prices
Home Budget I	Do	Kuma	6K	C AX,AC,AO,AB	£6.32
Hunter Killer	Gm	Kuma	48K	C AX,AB	£6.32
I Spy	Ed	Highlight S/W	22K	C CC	£5.75
Instant Addition And The Four Rules	Ed	Kuma		C AX	£6.32
Intruder	Gm	Kuma	48K	C AX,AO,AB	£6.32
Invaders	Gm	Kuma	20K	C FZ	£6.30
Invoice Control	Bs	David Computer Software	48K	C JQ	£6.00
J S Line 4	Gm	Kuma	48K	C AX,AB	£6.32
Junior Maths and Stepping Stones	Ed	Kuma		C AX	£6.32
Juntori	Gm	Sharpsoft	20K	C AB	£5.85
Kentucky Derby	Gm	Kuma		C AX	£6.32
Knights Commander	Ut	Knights	48K	C AX	£28.75
Knights Commander	Ut	Knights	48K	D AX	£74.75
Knights Fortran	Ut	Knights	48K	C AX	£34.50
Knights Wee Pascal	Ut	Knights	48K	C AX	£23.00
Large Display	Gm	Kuma	48K	C AX	£6.32
Las Vegas	Gm	Sharpsoft	20K	C AB	£5.85
Ledger	Bs	NCG Ltd	40K	C KW	£90.00
Letterwriter WP	Bs	David Computer Software	48K	C JQ	£10.00
Life	Gm	Kuma	48K	C AX,AO,AB	£9.20
Linear Programming	Bs	NCG Ltd	20K	C KW	£45.00
LP Gas Flow	Bs	DCS	20K	C JQ	£3.00
Lunar	Gm	Kuma	48K	C AX,AO,AB	£6.32
Lunar Lander	Gm	Kuma	48K	C AX,AO,AB	£6.32
MZ Othello	Gm	Kuma	48K	C AX	£12.00
Machine Code Editor	Ut	DCS	24K	C JQ	£14.00
Machine Code Editor	Ut	DCS	48K	C JQ	£14.00
Madness	Gm	J Wolstencroft	24K	C CZ	£4.60
Mailing List	Bs	DCS	48K	C JQ	£6.00
Maniac	Gm	Highlight S/W	6K	C CC,AB	£5.75
Man on the Run	Gm	Sumlock	48K	C DN	£6.33
Map of England	Gm	Kuma	48K	C AO	£6.32
Map of Englad	Gm	Kuma	48K	D AX	£12.00
Marauders	Gm	Plymouth Computers	13K	C OG	£4.99
Mastermind	Gm	Highlight S/W	6K	C CC,AB	£4.60
Mastermind	Gm	Kuma	48K	C AX,AO,FZ,AB	£6.32
Match the Character	Ed	Highlight S/W	22K	C CC,AB	£4.60
Match the Word	Ed	Highlight S/W	22K	C CC,AB	£5.75
Maths	Ed	Highlight S/W	22K	C CC	£5.75
Maths 1	Ed	DCS	48K	C JQ	£3.00
Maths 2	Ed	DCS	48K	C JQ	£3.00
Maths 3	Ed	DCS	48K	C JQ	£3.00
Maths 4	Ed	DCS	48K	C JQ	£3.00
Maths 5	Ed	DCS	48K	C JQ	£3.00
Maths 6	Ed	DCS	48K	C JQ	£3.00
Melody	Gm	Kuma	48K	C AX	£6.32
Memory Tests	Ut	Kuma	20K	C AX,AO,AB	£6.32
Minefield	Gm	Kuma	48K	C AX	£6.32
Missile Defence	Gm	Sumlock	48K	C DN	£8.50
Missile Defence	Gm	Plymouth Computers	18K	C OG	£4.99
Miz-Maze	Gm	Kuma	48K	C AX,AO	£6.32
Monkey Climb	Gm	Kuma	48K	C AX,AO	£6.32
Moonlander	Gm	Highlight S/W	10K	C CC,AB	£5.75
Mortar Attack	Gm	Kuma	48K	C AX,AO	£6.32
Munchie Men	Gm	Plymouth Computers	22K	C OG	£4.99
Music Composer/Editor	Ed	Kuma	48K	C AX,AC,AB	£12.00
Multiple Regression	Ed	NCG Ltd	24K	C KW	£65.00
Narpe	Ed	Kuma		C AX	£28.70
Newton/Conservation	Ed	Kuma		C AX	£12.00
Number Advance	Gm	Plymouth Computers	3K	C OG	£4.99
Oil Strike	Gm	Plymouth Computers	14K	C OG	£4.99
Pac Man	Gm	Kuma		C AX	£9.20
Pascal	Ut	Sharp	48K	C AB	£34.50
Patience	Gm	Kuma	48K	C AX,AO	£6.32
Payroll	Bs	Microtek	48K	C EQ	£65.00
Payroll	Bs	NCG Ltd	40K	C KW	£150.00
Payroll 81-C	Bs	Sumlock	48K	C DN	£74.75
Payroll 81-D	Bs	Sumlock	48K	D DN	£74.75
Payroll	Bs	Tridata	48K	D ID	£170.00
Pelmanism	Gm	Sumlock	48K	C DN	£5.75
Physics 1	Ed	DCS	48K	C JQ	£3.00
Physics 2	Ed	DCS	48K	C JQ	£3.00
Picture Count	Ed	Highlight S/W	22K	C CC,AB	£5.75
Pilot	Ut	Kuma		C AX	£17.25
Poker	Gm	Kuma	48K	C AX,AO,AB	£6.32
Polaris	Gm	Sumlock	48K	C DN	£6.50
Pontoon	Gm	Kuma	48K	C AX,AO,AB	£6.32
Poseidon	Gm	Highlight S/W	6K	C CC, AB	£5.75

JO	Mossoft Microcomputer Software 10 Garden Street Norwich Norfolk NR1 1QX	KH	Llamasoft Computer Software 49 Mount Pleasant Tadley Hants 07356-4478
JP	Romik 24 Church Street Slough SL1 1PP	KH	Superior Software 69 Leeds Road Bramhope Leeds 0532-842714
JQ	David Computer Software 38 South Parade Bramhall Stockport SK7 3BJ	KI	Earthshock Software 15 Eden Avenue Wakefield WF2 9DJ
JR	Creative Software 48 Hartlip Hill Newington Sittingbourne Kent ME9 7NZ	KJ	Bridge Software 36 Fernwood Marple Bridge Stockport Cheshire SK6 5BE
JS	Allrian Data Services 100a Uxbridge Road Hayes Middlex UB4 0RL	KK	ME & P Micro Products The Old Oast House Malting Lane Cambridge CB3 9HF
JT	Apex Trading Ltd 115 Crescent Drive South Brighton BN2 6SB	KL	Calpac Computer Software 108 Hermitage Woods Crescent St Johns Woking Surrey GU21 1UF
JU	TX Software 109 Abbotsweld Harlow Essex CM18 6TQ	KM	KCET Software 17 Torry Drive Alve 0259 60840
JV	Hopesoft Hope Cottage Winterbourne Newbury Berk RG16 8BB	KN	Softare for All 72 North Street Romford 0708-60725
JW	GT Software 8 Bull Street Potton Sandy Bedfordshire SG19 2NR	KO	Rucksoft 10 The Moorlands Hanley Road Malvern Wells Worcestershire WR14 4PS
JX	Garland Computing 35 Dean Hill Plymouth PL9 9AF	KP	Liverpool Computer Centre
JY	Corona Software Corona House 21 Tennyson Avenue London E11 2QN	KQ	W. E. Hunt
JZ	MP Software & Services 165 Spital road Bromborough Merseyside L62 2AE	KR	ABC Software
KA	Ludinski Computer-Assisted Learning 26 Avondale Avenue Staines Middlesex 0784-58771	KS	Rainbow Software
KB	B.B.C. Publications The British Broadcasting Corporation 35 Marylebone High Street London W1M 4AA	KT	Chalksoft Lowmoor Cottage Tonedale Wellington Somerset TA2 0AL
KC	Miking Software 28 New Road Northbourne Bournemouth Dorset BH10 7DS	KU	Wizard Software
KD	Inverse 'Orchard View' Droitwich Road Fernhill Heath Worcester WR3 7T2	KV	Data Brain Software
KE	Alan Turnbull 65 Vicarage Road Cale Green Stockport Cheshire	KW	NCG Ltd, Letterghesh Renvyle, Co. Galway Republic of Ireland
KF	Chromasoft	KX	Broadwater Economic Simulations 24 Hill Barn Lane Worthing West Sussex
		KY	Kent Computer Company Alders of Bromley High Street Bromley Kent
		KZ	Cases Computer Simulations 14 Langton Way Blackheath London SE3 7TL
		LA	Juniper Computing 8 Pembroke Green Lea Malmesbury Wiltshire SN16 9PB
		LC	Computersmith 40 Greensfields Avenue Bromborough Wirral Merseyside L62 6DD

Poster Printer	Bs	DCS	48K	C JQ	£3.00
Princess & Monster Maze	Gm	Kuma	48K	C AX,AB	£6.32
Program Filing Index	Bs	Kuma	20K	C AX	£6.32
Quadrax	Gm	Kuma	48K	C AX,AO,AB	£6.32
Quest	Gm	J Wolstencroft	48K	C CZ	£4.60
Race Track	Gm	Kuma	48K	C AX,AO,AB	£6.32
Racing	Gm	Kuma	48K	C AX	£6.32
Raider	Gm	Kuma	48K	C AX,AO,AB	£6.32
Ram Test	Ut	DCS	48K	C JQ	£3.00
Reactor	Gm	Kuma	48K	C AX,AB	£6.32
Reportwriter WP	Bs	David Computer Software	48K	C JQ	£8.00
Rhymes	Gm	Kuma	48K	C AX,AB	£6.32
Road Alignment	Bs	Canal Computing	16K	C OF	£60
Road Hunter	Gm	Kuma	48K	C AX,AO,AB	£6.32
Rocket	Ed	Kuma	48K	C AX	£6.32
Roulette	Gm	Sumlock	48K	C DN	£6.33
Tank Wall	Gm	Kuma	48K	C AX,AO	£6.32
Tank Practice	Gm	DCS	48K	C JQ	£3.00
Target Practice	Gm	DCS	48K	C JQ	£3.00
Tape Copier	Ut	DCS	20K	C JQ	£4.00
Tenpin Bowling	Gm	Kuma	48K	C AX,AO	£6.32
Timetabling Aid	Ed	Kuma	20K	C AX	£22.45
Towering Inferno	Gm	Sharpsoft	20K	C CH,AB	£5.85
Towers	Gm	DCS	48K	C JQ	£3.00
Towers of Hanoi	Gm	Kuma	48K	C AX	£6.32
Track Layer	Gm	Kuma	48K	C AX,CH	£6.32
Trader Smith	Gm	Kuma	48K	C AB	£6.32
Tudor Village	Gm	DCS	48K	C JQ	£3.00
Trench Mortars	Gm	DCS	48K	C JQ	£3.00
Tycoon	Gm	Kuma	48K	C AX,AO	£6.32
Typewriter	Do	DCS	48K	C JQ	£3.00
Typing Test/Tutor	Bs	DCS	20K	C JQ	£6.00
UFO	Gm	Kuma	6K	C AX,AC	£6.32
Video Draughts	Gm	DCS	48K	C JQ	£3.00
War at Sea	Gm	DCS	48K	C JQ	£3.00
Waves I	Ed	Kuma	48K	C AX	£12.00
Waves II	Ed	Kuma	48K	C AX	£12.00
Wizards Quest Adventure	Gm	Sumlock	48K	C DN	£10.50
Wordpro	Bs	Kuma	48K	C AX,AC	£45.45
Wordpro	Bs	Kuma	48K	C AX,AC	£91.95
Wordprocessor LW	Bs	DCS	48K	C JQ	£10.00
Wordprocessor RW	Bs	DCS	48K	C JQ	£8.00
Utility Tape 1 — Maths	Ed	DCS	48K	C JQ	£8.00
Utility Tape 2 — Maths/Physics	Ed	DCS	48K	C JQ	£3.00
Y Geirfa	Ut	Kuma	4K	C AX	£66.16
Zen Dos	Ut	Kuma	20K	C AX,AO,AB	£22.45
Zen Editor Assembler	Ut	Kuma	4K	C AX,AB	£12.00
Zenmod	Ut	Kuma	4K	C AX,AB	£12.00
Z-80 Disassembler	Ut	Sumlock	48K	C DN	£12.00

TRS-80

A-Maz-Ing	Gm	Molimerx	4K	C AJ	£6.33
Acquire	Gm	Avalon Hill	16K	C IA	£13.95
Adventure I	Gm	Adventure Int.	16K	AJ	£13.77
Adventure III	Gm	Adventure Int.	16K	C AJ	£13.77
Adventure III	Gm	Adventure Int.	16K	D AJ	£13.77
Adventures No I	Gm	Cload Inc	16K	C IA	£11.95
Advanced Programming Aid	Ut	Kansas	16K	C IH	£12.50
Adventureland	Gm	Adventure Int.	16K	C IS	£12.50
				AJ	£18.99
				OH	£15.25
Adventure Mysterious	Gm	Adventure Int.	16K	C AJ	£10.06
Adventure Mysterious	Gm	Adventure Int.	32K	D AJ	£13.50
Aid, Basic	Ut	J.K. Gosden S/W	16K	C LB	£9.00
Air Raid	Gm	MA	16K	C IS	£7.50
Air Traffic Control	Gm	MA	16K	C IS	£9.50
Airflight Simulation	Gm	Instant S/W	16K	C GB,AB	£9.95
Airmail Pilot	Gm	Instant S/W	16K	C GB,AB	£8.50
Ajedid	Bs	Molimerx	32K	C AJ	£49.95
Aladdin	Ed	Bryants S/W	16K	C HW	£3.75
Alien Armada	Gm	Molimerx	16K	C IS	£11.50
				AJ	£10.06
Alien Armada	Gm	Molimerx	32K	D AJ	£13.23
Alien Attack Force	Gm	Instant S/W	16K	C GB,AB	£8.50
Alien Attack	Gm	Kansas	16K	C IH	£9.50
Alien Defence	Gm	Soft Sector Mkting	16K	C IS	£11.50
				GB	£15.50
Alien Defence	Gm	Soft Sector Mkting	16K	D IA	£11.95
All Stars	Gm	Instant S/W	16K	D GB	£26.50
				AB	£28.95
All Turret Gunner	Gm	Instant S/W	16K	C GB,AB	£8.50
Amateur Log	Ut	Molimerx	32K	D AJ	£18.40
Amazing Maze					
Touchdown	Gm	Kansas	16K	C IH	£7.50
Angel Worms	Gm	Adventure Int.	8K	C AB	£14.35
Animation	Ut	Molimerx	16K	C AJ	£17.20
Animation	Ut	Molimerx	32K	D AJ	£20.65
Android Nim	Gm	Molimerx	16K	C IS	£7.50
				AJ	£10.06
Arcade Invaders	Gm	Kansas	16K	C IH	£9.50
Arcade Scramble	Gm	Kansas	16K	C IH	£9.50
Armoured Patrol	Gm	Adventure Int.	16K	C IS	£15.00
				GB	£15.00
Armoured Patrol	Gm	Adventure Int.	16K	D AB	£18.99

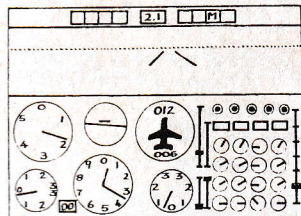
SOFTWARE DEALERS

LD	Pro Software 121 Tyn-y-Twr Baglan Port Talbot West Glamorgan SA12 8YE	OV	ZX SAS 42/45 New Broad Street London EC2M 1QY
LE	Sumlock Electronic Services (M/cr) Ltd Royal London House 198 Deansgate Manchester M3 3NE 061-834 4233	OW	MS 73 The Broadway Grantchester Cambridge CB3 9NQ
LF	Mavac Enterprises 101a Underdale Road Monkmoor Shrewsbury Shropshire SY2 5EF	OX	ICL Putney Bridge London
LG	Sospan Soft 1 Warborough Close Old Road Llanelli Dyfed	OY	Carnell Software 4 Staunton Road Slough SL2 1NT
NP	Program Direct	OZ	Micro Power 8/8a Chapel Allerton Leeds LS7 4PE
NR	Foilkade	PA	Wizard Software PO Box 23 Dunfermline Fife KY11 5RW
NT	Digital Fantasia	PB	Gemini Software 36 Badminton Road Leicester LE4 7RQ
NU	Database Software	PC	Softek 329 Croxsted Road London SE24
NV	CJE Microcomputers	PD	Jaysoft 22 Dane Acres Bishop's Stortford Herts
NW	Eduquest	PE	Martech Games 9 Dillingborough Road Eastbourne East Sussex BN20 8LY
NX	Davansoft	PF	Microsphere Computer Services 72 Roseberry Road London N10
NY	Square Software	PG	Computer Rentals Ltd 140 Whitechapel Road London E1
NZ	Salamander Software 27 Ditchling Rise Brighton East Sussex BN1 4QL	PH	Picturesque 6 Corkscrew Hill West Wickham Kent BR4 9BB
OA	Anirog Computers	PI	Oxford Computer Publishing PO Box 99 Oxford
OB	Golem Ltd	PJ	Spectre 2 Mull Close Oakley Basingstoke Hants
OC	A Lane Software	PK	Richard Shepard Software Freeport Maidenhead Berks SL6 5BY
OD	ASP Software 145 Charing Cross Road London WC2H 0EE 437-1002	PL	Saxon Computing 3 St Catherine's Drive Leconfield Beverly Humberside
OE	Micromail	PM	Addictive Games PO Box 278 Conniburrow Milton Keynes MK14 7NE
OK	Softek 329 Croxsted Road London SE24	PN	Hartland Software 8 Penzance Place London W11 4PA
OM	New Generation Software Freeport Oldland Common Bristol BS15 6BR	PO	C Tech 184 Market Street Hyde Cheshire
ON	Foilkade Ltd 66 Littledean Yate Bristol BS17 4UQ	PP	Severn Software 5 School Crescent Lydney Glos GL15 5T
OO	D.J. Moody 1 Starnhill Cottages Granby Lane Bingham Notts NG13 8DH		
OP	Microwave		
OR	Imagine Software Masons Building Exchange Street East Liverpool Merseyside L2 3PN		
OS	Abacus Electronics 186 St Helens Avenue Swansea West Glamorgan		
OT	Abbex Electronics 20 Ashley Court Great Northway London NW4		
OU	C Tech 184 Market Street Hyde Cheshire		

SOFTWARE GAMES

DRAGON/32 BBC MODEL/B TRS80 C/C 32K 747 FLIGHT SIMULATOR

Superbly realistic instrumentation and pilot's view in lifelike simulation which includes emergencies such as engine fires and systems failures. This program uses high resolution graphics to the full to produce the most realistic flight-deck display yet seen on a home computer. There are 21 real dials and 25 other indicators (see diagram). Your controls operate throttle, ailerons, elevators, flaps, slats, spoilers, landing gear, reverse thrust, brakes, etc. You see the runway in true perspective. Uses joystick and includes options to start with take-off or random landing approach. "A real simulation, not just another game." (Your Computer Apr. 83).
Cassette £9.95 (PP and VAT included)



D.A.C.C. Ltd. (Dept PCT) 23 Waverley Road, Hindley, Gtr. Manchester WN2 3BN

ZX81 — SPECTRUM

Game of Cricket Simulates the play in a Test Match. Operates in real-time & includes most facets of the game. ZX81 16K & ZX Spectrum 48K £4.00

Football Records Keep a record of your favourite football. Team's progress in any season. Includes up-to-date league tables etc. ZX81 16K & ZX Spectrum 48K £4.99

Lazer Defence Help save the planet Caprica from annihilation by destroying the missiles with your lazer cannon. ZX Spectrum £4.95

Spectrum Sound Expander Amplify the sound of the Spectrum with this unit. All leads included £6.00

Order Expander and Tape and deduct £1.00 S.A.E. for up-to-date list.

MICROMOR, 1 Elizabeth Close, Ynysforgan, Swansea SA8 6PW.

ZX SPECTRUM 48K/ NASCOM 32K ADVENTURE 32K (Nascom Approved Product)

A complete full-spec version of the original classic mainframe game Adventure. In our opinion ours is simply the best — no one else gives you the full unadorned authentic description and messages, all the genuine locations, helpful hints in the programs, and lots more.

Using English words, explore a vast underground labyrinth of caves, twisty passages, and exotic rooms; defeat fierce enemies, collect all the many treasures, and become a Grand Master!

No one else gives you this — but don't take our word for it — buy it and see for yourself!

£5.95 Spectrum/£8.95 Nascom. Free P&P in UK; no VAT. Send cheque or PO, stating machine, or SAE for further details to:

SYRTIS SOFTWARE, 23 Quantock Rd., Bridgwater, Somerset.

SOFTWARE FOR TANDY COLOR & DRAGON

REF	ADVENTURES	PRICE
1001	LOST IN SPACE	16K £3.00
1002	DRACULA'S CASTLE	16K £3.00
1003	DEATH PLANET	16K £3.00
	GAMES	
2001	STAR TREK	16K £3.00
	Find the enemy and destroy him.	
2002	A-MAZE-IN	16K £3.00
	Seek and destroy the monsters in the maze as quickly as you can take you hours	
2003	TURNOVER	16K £3.00
	Similar to OTHELLO	
2004	OWNERSHIP	32K £3.00
	Similar to MONOPOLY	
2005	DRIVER	4K £3.00
	Test your driving skills	
2006	GAMES PACK 1	4K £3.00
	5 Different games	
2007	GAMES PACK 2	16K £3.00
	5 Different games	
	Send SAE for catalogue. State if TANDY or DRAGON. All prices include P&P and VAT	
	Cheques or Postal Orders to:	
	FLATBELL LTD (DEPT PCT)	
	9 Franklin Road	
	HADDENHAM	
	BUCKS HP17 8LE	

OTHELLO for 32K BBC Micro. 5 levels of play. Mode 5 graphics. Ability to change sides during play. Basic and MC. Cheque or PO for £6.00 to R. Fryar, St Briac, South Strand East, Preston, Sussex.

LYNX DEFEND, DODGEBALL, both fast action games £5.50. A. Miller, 50 Orchard Road, Seer Green, Beaconsfield, Bucks.

AQUARIUS SOFTWARE

PET, BBC, TEXAS (TI99/4A)

Martian Lander (actual simulation);

Noughts and Crosses special; Code

Breaker; Viking; User Defined Jigsaw;

Morse Test suitable for R.A.E.; PET —

Sound Only. All others colour/sound.

All the above £5.

Basic Tutorial 5x10K £10.00.

Discs £2.50 extra.

extra. See us on Micronet 800.

10 Kenneth Rd., Basildon, SS13 2AT.

TI99/4A power-cross, written in TI Extended Basic. Utilizing Sprites graphics and sound £4.00 inclusive. Cheques to M. Whiteley (Software), Meadows, Broadway, Woodbury, Devon EX5 1NR. 0395 32731.

FANTASTIC SOFTWARE for MZ-80 K/A games (Maze-Man etc), utilities. From £3.50. Details 166 Queensgate, Bridlington, Humberside.

DRAGON 32 GAMES

Startrek III (32K superb graphics)	£7.00
Crayon (Artistry in graphics)	£5.50
3-D Designer (shapes galore)	£5.00
Luna Lander (a challenge)	£4.00
Dragonslayer (80K adventure)	£9.00
Gobbler (+)	£5.50

SAE & 50p for Catalogue
SAINT GEORGE SOFTWARE
Dept PCT, 73 Ling Street,
LIVERPOOL L7.

TI99/4A QUALITY SOFTWARE.

Quality Games at sensible prices. SAE for list to Quantum Software, 8 Alconbury Close, South Beach, Blyth NE24 3TL.

TRS80 — GENIE — ATARI

Space arcade and adventure games from Epyx. Adventure Int. & JV Software are just some of the exciting programs featured in our new catalogue of bargain priced games & utilities. Send 1st Class stamp NOW to:
T. SMITH SOFTWARE (DEPT PCT)
26 Wesley Grove, Portsmouth, Hants
PO3 5ER

Mail Order Only Dealers Welcome

VIC 20 Unexpanded Car-Maze. Drive your accelerating car through maze of trees, chickens, parked cars and oil slicks. £1.95. R. Clayton, Cheriton, Congleton Road, Alderley Edge, Cheshire.

12K ACORN ATOM "Froggit". This game incorporates machine code to make it one of the best programs currently available for the Atom. Cars, logs, double speed lorries, lady frogs, snakes & sound effects are all included. Send cheque for £4.85. M. Stevenson, 10 Rhanbuoy Park, Craigavad BT18 0DX.

SOFTWARE EDUCATIONAL

BBC Educational Programs, send SAE for Brochure. Bryants (Educational) Software, 1 The Hollies, Chalcraft Lane, Bognor Regis PO21 5BX.

SOFTWARE APPLICATIONS

MZ80K/A Horserace Analysis, winners galore. Cassette £5.75. Other Sharp Programs from £3.00. Details: PC Paragon "Moorside", Woodlands, Wimbourne, Dorset.

MZ-80A MZ-80K programs, games, extended basics, educational etc. Catalogue SAE Edonsoft, 33 Broadoak Road, Bramhall, Stockport SK7 3BL.

007 SPY. Lets you stop and copy any previously unstoppable Spectrum cassettes. On cassette £2.95. Bobker, 29 Chadderton Drive, Unsworth, Bury, Lancs.

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

SOFTWARE BUSINESS



D.I.Y. Bookkeeping

A complete bookkeeping system based on the best known bookkeeping system for small businesses — up to 300 invoices per month.

EASY TO USE: Purchase ledger, sales ledger, sales journals (£24.95 each). The manual with each tape is written for people who have never used a computer and know little or nothing about bookkeeping.

Spectrum 48K, Printer or 3 tapes (£60).

ALL FOR UNDER £300

Lesson plans and notes available for teachers in F.E. and Secondary education. For further details: **RAMTOP SOFTWARE, 12 Milnthorpe Road, Burtonwood, Warrington, Cheshire.**

For orders ring: St Helens (0744) 59883

CLUBS/ USER GROUPS

DRAGON 32? THE SCOTTISH DRAGON CLUB

Welcomes new members. Send £8 for membership card, free games tape, newsletter etc... to

**THE SCOTTISH
DRAGON CLUB, TF,
1 WALKER STREET,
EDINBURGH.**

TI99/4A independent club exchange/sell TI Modules, TI accessories, TI software, see "TI Users", 40 Barrhill, Patcham, Brighton BN1 8UF.

SERVICES

EXPERIENCED 6502 Assembler Programmer with own Apple II seeks contract work. Anything considered big or small. Business, games, scientific, educational. 0732 366819 or write to Box 104, ASP Ltd, 145 Charing Cross Road, London WC2 0EE.

TEST, SERVICE, REPAIRS

- Computers (Business and Personal)
- Floppy Disc Drives (all makes) • VDU's
- Monitors • S100 Boards • Disc Drives
- Alignment and test £20, 48-hr service.

EPROM SERVICE

- Erase • Program • Copy • Modify
- For 1K, 2K, 4K EPROMs

MICRO UPGRADES, HARDWARE

- Printers • Monitors • Disc Drives
- Nascom Disc Interface • Z8/Basic Computer • Euro Card Micro Expansion System • Power Supplies • Cables

A. N. Electronic & Computer Services Ltd
211 Park Barn Drive
Guildford, Surrey
Tel: (0483) 504897

PLAIN PAPER print out for Spectrum 330. Line listing £2.25. Send tape, £1.00 for samples. A.S.C.S., 25 Church Street, Wareham, Dorset.

COMPUTER & PERIPHERAL SERVICES, ASHSTEAD OFFER

On-site maintenance contracts on BBC Computers and peripherals at 15% of total cost. 12½% on 5 or more. Schools, dealers etc. One-off on-site service £30 plus parts. 24 hour call.

TEL: Ashstead 74297

FOR SALE

"BACK NUMBERS". PCT Vol 1 nos 1-8 for sale. Reasonable offer secures. Strickland, 20 Mutual Street, Doncaster DN4 0LF.

ACORN ATOM 8 + 2K PSU, good software and literature. £120. 01-864 5311 Ext. 2576 (daytime).

SHARP MZ80K 48K, ten months old, as new, manual, basic and demonstration tapes, games etc. £325 ono. Phone Farnborough, Kent 51863 evenings.

EXCHANGES

SOFTWARE EXCHANGE for Atari VC5/400 Intellivision 4 TRS 80. SAE details Videocomp, 57 Woodlands Road, Ilford, Essex.

FOR ALL YOUR CLASSIFIED REQUIREMENTS CALL ASP LTD

01-437
1002