COMMODORE

COMPUTING INTERNATIONAL

FLIGHT GAMES TAKE OFF!

MUCH MORE
64 POWER

128 - CADPACK
- POCKET FILER

PLUS/4
N PIN – STRIP POKER

C16 - MEGAHITS

HI-TECH SEX!

PROGRAMS, PROGRA
AND MORE PROGRAMS!

GET FREE SOFTWARE

A FREE cassette of software...

...see voucher inside

Art

1 BELGIUM FR 1.30 CANADA $3.50 USA $3.95

+1

PLEASE
=B TO 62
ATA LOAD

CRE

AMAZING COMPETITION
– SPLIT PERSONALITIES – AVENGER, SKATE ROCK
AND MUCH MORE

Super Solutions 2

The Best Just Got Better

We just did something only the best can do! We made our award winning* software for the Commodore™ 128 and 64 computers even better!

Introducing...Pocket Writer 2/word processor **Pocket Planner 2**/spreadsheet **Pocket Filer 2**/database

Our new Pocket 2 series offers features usually found only in much more sophisticated applications software. Features that include: compatability with the new GEOS operating system†, ability to work with the Commodore RAM expander to allow a RAM disk, mouse support with pull down menus, 1571 burst mode for faster file loading, increased support for two single disk drives, automatic configuration for screen color, format and printer selection†.

Sophisticated software, yes, and still easy to use. You can be up and running in under 30 minutes even if you haven't operated a computer before.

Now, when you upgrade your Commodore™ 64 to a 128, Pocket software helps make it a breeze. The new Pocket 2 software has both 128 and 64 applications on the same disk. So when you buy one you are actually buying two software packages. The cost only $59.95 (U.S.).

You can buy all three Pocket 2 applications, Pocket Writer 2, Pocket Planner 2 and Pocket Filer 2 in one convenient Superpak for the low price of only $99.95 (U.S.). A super way to discover all the integrated features of Pocket 2 software and save almost eighty dollars.

As a companion to Pocket Writer 2, a **Dictionary Disk** containing 32,000 words (expandable to 40,000) is available. The cost $14.95 (U.S.).

For those of you who have already discovered the many benefits of owning Pocket software; we offer all registered owners upgrade Pocket 2 software for only $19.95 (U.S.) plus 3.00 (U.S.) shipping and handling! Available only by writing to Digital Solutions Inc.

*Commodore's Micro-computers Magazine, independent reviewers, rated the original Pocket Writer 128/64 and Pocket Planner 128/64 software the "Annual Best of 1986" in the productivity category.

Superpak: The Solution That Saves Money!

Economical; $179.85 (U.S. worth of software for on
$99.95 (U.S.)

Canadian Dealer Enquiries:
Ingram Canada Ltd.
1-416-738-1200

Mail orders:
Crystal Computer Inc.
in Michigan
1-517-224-7667
outside Michigan
1-800-245-7316

International Distributor Enquiries to:

Digital Solutions Inc.

2-30 Wertheim Court
Richmond Hill, Ontario
Canada L4B 1B9
Telephone (416) 731-8775
Telex 06-964501
Fax (416) 731-8915

Serious Software That's Simple to Use

Reader Service No. 177

Commodore is a registered trademark of Commodore Business Machines Inc.
† Features available for Commodore 64™
©1986 Digital Solutions Inc.

NUMBER ONE ARCADE HITS...

FOR YOUR COMPUTER.

Put on your black belt and challenge your friends or the computer through nine picturesque settings in this leading Martial Arts Game to become the **KARATE CHAMP**. For the Commodore 64™/128 and the 48K Apple II® Series.

As the crack shot **COMMANDO**,* battle overwhelming odds to defeat advancing rebel forces. Armed with only a machine gun and hand grenades, you must break through the enemy lines to reach the fortress. For the Commodore 64™/128.

Prepare for the fight of your life . . . you are the **KUNG-FU MASTER**.** Battle the evil forces through the five dangerous floors in the wizard's castle to rescue the captive fair maiden. For the Commodore 64™/128 and the 48K Apple II® Series.

Apple and Commodore 64 are trademarks of Apple Computer, Inc. and Commodore Electronics, Ltd. respectively.

* © Data East USA, Inc. Mfd. under license from Capcom USA.

** © Irem Corp. Mfd. under license by Data East USA, Inc.

Reader Service No. 190

DATA EAST

DATA EAST USA, INC.
470 Needles Drive, San Jose, California 95112
(408) 286-7074

© 1986 Data East USA, Inc. All rights reserved.

The best value Commodore magazine in the Universe!

Inside

COMMODORE COMPUTING INTERNATIONAL

MARCH 1987

...NEWS

OVERVIEW

Throne of Fire... Sky Runner release... 128 Blitz... Grange Hill computing and much more 6, 7, 8

...REVIEWS

Designer Board 12
Citizen MPS Printer
Superdesk 18, 19
Understanding your Computer Series 20
Pocket Planner 24
Cadpack 128 30
Pocket Fillers 32
Laser Genius, Robotex, Speedipen, 36,38
Skiwriter 43

...FEATURES

SEX AND THE SINGLE COMPUTER II

Goings on beneath the spreadsheets 14

ELECTRONIC FUNDS

How computer money moves 28, 29

...CONSTANT FACTORS

COMPETITIONS

Results 19
3 pages of sheer extravaganza... Win holidays... Videos... skateboards... and a Rubber Ronnie 57, 62, 69

BASIC FOR BEGINNERS

Part XI 34, 35

LETTERS

Rae West... The Good, The Bad and the Urgent 40

WRITE ON

A better class of letter 39

MIDI

Part Two 41

BOOKS

Futuristic fiction and Killer Tomatoes on the loose 42

ADVENTURE

Thrills, spills... and the Archers 45 47

SIMULATIONS

You'll believe a man can fly 48, 50

CHARTS

Bounders, Bubblers and those selling millions 63

BULLETIN 1000

Video viewing 72

CARTOON

Wimbley strikes back 77

SUPER FELIX

Kaustic Kitty Kronicles 78, 79

MINTER

Prophetic words 80

HINTS AND TIPS

97, 98, 100

Feature of the Month

64 POWER

PART TWO

GEOS 10, 11
Word Processing 21
Cobol 64 37

ICPUG

User Group News 92

PROGRAMS

Sprite 1
3D shape 90.
Say So 102, 106
Perfect Protection 107, 109
Grabber 110, 111
Commander 112, 113

GAMESWORLD

MEGA REVIEWS

Flight takes off! ... X29 Fighter... Handball Maradonna.. Blood and Guts Judge Dredd... Footballer of the Year... Destroyer... Batallion Commander... Red Max... Electrix... Galvan... Donkey Kong... Monkey Magic... Indoor Sports... Sky Runner... Howard the Duck... Macsen's Double... Dangerzone... Strip Poker... Terra Cognita... League Challenge... Way of the Exploding Fist... Bounder... Masterchess... Pinpoint

NEXT MONTH

More 64 Power... More on the AMIGA... More 64 and C16 games... More useful programs and much, much more... Order your copy now!

CCI View

Dear Reader,

This issue of CCI is carrying on our look at '64 Power' with an exclusive report on new GEOS products and other 64 coverage. The 64 is still the most used computer in the world and major releases continue on both sides of the Atlantic. In places like South America, 64s are being sold in quantity for the first time!

We have not forgotten the other Commodore machines with the C16/Plus 4 machines represented by an unending flow of new games including Bounder, C16 Chess and the well-known Artwork Strip Poker appearing at last on the Plus/4.

The 128, which we hear has now sold its 1,000,000th machine, has several new products including CADPACK and the interesting Canadian 'Pocket' range.

We are taking a look at a selection of flight style games. They seem to be growing faster in popularity than any other kind both in simulation and arcade-style games.

We are also including some 'Special Reports' of state of the art computer-related developments.

We have, as promised, also substantially increased the number of programs for those who have written to me asking for that section continue to grow with the rest of the magazine.

We know that many regular readers look to CCI as a way of keeping informed on not just one area but *all* their Commodore interests. We hope that you will find this CCI helps you do that, too.

Yours sincerely, **Antony H. Jacobson, Publisher**

Managing Editor and Publisher ..... Antony Jacobson
Features Editor ..Anthony Mael
Editorial/Production Controller ..... Sherri Gilkes
Subscriptions Controller ..... Sandra Gallagher
Senior Advertisement Manager .....James Mack
Advertisement Manager ..... Max Jacobson
Assistant Advertisement Manager.....Billy Brown
Finance Director B.J. Lewis M.Sc. F.C.A.
Consultant Art Editor ..... Graham Baldock
Illustration/Artwork M L. Arts
Cover Photo... courtesy of Midas
Photography ... Paget Joseph
Advertising Assistant ..... Krotoa Moses
Contributors .....Tim Arnot
..... John Arthur
..... Ian Bennett
..... Bob Collyer
..... Bill Donald
..... Len Keighley
.....Courtney King
..... Tony Lydeard
..... Jeff Minter
.....Andy Moss
.....Daphne Moss
..... Peter Richardson
..... Ian Waugh
..... Rae West
..... G. P. Wayne

Telephone 01-278 0333
Editorial ext: 274
Advertising ext: 280/286
Subscriptions ext: 274
Published by Croftward Limited
Finsbury Business Centre
40 Bowling Green Lane
London EC1R 0NE
Distributed by: Comag, Tavistock Road, West Drayton, Middx UB7 7QE
Printed by Chase Printers Group
Typesetting: Carlton Barclay

Commodore Computing International is published monthly by Croftward Limited. The publishers do not accept liability for any incorrect statement or errors contained in material from independent contributors or authors which may be reproduced from time to time.

© Croftward Limited 1987

SAVE THIS VOUCHER

II

FREE SOFTWARE

and send it together with vouchers I and III and you will receive a *free* cassette of software. The final voucher will be in next month's CCI.

Advertisers' Directory

AB Computers	96
Adamsoft	31
American Action AB	51, 68
Anco	75, 81, 85, 89
Barry Paul	61
Calco	27
Computer Cupboard	85
Datei Electronics	22, 23
Delta Pi	25
Digital Solutions	2, 3
Dimension	9
Direct Disk Supplies	26
Dosoft	29
Durell	66, 67
E&J Software	96
Evesham Micros	94, 95
Gremlin	83
Hi-Voltage	15
H&P Computers	44
ICPUG	92
Insight Software	31
Konix	65
Logic Sales	31, 90
Martech	59
Micromedia	38
Micronet 800	13
Micropro	33
Mode Deal	54
MPC Software	92
Precision Software	25, 27
Rams	85
R. E. Limited	17
Selec	25
Sixty-Four Software Centre	99, 107
Superior Software	IBC
Supersoft	OBC
UK Soft Centre	89
UK Gold	49
Wizard	61
York Electronics	96

..news...news...news...news

3rd Enhanced 64 Drawing Board

Culton has announced Fill Routines and Fill Pattern enhancements for its 64 design package.

The FILL ROUTINE allows hatching, shading, griddling and tiling of selected areas of a drawing. The routine takes under 1 second to fill a 320 by 200 pixel area.

The FILL-PATTERN is preselected from a suite of over 30 held in memory at one time.

Sets of patterns can be created in sizes from 8 to 1 pixel up to 40 by 24, or any similar sized area can be "cut" from an existing drawing and used as the fill-pattern, in two or three keystrokes.

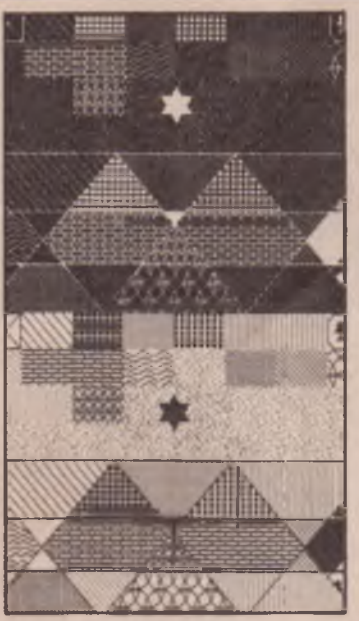
Incorporated in the routine is an AREA MEASURING FACILITY which counts the number of pixels in the filled area, the count then being scaled to display the area size in units chosen by the operator.

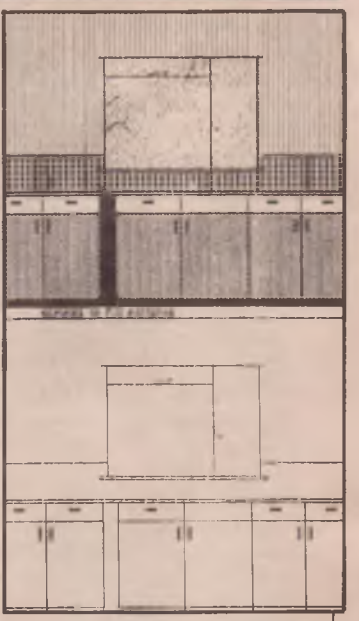
Culton recently announed other enhancements for the arc, circle, quadrant, line and tangent.

Disk: £29 (plus VAT).

128 version (cartridge): £49.

Contact: Culton Sales & Services Ltd, 34 Mount St, Dorking, Surrey RH4 3HX. Tel: (0306) 885138.





U.K. micro users help children in need

Micronet raised over £45,000 for this year's CHILDREN IN NEED APPEAL by establishing a special nationwide comunications link with the country's ITECs (Information Technology Centres).

Over 150 ITECs throughout Britain held fundraising events during the day of the appeal, and hundreds of computer clubs visited their local ITECs to make their donations on-line.

Meanwhile, based in the dressing rooms of the BBC, intrepid Micronet staff went celebrity-hunting to raise money; the concept being to bring the likes of Jimmy Saville and Pamela Stephenson into the dressing room where Micronet members could interview them via their micros. On-line auctions were run concurrently and in the excitement, Linda Lusardi donated her dress to the action, going home frockless!

Demon King Size

Transaction Point who created the Demon Spreadsheet claim that the Lotus boast of producing the world's biggest spreadsheet (CCI January) just does not stand up. T P say Lotus 123 (40ft x 80ft) is tiny by comparison to the Demon Spreadsheet that for 17,576 columns by 65,536 rows can measure 14,097ft x 1530ft.

T P also say that Demon executes a GOTP command from the top now to the bottom row about 20 seconds faster than a human being could fall the same distance. Can we expect the Marketing Director of Lotus to test out that last claim ?

Red box alarm

A new 160db warbling alarm is now available for use with the Red Box computer add-on home security system.

Red Leader is a complete microprocessor running its own Basic language and providing the program to the home micro for it to act as a terminal to the system. Once programmed, Red Leader can be disconnected from the computer and left to run on its own.

Red Leader can also recieve and react to signals from the other modules.

Red Two is a wide angle heat sensor which can detect movement. For security purposes, it will send acknowledgement of an unwanted intruder to Red Leader which can be programmed to communicate with Red Five and sound the warbling alarm for a preset time period.

A Red Box home security system comprising Red Leader, Red One, Red Two and Red Five costs £163.95 (plus £4 postage and packing); contact: Electronic Fulfilment Services Ltd., Chesterton Mill, French's Road, Cambridge CB4 3NP.

CD ROM is GO!

Hitachi is now offering a stand alone CD rom drive called the CDR 2500S. When you consider it can provide over 2.2 gigabytes of storage on a single compact disk you may consider its one-off user price of £945 as a snip. It comes with its own power supply and IBM 8 bit bus and can be daisy-chained upto 4 deep. Average access time is quoted as being 0.5 seconds with a data transfer rate of 176 kBytes per second. There is an optional card which will permit the mixture of date, music and speech.

Clough's Challenge

Brian Clough's Football Fortunes is a computer game with a difference — because it's a board game! It is an exciting departure from other computer simulation games, as it combines the speed and flexibility of a computer, with the social aspects of other best-selling board games, and was written with plenty of advice from Brian Clough himself!

Two to five players take on the role of team managers. Each manager must steer his team through the season — successfully — and use his skill to make his team stronger. Some of the opposing teams are managed by fellow players, and the rest of the ten strong league is managed by the computer. There are many opportunities to follow Brian Clough's example and strengthen your team — both by landing on the correct place on the board, and by "wheeling and dealing" with your fellow players — demanding huge sums of money to lend or transfer 'footballers'.

The game package consists of a computer cassette or disk, a playing board, five coloured counters, a pack of 'football player' cards, immunity cards — and a heap of money! The compulsory Brian Clough phrases "over the moon", and "sick as a parrot", must also be shouted at the appropriate times — but no violence please!!

Price: £14.95 (c), £17.95 (d). Further details can be obtained from: Dave Carlos, Inter-Mediates (0279/726585.

...news...news...news...news

School Computing from Quicksilva ????

Quicksilva are releasing Grange Hill — The Computer Game. It may prove to be one of the adventure releases of the year.

The game, which is based on "After Hours" — one of the Grange Hill novels, has been licenced from Phil Redmond — the man who devised the series that celebrated its tenth anniversary on February 8th 1987.

Quicksilva's game involves Hollo and Gonch trying to break into the school in order to retrieve a personal stereo that has been confiscated by one of their teachers. There are plenty of puzzles and twists in the storyline, which was devised by Colin Jones whose previous work includes Deux Ex Machina and iD.

"Sky Runner"

At last the long awaited follow-up to Cascade Games' number one hit, ACE is released and entitled, 'SKY RUNNER'.

Programmer Ian Martin, the man responsible for ACE, has been working secretly on this project for several months and is 'delighted' with the results of his work Ian commented;

"We wanted to produce a game with a very original theme. We've been under a lot of pressure from America to write ACE2 but we're holding back on that one for a while.

The idea for 'SKY RUNNER' came from a couple of my favourite movies, Dune and Return of the Jedi. The scene in Jedi where the flying motorcycles are hurtling through the trees was by far the most exciting sequence. That was the inspiration for the action scenes in Sky Runner.

The story line for the game could be considered contraversial in that it is based on drug busting on an interplanetary level. Future society is subdued into docile obedience by the drug SKY and it is your function to terminate the drug harvesting operation."

The game is out now on Commodore 64

Price: £9.95 Cassette
£12.95 Disk.

M.H.'s Throne of Fire

Melbourne House is about to release a computer game quite unlike anything it — or any other software house — has released before.

It's a multiplayer combat game for two players and a third computer opponent or one player and two computer opponents, all playing simultaneously. It's called Throne of Fire, and it's designed by the uncrowned king of strategic software, the author of the legendary Lords of Midnight and Doomdark's Revenge, Mike Singleton.

Throne of Fire enacts a classic three-sided power struggle between ruthless and ambitious princes, sons of the late King Atherik. It is played out against the dramatic back-cloth of the Burning Citadel, a towering edifice built around the rim of a smouldering volcano. Each prince aims to seize the now vacant Throne of Fire, by slaying his brothers and their men-at-arms, and then channel the mind-wrenching powers of the Throne to his own dark ends.

The action is controlled by dual joysticks, or joystick and computer, with each player adopting the persona of one of the rival princes, and the computer taking on the role of the third. All three play at once, moving the main characters and the members of the supporting forces through the many chambers and connecting stairways of the Citadel.

This is depicted with large animated knights exploring and battling it out with clashing axe and sabre, against the detailed graphics of the Citadel's interior. Below the two main action screens — one of each human player — is displayed the silhouette of the itadel, standing starkly against the darkening sky, each illuminated arrow slit showing the current deployment of the opposing armies.

Throne of Fire will be released on Commodore 64 Cassette £9.95, disk £14.95.

Big Byte Bucks

Want to be a millionaire? Get into computers! According to a recent US survey Bill Gates, 30-year-old boss of Microsoft (creator of MSDOS) is now worth more than $850 million (£270 million) and is one of the top 400 richest people in the US. Not bad for 30 years old but put in the shade by H Ross Petrot, founder of EDS, now owned by General Motors. He's worth a cool $2.5 billion (£1.9 billion). And there's David Packard of Hewlett-Packard who tots up a neat $2 billion (£1.6 billion). Now about that software idea your were inventing.

Supersoft Spearhead Commodore Revival

Since Supersoft bought Commodore's remaining stocks of these much-loved Pet Range enquiries from existing users have been flooding in. Most of the machines that came from Corby were the older 4032 and 8032 computers, whereas many users wanted to expand their systems with the sleekly-styled 8296 computers, the very last in the PET range.

Supersoft managed to locate a stock of brand-new 8296 computers in a Commodore warehouse in Europe. These are now in England, and are available from Supersoft direct at £595 plus VAT.

Supersoft are currently negotiating with a number of established suppliers of Commodore 8000 series software to make programs available at a fraction of their original

prices. An announcement will be made when negotiations are complete — in the meantime Supersoft would be interested to hear from other software suppliers with 8000 series software collecting dust on the shelves!

Contact Peter Calver 01-861 1166

Phasor One

Britannia Software of Cardiff, have produced Phasor One, a new joystick they believe will faze its competitors with a revolutionary hand-held design.

With pistol-grip shape, the Phasor One fits neatly and securely in either hand and does not need to be placed on a solid surface. The joystick is on top to allow right or left-handed players complete freedom of movement while an ultra-sensitive trigger is used to fire the 'gun', allowing extra rapid response. Retailing at £12.95, the Phasor One fits most types of home computer and comes with an extra long cable to give the player plenty of room to manoeuvre.

Cliff Gardener of Britannia Software claims, "It's just what the experienced gamester is looking for — fast, mobile, accurate and with an authentic feel to it. We are sure that this product will really take-off."

Contact: Messrs Cliff or Steve Gardener, Britannia Software Ltd, Unit M28, Cardiff Workshops, Lewis Road, Cardiff, CF1 5ED. Tel: 0222 481135.

Yugoslav Computer Hero

Serbo-Croat does not seem a likely language for a champion of computing but there is a contender for the title of Mr Computing Yugoslavia who may have few equals anywhere. Andrija Kolundzic, 27, is a student at Belgrade University and also a teacher of computing. He is also author, radio and TV presenter, programmer and organiser of computer clubs and creator of audio cassettes.

Kolundzic runs Yugoslavia's biggest personnel computer club with over 4,000 members and also teachers courses in Basic and Machine language for Commodore computers. He conducts similar courses by radio and on TV every three days' and puts the courses on audio cassettes. He wrote the first book of Basic for the Spectrum and the Commodore 64 in Serbo-Croat (the national language of Yugoslavia). He is at present engaged in writing more books on Basic, machine Language, Modem and Mailbox services for Commodore computers. He writes for the three main popular Yugoslavian computer magazines 'My Micro', 'Yu Video' and 'World of Computers' in which he is editor of the 64 columns.

He is also a professor at the College of Pedagogics in Belgrade where he runs 30 C64's. Kolundzic owns a 64, 128, Spectrum, 2 1541 disk drives, four printers and over 3,000 'serious' programs for 64/128. He runs two modems... and he is involved in Ham radio. Whew!

He's about to start the first private mailbox service in Yugoslavia and is keen to contact other bulletin boards (and other enthusiast) outside his country with a view to exchanging ideas, programs and membership. He tells us there are 200,000 home computers in Yugoslavia so there are lots of opportunities for mutual advantage for hobbyists in other countries.

Andrija Kolundzic seems an enthusiast who is doing a great job bringing computing to a wider public with very few resources. What about contacting him international Commodore fans and giving him some help?

Contact: Andrija Kolundzic, Vojvode Brane 31, 11000 Belgrade, Yugoslavia.

Portal: A Computer Novel

Activision today announced the long awaited release of Portal: A Computer Novel, with the promise that the Portal experience heralds a new era of computer literature.

Portal takes the player to the year 2106. Having returned from an aborted 100-year voyage only to find a peaceful but people-less world, the player delves into Worldnet databases to scan the records of the vanished civilizations. Slowly, the thread of the story begins to unravel as the game's interaction revives the sole survivor of the lost world: a biological computer called Homer.

Different from any computer software in existence, "This work is the first true piece of computer literature in which the player is in large part the author", explained Rod Cousens, Group Managing Director of Activision UK Limited.

Unlike books or films that have been translated to the computer medium, Portal was created specifically as computer literature. And unlike puzzle-solving text adventures, the player directs his own research and controls the experience in a truly innovative way. Portal was created and produced by Brad Fregger, teamed with Rob Swigart, a well-respected author of adventure and science fiction.

Portal's massive database requires that it be multi-disk on all systems. The premier release scheduled for February will be a 3 disk product for Commodore 64/128 computers, price £24.99.

Datel Diskmate

Datel have brought out DISKMATE II, a multi feature cartridge for the Commodore C64/1541 disc user. The unit provides: FAST LOAD/SAVE . . . speeds up the save/load operation by up to 5 times. FAST FORMATTER . . . formats a diskette in under 10 seconds. FAST LOADER . . . fast load programs at 5 to 6 times normal disc speed and works with most software. DOS WEDGE . . . gives single key commands for directory, load, scratch etc., etc. MICRO MON . . . a powerful monitor/disassembler enable you to view any area of memory as HEX, ASCII or full disassembly. All the features of other monitors plus many more . . . too many to list. RESET BUTTON . . . DISKMATE II incorporates special switching techniques which make it invisible to the system. The monitor can look anywhere including at the RAM under itself.

DISKMATE II is an easy to use auto start cartridge and is fully menu driven.

DISKMATE II and ACTION REPLAY MK2 are available on the same cartridge for only £34.99.

Contact: Datel Electronics, Units 8/9, Fenton Industrial Estate, Dewsbury Rd, Fenton, Stoke on Trent. Tel: 0782 273815.

Announcing Shanghai....

Now Activision introduces SHANGHAI an exciting strategy challenge devised from the ancient oriental game of Mah Jongg, a captivating and addicting puzzle that brings the best of the ancient pastime to the home computer audience.

Over twenty-five centuries ago, the exotic ports of China added yet another export to their trade in silks and spices: one of the most compelling games ever created — Mah Jongg.

Devised by sailors to pass the time and risk their wages, it became the obsession of warriors, scoundrels and kings.

Taken to America during this century, it lured unsuspecting thousands to become addicted to the click of the ivory tiles, and was even banned in Philadelphia!

SHANGHAI is 144 picture tiles stacked in a five level, dragon-shaped pyramid. Players must search for matching tiles that are often hemmed in out of reach, and must be approached through maddening and roundabout matching maneouvers.

Small wonder that once computer owners get started, they don't want to stop. And, thanks to SHANGHAI's billions of different gameboards and four different game options — Solitaire, Team Effort, Tournament or Challenge — they don't have to.

Price: £9.99(c)

DIMENSION computers l.t.d.

27/29 High Street
Leicester LE1 4FP
Tel: (0533)
517479/21874

THE MIDLAND'S LARGEST HOME COMPUTER STORE

SOFTWARE

VIZA

Vizastar XL8 64	~~£99.95~~	£79.95
Vizastar XL8 128	~~£129.95~~	£99.95
Vizawrite Classic 128	~~£99.95~~	£79.95

ANAGRAM 64/PLUS 4

Purchase Ledger 64	~~£75.00~~	£49.95
Sales Ledger 64	~~£75.00~~	£49.95
Stock Control 64	~~£75.00~~	£49.95
Cashbook 64	~~£75.00~~	£49.95

PRECISION

Superscript 64	~~£60.95~~	£49.95
Superbase 64/+4	~~£90.95~~	£39.95
Superscript 64 & Superbase 64	~~£169.90~~	£79.95
Superscript 128	~~£89.95~~	£74.95
Superbase 128	~~£99.95~~	£59.95
Superscript 128 & Superbase 128	~~£189.90~~	£119.95
Superbase, The Book		£11.95

COMMODORE

Future Finance (Planning Package), Disc	~~£75.00~~	£17.95
Easyscript (Word Processor), Disc	~~£75.00~~	£24.95
Simons Basic Extension, Tape	~~£19.95~~	£12.95
Commodore 64 Programmers' Reference Guide	~~£9.95~~	£7.50
Typing Tutor 64, Cassette		£9.95

LOGO + PILOT

2 Educational Languages, Disc	~~£64.99~~	£14.95
Easyfile Database, Disc	~~£50.00~~	£17.95

AUDIOGENIC

Swift Spreadsheet 128, Disc		£24.95
Wordcraft 40 (Word Processor), Cartridge	~~£99.95~~	£17.95

SWIFTCALC 128
Powerful CBM 128 Spreadsheet with Graphics and Sideways Print **£57.50**

MICRO CLERK 128

Accounts Package with Spreadsheet, Database and Word Processor		£99.95
Purchase Ledger		£69.95
Sales Ledger		£69.95
Accounts, Purchase Ledger, Sales Ledger Package now		£199.95

HANDIC

Diary, Cartridge	~~£29.95~~	£9.95

PRACTICORP

Inventory (Stock Control Package), Disc	~~£29.95~~	£14.95
Macro Assembler Development System, Disc		£14.95

6 DISC ADVENTURE GAMES PACK, 64/128
Exodus, Suspended, Starcross, Zork I, Zork II, Zork III **£19.95**

Pack of 12 Commodore 64 Pre-School Educational Titles, Tape **£39.95**

PLUS 4 COMPANIES PACK
Sales/Purchase/Nominal Ledgers with Invoicing and Stock Control **£24.95**

1541C DISC DRIVE OFFERS

Pack A
1541C with 6 Infocom Disc Adventure Games **£199.95**

Pack B
1541C with Quick Brown Fox Word Processor, Easyfile Database and Future Finance Planning Package **£199.95**

PERIPHERALS

POWER CARTRIDGE
Utilities including Tape and Disc Turbo and Screen Dump **£39.95**

ACTION REPLAY
Tape to Disc Back-up Cartridge **£24.95**

64/128 PRINTER BUFFERS

32K	£69.95
64K	£89.95

64/128 MUSIC SYNTHESIS PACK
with Sound Expander, Sound Studio and 5 Octave Keyboard **£149.95**

COMPOSER/EDITOR SOFTWARE
for Sound Expander System **£24.95**

TROJAN CADMASTER LIGHT PEN

Commodore 64	£16.95
Commodore Plus 4/C16	£19.95

PRINTER RIBBON OFFER

MPS 801, 802 Ribbons	£5.95
MPS 803 & MPS 1000	£4.95
MPS 1101 M.S. Ribbons	£3.50

BUY FOUR AND GET ONE FREE!

LOCKABLE DISC STORAGE BOXES
Price includes pack of 10 Commodore compatible discs

50 Capacity	£19.95
100 Capacity	£21.95

THE EXPERT CARTRIDGE
Tape to Disc System **£31.95**

FREEZE FRAME 3 **£39.95**

COMMODORE MPS 803 TRACTOR FEED UNIT **£24.95**

FCC CENTRONICS INTERFACE
With Commodore Graphics and 8K Buffer **£64.95**

QUICKDISC + 1541 FAST LOAD/UTILITY CARTRIDGE **£19.95**

10 COMMODORE COMPATIBLE DISCS WITH FREE PLASTIC DISC HOLDER **£9.95**

NEOS MOUSE
the Ultimate Graphics Utility for the 64/128
WITH CHEESE SOFTWARE, Tape or Disc **£42.95**

THE ARTIST
Advanced Mouse Graphics Package **£29.95**

COMMODORE DPS 1101
Daisy Wheel Printer **£199.95**

COMMODORE 560P
2-colour Dot Matrix Printer takes $2\frac{3}{4}$ in. roll paper **£49.95**

CITIZEN 120D CBM PRINTER
High Quality Dot Matrix Printer
* Near Letter Quality Mode * 120 cps Draft Print Mode
* Friction and Tractor Feed * Needs no interface
* Full Two-Year Warranty * 100% Commodore compatible **£199.95**

AMIGA with software package **£1050.00**

STAR NL 10C NLQ PRINTER

Fully Commodore compatible	£253.00
Commodore 1571 Double-sided Drive	£259.95
Commodore 1901 Colour Monitor	£339.95
64/128 Green Screen Monitor with 40/80 Column Leads	£79.95
Commodore 1541C Disc Drive	£189.95
Commodore 128D	£499.95
Commodore MPS 1000 CBM/Centronics Printer	£274.95

PERSONAL CALLERS AND EXPORT ENQUIRIES WELCOME
ALL OFFERS STRICTLY SUBJECT TO AVAILABILITY
ALL PRICES INCLUDE V.A.T.

To order, either send cheque/P.O. with coupon or ring **(0533) 517479/21874** with Access/Barclaycard number. Please allow 7 working days for delivery from receipt of order or cheque clearance.
Please add £1.00 towards carriage and packing on any software order.
Hardware orders add £1.00 under £65.00 value, and £5.00 over £65.00 value.
Printer orders add £5.00 towards carriage.

Send to: Dept. No. CC13, Dimension Computers Ltd., 27/29 High Street, Leicester LE1 4FP.

Item	Quantity	Price
	Total	

Name.....

Address.....

.....

Telephone:.....

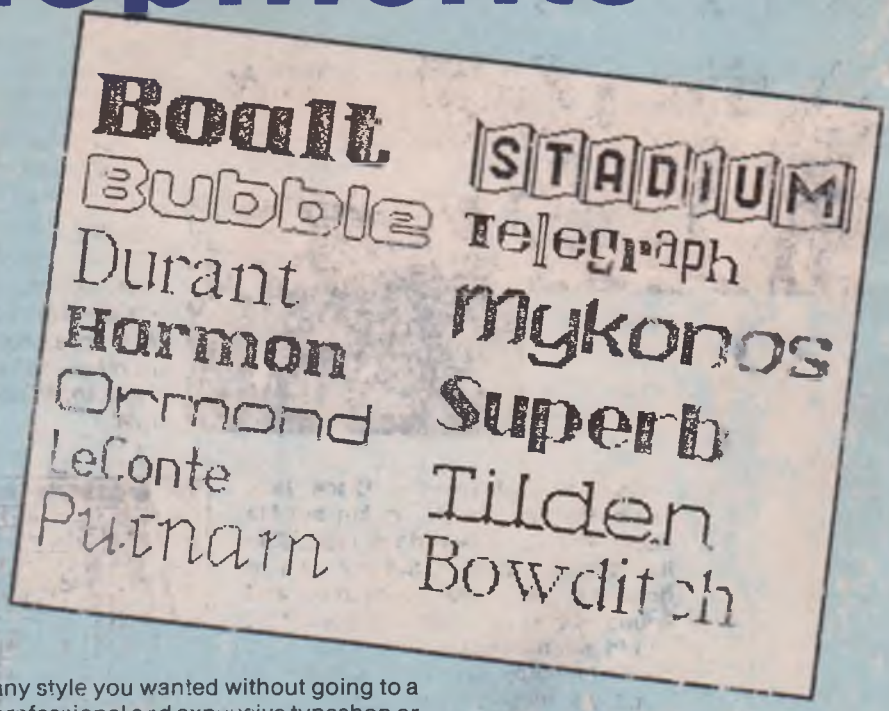
More 64 Power — New Geos Developments

The 1987 Consumer Electronics Show in Las Vegas was not rich in novelties to interest computer users. There were a number of new AMIGA products but the major Commodore 64 development was new releases in the GEOS range. Berkeley Software claim that GEOS is a whole 'universe'. That may be going a little far but certainly GEOS — which CCI was the first to review in mid-1986 — is the product that has not only probably the greatest potential for applications but has almost certainly lengthened the life of the 8 bit C64/128 range, in the face of its long predicted elimination by the AMIGA-style high flying 16 bit machines.

GEOS — as most Commodore owners will know now-stands for Graphic Environment Operating System. This is a professional style package that has virtually all the features that can be found in similar operating systems built into 16 bit machines like the AMIGA or Atari ST.

GEOS is a 'window and graphic icon' based system with dialog, error and system request boxes. It is extremely easy to use and finding a growing number of users throughout the world even though it is not supplied on cassette. GEOS was originally published with two powerful software packages, GeosWrite and GeosPaint. Now Berkley Software has brought out the next two packages in the system — FONTPACK 1 and DESKPACK 1.

GEOS originally came with a range of 5 fonts (typefaces) but the new product FONTPACK introduces 20 more. They are an interesting and even witty range. It is like having a book of Letraset on your computer available to use for any suitable occasion. The typestyles certainly look highly professional both in their appearance and the way they can be used. We particularly liked STADIUM for titling and HARMON too is very attractive. A short while ago you would have had to pay £3 or more a sheet for typefaces like these for headlines or titles and, of course, you could not have produced whole pages of text typeset in any style you wanted without going to a professional and expensive typeshop or printing company.



FONTPACK 1 is an excellent package for anyone who has a use for printing out professional style material and, of course, a 64 or 128 to run it on.

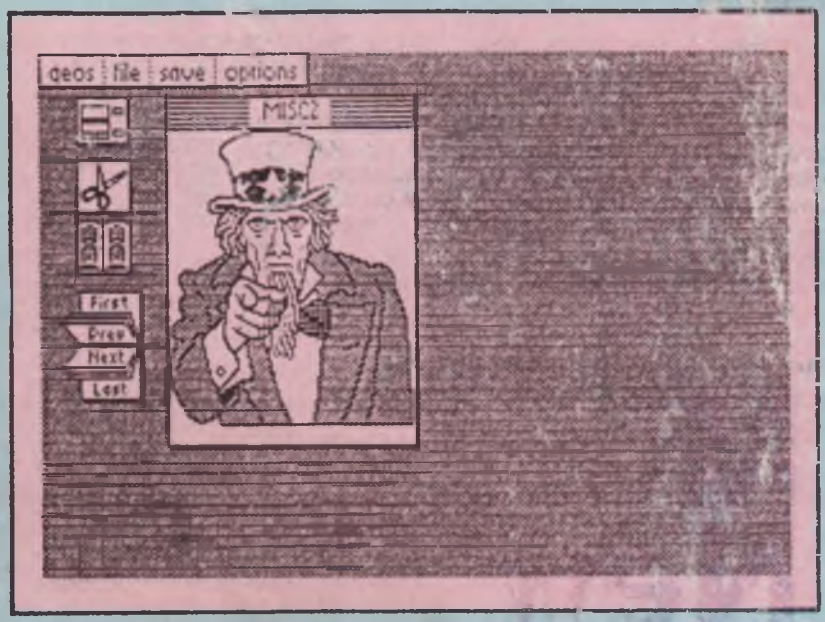
Add a laser printer, whose price is falling down to the £100 mark, and you've got what amounts to a real typesetting operation. Amazing!

DESKPACK 1 offers, in one package (disk only, of course) four applications for use with GEOS. All run on 64, 64C and 128 computers. There is a calendar — an application that everyone seems to include if they can't think of anything else. Personally I find it easier to use a real calendar stuck on the wall — particularly if there is an attractive picture to go with it.. The only slightly special thing about the DESKPACK 1 calendar is that it goes on till the year 9999. I don't expect many of us will be around to check to see if it's accurate till then.

Rather more useful is ICON Editor which gives you the chance to create your own icons and easily identify and run your GEOS files. Interesting but not vital.

Geos is charming.
Boot is all business.
FontPack is financial. And Telegraph is .. hmmm, well, you get the point.

Much more practical is the Graphics Grabber. This lets you copy graphics from the increasing number of products like Printshop, Printmaster, Newsroom and so on that give you a library of images to use at will. You can incorporate them into work you are producing on GeosWrite and GeosPaint. This is a very useful idea, for with all the excellent graphics now available, it is often a total waste of time trying to create simple things like maps, universally recognised designs or already created complex images. Of course, once you have incorporated them you can change or modify them to suit your own purposes.

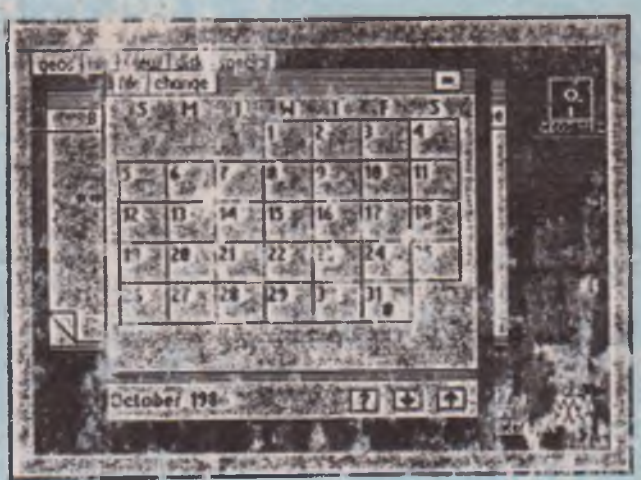


stop there. It has to go on at the same level of technical or practical creativity. The FONTPACK certainly does continue this very high quality of usefulness of GEOS however, I'm not sure that DESKPACK does it the same justice. Perhaps I'm asking too much but it is GEOS that is setting the standard. Nevertheless, I'm sure we're going to see many more brilliant ideas in the GEOS range from the Berkley Softworks stable giving much more 64 power yet.

FONTPACK 1 $29.95
DESKPACK 1 $34.95
(UK prices not available yet.)
Berkley Softworks (UK Distribution-First Analytical).
A.M.

The last application — Blackjack (a.k.a. Pontoon) might be fun but jits oddly with the more serious 'productivity' style products in the package. It does have quite agreeable graphics and sound effects but it's not something I would buy the package for. It seems to me that it could have been possible for Berkley Softworks to have come up with an application a little more relevant to 'productivity' or am I being too down to earth and is a card game the right kind of relaxation after the serious stuff?

These new GEOS packages suggest two things: first, that the GEOS range is going to extend considerably the scope of applications that can be handled by 64's or 128's to a very high level of professional skills — machines (not just computers) that could carry out work of this standard would have cost many thousands of pounds or dollars just a couple of years ago. Second, the sheer brilliance of a product like GEOS cannot



DESIGNER BOARD

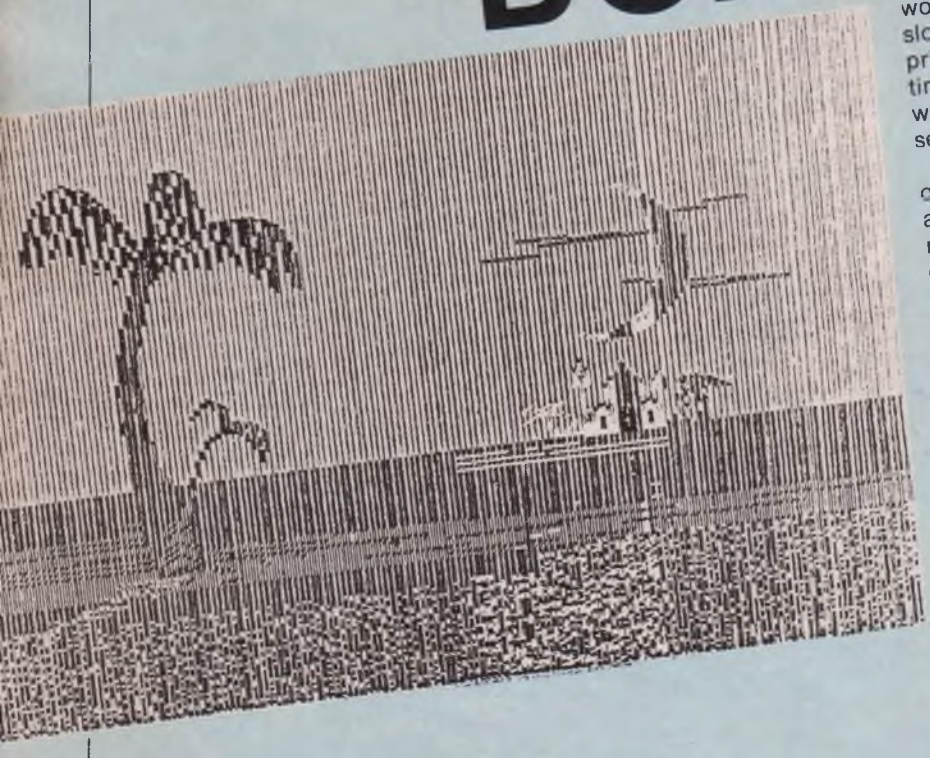
The Designer Board is yet another of the plethora of drawing packages now available for the Commodore 64. This particular program comes from Zanin Electronics, who share the same address as Precision Software. Zanin are probably better known for their range of Arabic language wordprocessors.

The Designer Board comes as cartridge, disk, joycard, and manual. Zanin have not bothered to protect the disk, since the cartridge acts as a double, and the software will not run without it plugged in. Unfortunately the cartridge casing didn't fit together very well, and I actually had to remove the card from its plastic case before it would fit in the cartridge port of my 128D. This was no problem, since the cartridge was only a press fit.

The options menu presents a series of some sixty icons, and fills the lower third of the screen. With the menu present, the cursor highlights the current option, which can be selected by moving the joystick and pressing fire. It is best to keep the manual with you at this point, since not all the icons are obvious in their function, nor is it always obvious what to do once an icon has been selected. The manual is reasonably helpful here, since each icon is listed by function, with a picture and also the coordinates of the icon in the menu.

Anybody who has used a mouse for drawing on an Amiga will know how much better the mouse is as an input device than the joystick. According to the manual, a version of Designer Board exists to support both mouse and graphpad, but my version did not. The joycard supplied with the program had a nicer feel to it than many joysticks, and most operations could be performed with a twitch of the fingers.

Selecting PRINT from the main menu takes you into the printer menu. Here you have to type in the name of your printer. The basic choice is between the MPS-801, EPSON and Canon PJ 1080A colour inkjet. The printer driver is then loaded from disk, and printing begins. I couldn't get it to print out on my Epson, either through the user port or with a serial bus interface, but it seemed to work ok on the 801, although rather slowly. It is a little unfortunate that the printer driver needs to be loaded every time the print option is selected, since it wouldn't be much bother to check and see if it was already loaded.



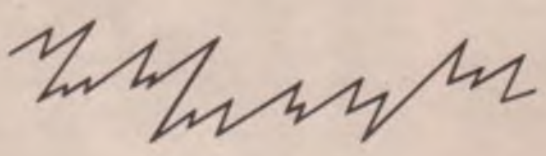
Conclusions? The designer board is quite a reasonable graphics package, and you can design some fairly elaborate high resolution pictures. There is even a shape library for designing electronic circuits, although I wouldn't mistake this for a C.A.D. package. It is possible to crash the program with some menu options, and the overall impression is that it still needs a little more polish. It comes with the input device (joycard) included, and the disk is not heavily protected. For this reason alone it deserves to do well. Lets hope that other software houses follow Zanin's lead.

T.W.A.

Price: £34.95

Contact: Zanin Electronics, 6 Park Terrace, Worcester Park, Surrey KT4 7JZ. Tel: 01-330 3150.

Your key to communications!



FREE Electronic Mail . . . International Telex . . . 10 National Chatlines (Interactive Bulletin Boards) . . . 70,000 users across the UK . . . Teleshopping . . . Multi-User Interactive Strategy Games

Instant computer news . . . Hardware and software reviews . . . Technical features . . . Hints and tips

FREE and discounted quality software to download direct to your micro – **24 hours a day**

PRESTEL

300,000 pages of information on the huge Prestel database

for just 20p a day

Micronet 800 – The ultimate peripheral

Micronet 800
8 Herbal Hill, London EC1R 5EJ
Telephone: 01-278 3143

Feature

SEX and the Single Computer II

Sex has reared its, for some people, shocking head in the ostensibly innocent world of computers. In California in the US, the FBI and the income tax service have been investigating the use of IBM PC's to run a database of prostitutes and their customers. The central location took calls from interseted enquirers, logged them onto the database and then sent out messages to the available ladies who were equipped with electronic paying devices.

The database held details of girls, and customers names, phone and credit card numbers and sexual preferences. The police arrested the two leading organizers and are now in the process of contacting customers who are listed on the database; probably not something greatly to endear hi-tech to them.

In France, the videotex service Minitel is being investigated by a high-powered government body after charges that the service is being used for a whole range of sexual activities from sexual chatlines to online prostitution rings.

Minitel terminals are provided free to anyone with a telephone and there are nearly two million in service in France. However, far from being only used for technical purposes, more than one third of all network traffic is now thought to be of a sexual nature.

'open access' was the only practical possibility. Since that time however, it is believed that videotex serivces such as Prestel, Micronet, Compunet etc keep a wary eye on the material on their systems and are quick to pull off messages likely to offend or break the law.

In the US, Bulletin Boards are regarded as 'the largest singles bars in the world'. Someone recently pointed out as, initially at least, the communications are exclusively electronic everyone can be imagined as beautiful — often an improvement on the real thing.

The US games adventure company Infocom has introduced the first X-rated computer game — its 'lewd' level of Leather Goddesses of Phobos. Samantha Fox's Strip Poker is still selling well months after its release and there are a number of other strip poker computer games including one for women in which a digitized man takes it all off. AMIGA versions of Strip Poker is promised shortly from Anco in the UK and

[illegible]phic abilities it
[illegible]ndeed. There is
[illegible]ow called Intra-
[illegible] help you dis-
[illegible]ences and prac-
[illegible] already know

[illegible]mmunications
[illegible]xuality Forum
[illegible]e popular than
Surprise! Sur-
[illegible]f the Forum is
[illegible]estion' option
[illegible]d more than
[illegible]also a 'Confi-
[illegible]he editors in charge of this section include psychologists, doctors, social workers etc. The kind of questions are 'Can Kissing spread AIDS', 'Fantasy among married women' and 'Is there a male menopause?', all fairly innocent. There is however, another network, CVC, that runs and adults only service 'Sextex' which does not censor messages. All users must sign a form stating they are over 18. Sextex contains graphic and totally explict material and even reviews hardcore pornographic material. We were unable to find any of the material that we could reprint in CCI. Even a travel guide 'Hot spots' was of nude beaches and clubs which cater for exceptionally kinky tastes. Sextex also takes advertisement for sexual toys and shops including the intriguingly named 'One Night Stand Survival Kit'.

The main problem is that it would be necessary to view every item of censorship on computing, especially in communications networks — even transient material like chatlines — a task that clearly would require impossibly high resources.

The control (or lack of it) of sexual material that might offend some people and please others is just one aspect of the breaking down in communications central authority. Today the individual has the means to transmit communications without, public control or restraint. It is not easy to accept that other have the freedom to do what we may not care for. However, with the growth of international computing networks and other technological advances like satellite broadcasting, national boundaries and local moral values become almost impossible to impose and maintain on the world at large.

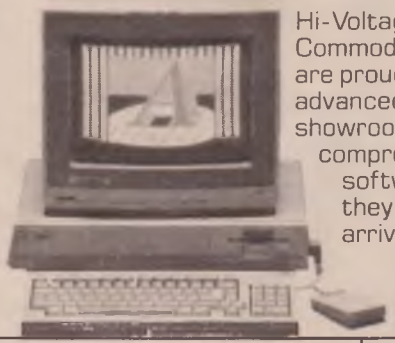
Sexual freedom may not be something one immediately associates with computers but it is another example of how technology infuences social change.

A.M.

LONDON'S LARGEST DISPLAY OF PRINTERS MONITORS COMPUTERS AND PERIPHERALS

HI-VOLTAGE

The London AMIGA Centre



Hi-Voltage are the Amiga experts. As Commodore's largest computer store we are proud to give the world's most advanced computer pride of place in our showroom. We stock the most comprehensive range of peripherals and software including colour printers, as they become available. New items are arriving every day so contact us now!

FREE on site service during the first year

FANTASTIC REDUCTION

COMMODORE AMIGA

Now Only **£975** + VAT

Phone for details

*Special offer to Commodore Users

Organize Database
Dbase III compatible high power database **£99.95** inc VAT

Scribble V2.0 Wordprocessor
Now includes mailmerge and spellchecker **£99.95** inc VAT

Analyze II Spreadsheet with Graphics New version now much faster with integrated graphics **£149.95** inc VAT

Deluxe Paint II
Now in stock

PHONE FOR NEW UPDATED AMIGA CATALOGUE AND PRICE LIST

PUBLISHER "Move over Mac"
Desktop Publishing Software

£199.95 inc VAT

Desk top publishing for the Amiga integrates with deluxe paint, scribble wordprocessor etc. Can produce copy in both colour and black and white

ALEGRA HALF MEGABYTE RAM PACK

Increases the Amiga Ram to 1 Meg. Just clips onto the side of your Amiga. Can be upgraded to 2 Megabytes easily

£346 + VAT

COMMODORE 64C/128D

CBM 64

C64C Computer NEW MODEL	**£195.95**
C64 Computer	**£159.95**
C64C Compendium	**£239.95**
C64 Compendium	**£189.95**
1541C Disk Drive NEW MODEL	**£195.95**
C2N Data Cassette	**£34.95**
Modem for 64 or 128	**£59.95**
Mastertronic Ski Writer WP	**£14.95**
Currah Speech Synth	**£19.95**
Konix Speed King Joystick	**£12.95**
Tasword 64 80 col WP	**£19.95**
Activision Music Studio	**£19.95**
CBM Sound Sampler	**£69.95**
Wigmore MS2000 Mouse (cass)	**£57.95**
Graph Pad II Graphics Tablet	**£59.95**
CBM Music Maker 1 Keyboard	**£9.95**
Final Cartridge	**£39.95**

CBM 128

C128D Computer inc Disk Drive + Microclerk Integrated Software includes Wordprocessor, accounts, spreadsheet data base **£549.95**

1571 Disk Drive	**£259.95**
Amiga High res RGB Monitor	**£339.95**
1901C RGB Colour 80 Col Monitor	**£339.95**
CBM 1900M green screen monitor	**£99.95**
Script 128 Word Processor	**£49.95**
Micro Clerk Accts/WP/D. Base/Calc	**£99.95**

PRINTERS

MCS 801 Colour Printer	**£199.95**
DPS 1101 Daisy Wheel	**£199.95**
MPS 1000 NLQ Dot Matrix	**£259.95**
Star NL10C NLQ Dot Matrix	**£259.95**
Citizen 120 CBM NLQ Dot Matrix	**£199.95**
Ram CBM/Centronics I/F	**£39.95**

The Final Cartridge II
Many more features at a new lower price. Now in stock

£39.95 inc VAT

EXCLUSIVE OFFER
CBM 1520 Colour Printer Plotter, NLQ, Graphics, 4 Colours

£79.95 inc VAT

FANTASTIC PRICE REDUCTION
Citizen 120D NLQ Printer with CBM 64/128 interface
Normal Price £249.95

Our Price £199.95

Superscript and Superbase Bargains

1. **Superscript 64** Normally £69.95	OUR PRICE **£49.95**
2. **Superbase 64** Normally £99.95	OUR PRICE **£59.95**
3. **Superscript 64** and **Superbase 64** Normally £169.95	OUR PRICE **£99.95**
4. **Superscript 128** Normally £89.95	OUR PRICE **£74.95**
5. **Superbase 128** Normally £99.95	OUR PRICE **£74.95**
6. **Superscript 128** and **Superbase 128** Normally £189.90	OUR PRICE **£134.95**

CBM DPS1101
High quality Daisy Wheel Printer PLUS

£199.95 inc VAT

Largest range of floppy disks and printer ribbons available in London over the counter.

London's largest range of games and software. Thousands of titles in stock.

Mail Order + Export Hot Line Phone 01-686 6362

Delivery by Securicor (4 day) please add £5.75 per item.
Delivery by Securicor 24 hour please add £9.95 per item.

Send off or order by phone quoting your Access, Visa No. Phone 01-686 6362.
Immediate despatch on receipt of order or cheque clearance. Or Telex your order on: 946240 Attn 19001335 **EXPORT CUSTOMERS SUPPLIED TAX FREE.**

ALL PRICES INCLUDE VAT

EXPORT
Contact our specialist export department on 01-686 6362

ALSO VAST RANGE OF DISK DRIVES, JOYSTICKS, DISK BOXES, INTERFACES, SHEETFEEDERS, ETC.

HI-VOLTAGE 53-59 High Street, Croydon, Surrey CR0 1QQ. Tel: 01-681 3022

Prices correct at copy date. Subject to change without notice due to currency fluctuations etc. E. & O.E.

OPEN MONDAY-SATURDAY 9 AM-6 PM

OPEN MONDAY-SATURDAY 9 AM-6 PM

Citizen MSP-10E Printer

The MSP-10E is an 80-column dot-matrix printer operating at two speeds. Citizen claim a speed of 160 characters/second in *draft* mode and 40 characters/second in *near-letter-quality* mode (NLQ). Whilst any printer manufacturer's figures should be taken with a pinch of salt purely on the basis that no manufacturer has to my knowledge, published the method of how these figures are arrived at, the figures I achieved using part of this article as a test were:
Draft Mode — 89 cps NLQ Mode — 27 cps

So much for claimed printer speeds, althought the MPS-10E is undoubtedly on a par with other printers with a similar claimed speed. The print speed can be selected by a switch located on the control panel on the exterior of the printer as well as by the more usual method of software selection, a nice convenient touch.

The unit is well-packaged and supplied with a 206 page indexed manual which also provides a tear-out sheet listing the various software control codes — another thoughtful touch. The manual is well written and there are a large number of example programs within it written in BASIC to demonstrate the various features of the printer plus some useful hints on using the MSP-10E with MS-DOS and CP/M applications software such as WORDSTAR. A push-feed tractor is used for the paper handling where fanfold stationery is in use. This is better than the more usual *pull-through* type of tractor found on other printers since the paper loading process is much simpler and faster. It also has the usual built-in self-test sequence and a *paper-out* detector.

The Citizen MSP-10E is configured to emulate the functions of the redoubtable EPSON FX-series of printers. However, the user can also select an IBM graphics printer emulation mode which are measurably more useful to the bulk of users since this mode contains a number of mathematical formula symbols as well as character symbols more appropriate to modern business needs. Unfortunately, the selection between configuration modes could only be achieved through resetting internal switches. Admittedly this operation only entails 4 cross-head screws and typical of the Citizen attention to detail, these screws are captive, meaning that they merely have to be loosened rather than removed and invariably in time, completely lost.

In use I found the printer to be fast and reliable and with an average monthly output from the Donald workroom of 30-40,000 words which is roughly 175,000 characters/month, the MSP-10E performed flawlessly. Indeed, CCI have been so impressed that we have used this printer as a general-purpose office machine. The interface used is the *industry standard* Centronics parallel and connection to an AMIGA A1000, Commodore PC-20 IBM clone and various assorted Commodore 8-bit machines presented no problems.

The quality of print obtained from the NLQ mode was very good and several people who were not aware of the source made comments to the effect that I must have purchased a typewriter! From a technical point of view to achieve this level of quality from only a 9-pin print-head is vey surprising. The other point that impressed about this printer was the level of noise during operation. A dot-matrix printer is unlikely to achieve noise levels comparable with a laser or inkjet printer simply on the basis of the technology it uses viz. an impact of ribbon to paper. However since noise levels are, in the absence of a decibel meter together with a prescribed standard test procedure a subjective matter this printer sounded a good deal quieter than most other dot-matrix printers. Last but not least, any prrospective purchaser of a printer should carefully examine the costs and availability of expendable items e.g. ribbons. It can be a shock to see just how much these can cost over the course of a year — I feel sorry for those readers who have a colour dot-matrix printer with ribbons costing a minimum of circa £15.00 each! Happily, the ribbons for the MSP-10E fall into normal price range and there was no need for concern.

In summary the Citizen MSP-10E is a fast, reliable dot-matrix printer and is worthy of consideration for users who require speed along with feature not normally found at this level of price. On this basis alone the MSP-10E offers very good value for money.

Contact: Citizen Europe Ltd., Wellington House, 4/10 Cowley Road, UXBRIDGE, Middlesex. UB8 2XW. Tel: 0895 72621.

Price: £349

BD

TURN YOUR CBM64 INTO A PROFESSIONAL WORD PROCESSOR

DISC DRIVE £125 EX VAT

Enhancer 2000 by Chinon
Free icon-driven word processor
Free Utility disc

"a good buy" . . . *Your Commodore*
"impressive specification . . . very good indeed" . . . *Commodore Computing International*

* On sale in computer stores across the USA
* CBM64, Plus4 compatible
* Super high speed — it's fast
* 1 year warranty — it's reliable
* Does not use any computer memory — it's smart
* **FREE SOFTWARE**
* *£143.75 plus £5 p&p & insurance. Total £148.75*

BLANK DISCS £8.69 EX VAT

10 discs per box
* Double sided, double density
* Hub reinforced,
* 100% certification, 2 notches and index holes.
* *£9.99 plus £1 p&p/box. Total £10.99*

CITIZEN PRINTER £185 EX VAT

Citizen 120D . . . 120 cps draft/60 cps emphasised draft/25cps NLQ
* **includes CBM 64 interface**
* tractor feed, 4k buffer
* graphics, pica, elite, italics
* sub/superscript
* *£212.75 plus £5 p&p & insurance. Total £217.75*

WORD PROCESSOR PACKAGE GREAT DOUBLE SAVER BUYER

Enhancer 2000
Citizen 120D
Word Processor
Utility disc

£299.00 EX VAT

Total incl VAT, p&p, and insurance £353.85

FIRSTLINE SOFTWARE—
Your firstline of supplies

Write for full details or phone Access 0480 213969
Cheques payable to R.E. Ltd.,
206 Great North Road, Eaton Socon, St. Neots, Cambs. PE19 3EF

Superdesk

The 128 comes into its own!

The much underestimated C128, besides being a very good games machine in its C64 guise, is also an extremely versatile business machine, and since it can be picked up for about £185 on Tottenham Court Road (less than a 64C at present) it is a very good investment. At that price, if you already have a disk drive and printer, even the Amstrads look dear, and the quality of finish is much superior. It has a lovely key-board and unlike the C64 it has both 40 column and 80 column screens — a distinct advantage when running business software even if you have a fairly low quality colour monitor a simple switch arrangement allows a reasonable monochrome picture in 80 columns while a cheap monochrome monitor gives an excellent performance. It runs a wide range of business software in CP/M mode, and in 128 mode there are a number of spreadsheets, word processors and databases available. For the money the greatest advantage of the 128 or the 64 is the fact that both Superbase and Superscript can use memory at the same time and this limits Superscript but it is not for most short articles.

Jim Kenn Chairman of I.C.P.U.G. the Independent Commodore User Group, has come up with a lovely little programme, Superdesk designed to do for the C-128 what 'Sidekick' does for the I.B.M.P.C. It allows you to hop about automatically between the two programmes doing all sorts of useful things. You load Superscript and Superbase, using the same 'Superdisk' work disc as the data disc for both, and when they have loaded a menu is presented enabling you to call up friends and business addresses write letters and memos to them make phone calls and generally run your daily chores with very little effort indeed. What's more it is free!

Clocking-in time first the programme asks for today's date which it will place on letters, memos, records etc. and note when you last wrote to or 'phoned someone, then a large 'Primary Menu' fills the screen. The initial letters of commands are all that are needed to carry them out.

'Key' brings the request for a name, and when supplied this becomes the current record. 'L' for Letter results in your letterhead, with today's date and the addressee's name and address, being almost intantaneously loaded. A touch of a key and you may type your letter in Superscript. At the end of the message touch Escape (or Run/Stop) F (for Yours faithfully), or S (for Yours sincerely) or even C (for Cheers) and the valedictory message is inserted magically before your very eyes. It leaves space for your signature then types your name. But there's more! Quite automatically, without your touching another key the cursor jumps up to the addressee's name and address then down again to the end of the letter and copies it ready to go on the envelope. Put a sheet of paper in the printer and press Esc P and the printer leaps into action, types your letter pauses for you to remove the paper and put an envelope in, types it then ejects the envelope. Then you remove the envelope and press Esc R (for Return) The letter is sent to disc. The only file in all the programme configured as Drive 8, in which case this drive is called up and the letter saved, the programme then reverts to Drive 8 with Superdisk in it, to await further orders. If you have only one drive then you may opt to put in your letter before saving, or use the 'Superdesk' disc as your letter disc, changing it when full. For 1571 owners there are dictionary files built in so that you rarely need to change a disc.

For 1570 and 1541 owners the dictionary files probably take too much space to allow for a reasonable number of names and addresses so are better omitted.

In addition to letter-writing Superdesk contains a Diary, takes care of expenses, and automatically records and totals business and personal phone calls, presents the bill to you on request or at the end of a week or month. The method of dealing with 'phone calls is quite clever. From the main menu you tap 'T' for Telephone and a request menu pops up asking whether you are in Cheap, Standard or Peak time, then presents the name of the person being called (the current record in the database) and his business and home number. You dial the call and on being connected press SPACE. It is much quicker to do than to write about. The running time of the call is displayed together with the mounting cost. I can thoroughly recommend this as a cure for long-windedness on the 'phone. Even in cheap time a B call clocks up cash at a phenomenal rate. On completing the call you press SPACE again and are asked if you wish this to be recorded as a personal or business call, or not recorded at all. A single touch is the opportunity to amend the last call or expense entry before it goes on permanent record.

A second 'U' Menu, called up from the first, deals with internal 'house-keeping' Here is a facility for creating a Xmas Card or Birthday list, as well as lists of club members, debtors (or creditors) these are based on the Superbase program, of course.

The beauty of this gem of a program is that it is based on the Superbase programming language, which is a much faster Basic, and that Jim Kenn has kindly included it in the Public Domain which means that you may use it or copy it for a friend, the only charge being a reasonable fee for the copying procedure. It may not be sold for profit. There is a 'Read Me' file on the disk explaining the main points, and Jim has used slightly different methods of programming for each of the features, so that you may see how he has accomplished a particular feat. He invites you to amend the program, extend it to suit yourself, and generally have fun. This is where the pleasure and fulfilment comes in for many computer owners, and even if

you are a raw beginner I am sure that having listed Jim's program you will be tempted to have a go, though some experience is needed for major alterations.

There are a number of Esc key commands included, using Superscript's command key facility. Two key strokes change the disk drive number, alter the printer output from Serial to Centronics or vice-versa, switch on or off justification, centring or underlining, start a new page, or even transpose two characters. An excellent paragraph numbering demonstration deserves to be mentioned. This is not of Jim's own devising but was sent in by Garry Benneworth after a request by an I.C.P.U.G. member who needed it in his work as a solicitor. In making up letters from previously stored paragraphs (a feat for which Superscript is admirably equipped), you simply place an asterisk where the number should be on each stored paragraph, and when you have assembled your document type Esc (or Run/Stop) *. Sit back and watch while the search and replace function, programmed by a built-in command sequence, takes each asterisk in turn and replaces it with a consecutive number. I used it for numbering 35 rules in a club booklet I was asked to produce. The Committee kept on inserting new rules so that it would have been a tedious task to erase and renumber every time a new rule was inserted, but the command macro just described coped with it easily. I was so intrigued by the ingenuity that I was inspired to create a tiny command sequence of my own, which automatically types and centres the little decorative gizmo with which I finish articles and notices. I also added to the main menu key for producing a mail-merge letter based on Xmas lists and so forth. You are simply asked for the name of the list and the merge letter (previously created using the letter-writing option) and away you go.

Jim does suggest that new owners be invited to join the completely Independent Commodore Users Group, which with a yearly subscription of £10 is, as I mentioned in a previous article, the best thing you are likely to spend the money on. You will save far more than that in the first year on discounts negotiated on members' behalf, and you have access to a tremendous amount of free, but valuable advice. The magazine, published every two months, is packed full of ideas, reviews, offers of substantial discounts on reputable equipment, etc., and there is a free disk copying service for programs in the Public Domain, including Superdesk. Please note that Superdesk itself may have changed considerably because of improvements suggested by happy users. That is how I.C.P.U.G. works.

P.R.

I.C.P.U.G. Mr. Ja[illegible] Cohen Membership Secretary I.C.P.U.G. 3[illegible] Brancaster Road Newbury Park, Ilford, Essex IG2 7EP.

Superscript and Superbase 128: Precision Software Ltd. 6 Park Terrace, Worcester Park, Surrey KT4 7JZ. Copies of my version of Superdesk on supply of a disk [illegible] return postage. Please state whether [illegible] column or 80 column version [illegible]. G.D. Richardson, 5 Wa[illegible] Road, Buxton, Derbyshire SK17 6[illegible]

T-Shirt Spectacular

It seems as the [illegible] too many long nights in front of the monitor has affected the eyesight of some of our [illegible] well to be honest, I [illegible]

We made a sp[illegible] offer in the July [illegible] new readers [illegible] a FREE CCI T-shirt by subsc[illegible] to the magazine [illegible] Unfortunately would-be recipie[illegible] ly read the co[illegible] T-shirt [illegible] for pen and paper [illegible] glectfully omitting [illegible] cheque!

Overwhelmed by [illegible] albeit misguided, [illegible] CCI recently [illegible] dra[illegible] picked FIVE lucky readers to receive a T-shirt. The winners are:

Tony Baldacchino [illegible] swick, Manchester
Rebecca Dix — Sw[illegible] Wales
Kuljinder Singh — [illegible]nam
Hans Skoglund — N[illegible]
N Dobbie — Bath

To the many, many [illegible] sperate for T-shirts, sorry, but keep your eyes [illegible] for future competitions and you may win one yet!

COMPETITION RESULTS!

SPINNIZZY COMPETITION

D. Bake, Ke[illegible] Serbert, N. Yorks; R. Palmer, Stafford; [illegible] Cooke, York; S. Pearson, Uxbridge; D. Laidler, Hants, Marko [illegible], Finland; S. Embury, Staffordshire; P. [illegible], Rotherhithe; A. Waller, Birmingham; D. [illegible]arke, Peckham; D. Abbott, Kent; Jens Brehmer, Sweden; Lee Russell, London; J. Gasson, Horsham; M. B[illegible], Sweden; John Folly, Middx; J. Tyrell, Liverpool; Ian Thompson, Worcs; Alex Butwick, Northwood; David Connor, Liverpool; M. E. Ve[illegible], Herts; Chris Garbutt, Essex; J. Cassidy; T[illegible] & Wear; Greg Swire, Brentford; Brian Newnes, [illegible]; D. Reynolds, Cambs; T. Richards, Lancs; [illegible], Carr, E. Sussex; [illegible] Ahlbert, Finland.

UNDERSTANDING COMPUTERS

A hundred years ago, an educated person — or probably man — could have a reasonable working knowledge of everything the science — or scientist — of his time could comprehend. Indeed he was expected to. Now with thousands or even millions of scientific papers being published, it is impossible even to attempt a superficial acquaintance with everything there is to know. And yet more information pours out every day. It is said that more than nine tenths of all the scientists who ever lived are living and working today; that more than 90% of the world's total scientific knowledge has been acquired in the last 20 years —and the pace is accelerating every day.

Computers, of course, have started to play a fundamental role in storing this flood of information and allowing us relatively easy access to it. But someone recently said that if you had to design the ideal storage vehicle for information, you would probably choose a book — it's easily transportable, requires no great training to use, provides exceptionally easy access to the information it contains, is cheap (relatively) to produce, occupies little space etc.

It is therefore ironic that the computer which was once thought to be likely to replace the book has been chosen as the subject of a series of excellent books by the renowned TIME/LIFE organisation. The series — Understanding Computers — sets out to explain the whole world of computers. Yes, everything from the people who created this extraordinary and fast-changing industry — the Packards, Jobs and Gates — to the complexities of what makes the chips in watches, cars and, of course, computers work.

Published in seperate volumes starting with 'Computer Basics' they are the most comprehensive and comprehensible books on computing that have come our way. One of the most outstanding things about them is the clarity, simplicity and sheer beauty of the illustrations, which break down the complexity of computers so they can be understood at a glance. They are, witthout question, outstandingly attractive books. They are not, however, just "coffee table" ornaments. The text is simple, fast-paced, but complete with a very wide range of subjects covered. They will interest everyone from the hotshot propeller head programmer to the novice with the new 64C still in the box.

At £12.75 (UK price) each, they are well worth the money.

A.M.

64 Word Processing

Word processing, once the domain of the stand alone unit like Wang which will cost thousands of pounds,was brought to millions cheaply by the 64. Throughout the world, word processing packages have meant that all the facilities that most people could use are now available for around £50.

The list of word processors available for the 64 is virtually endless but some have become generally accepted as leaders.

There is a considerable number of good first class word processing packages well worth considering. These include the excellent "Pocket" range which comes from Canada — from which 128 products are reviewed in this issue. There is also of high repute Ariolasoft's Paperclip — which has just appeared with an 85,000 spell checker.

Possibly the two most popular word processors (in terms of units sold) for the C64 are Superscript and Vizawrite. Both have been developed over several years and have reached a level of refinement that makes them suitable for almost any level of word processing. About the only two features missing are the inability to display different type styles directly on the screen (more usually referred to as *fonts*), and to show more than 40 characters per line of text at any one time. However, these are limitations of the hardware, not the software.

Superscript uses a cursor-driven menu to select the numerous options. The menu is not displayed on the screen continuously which has the benefit of releasing space for the users text and not causing a distraction. Access to the menu is by means of a single function key. Moving around the menu is done by the use of the left-right cursor key while final selection is indicated by pressing the return key. If a menu selection has some secondary function, then these are displayed and the process is repeated. This may sound rather long-winded, but in practice it is very quick since a brief description of each option is also displayed on the screen. Experienced users can select directly from the keyboard using just the first letters from each menu option. Thus to optain the disk directory you would press the input key F1 then the D key and the D key again. It is surprising just how quickly you can operate in this manner once you have learned the most commonly used key sequences.

The display of your text is one of a window both down and across the document. The user can scroll sideways across the text and up and down from the start to the finish of the text. Formatting the text — that is the arrangement of the text into columns and paragraphs, is carried out on screen so other than the limitations of the 40 column display the screen is a good reproduction of what will appear on your printer. By and large Superscript is an extremely good word processor with many facilities for these heavyweight applications as well as being easy to learn and use.

Vizawrite has much the same type of facilities as Superscript but takes a different approach than the screen handling. In this case the display is based on that of a document page. Thus you can scroll up and down as well as across the page, which has the boundary between each page very clearly visually defined. This may be easier for new starters to word processing although some facilities are not as comprehensive as Superscript. In particular the printer handling can be tricky to set up for those users who do not have a Commodore serial printer and are using a Centronics printer. Another weak spot is the file structure which makes it difficult to move a file to another application such as a database or spreadsheet for further work. Superscript uses a standard sequential file which does not have this problem and the C128 version of Vizawrite manages to overcome this problem.

The command structure of Vizawrite employs the same method of access, that is, using the keys although each of the function keys is used to obtain a specific action. The masterkey with Vizawrite is the Commodore LOGO key which then opens a whole series of text handling commands. One useful feature of Vizawrite is the scratchpad where users can place odd notes and jottings away from the main text. Both Vizawrite and Superscript provide a spelling checker/word counting facility. This is a common feature found in standard business word processors and makes life for those of us with poor spelling very easy indeed. My own view of both of these word processors is that Vizawrite is usually more attractive than Superscript but does not have the overall functionality for ease of use and the latter. However, do not let these views get in the way of your own decision making — always, always try before you buy any software.

There are a number of other word processors for the C64 which are cheaper than the previous two. This generally means a loss of some functions. For example the first casualty is normally the spelling checker — not so important if you are merely creating personal letters but, vital if a formal document. Another point to watch out for with word processors at the lower end of the market is document size limitations. Some will only allow several pages of the document or may only work with a cassette. To a large extent it rather depends on what you want a word processor to do. Other users whose need is only an occasional letter would probably be better off with the minimum necessary. It is also advisable to check carefully the printer support — all word processors for the C64 will operate with the MPS 801/3 printers although the cheaper word processors may have difficulty if you have some obscure make of Japanese printer. Once again my advice is to check carefully before parting with any money. Some cheaper word processors for you to look out for are Speedipen from JCL Software (see review p38) and Skiwriter (p43). These offer good value for money. Some others are Tasword-64 from Tasman which is useful if you have come from another machine such as the Spectrum or Amstrad since this software is available on these two machines and this saves the user having to learn everything all over again. Word Perfect from Supersoft is another solid down-to-earth product from this respected software house.

If money is really tight, then you can always try looking for word processing software in the public domain through your national User Group. Admittedly this source is rather thin on the ground where word processors are concerned although SpeedScript is generally reckoned to be on a par with most commercially available software. The only problem here is a lack of support for technical queries, poor documentation and limitations on the printers that can be used with it. Try to ensure that you obtain the latest versions and always remember that it is public domain software which never has the same degree of robustness from crashing as would a piece of commercial software, therefore save your documents regularly. I have only briefly touched on the subject of word processing on the 64 but hopefully have stimulated a few ideas. Reading the advertisements and reviews in CCI is a very good way of keeping abreast of the latest developments. **B.D.**

DATEL ELECTRONICS

THE NO 1 NAME FOR COMMODORE

THE ULTIMATE BACKUP CARTRIDGE IS HERE

ACTION REPLAY MK II

NEW IMPROVED VERSION

FOR C64/128 *ONLY* £24.99 POST FREE

- Stop the action of your game and make a complete backup to **Tape** or **Disk**
- Action replay works by taking a 'snapshot' of the program in memory so it doesn't matter how the game was loaded — at normal or high speed — from Tape or Disk.

Just look at the features, no other unit can offer such value.

☐ TAPE TO TAPE ☐ TAPE TO DISK ☐ DISK TO DISK
☐ DISK TO TAPE ☐ ALL BACKUPS WILL RELOAD AT TURBO SPEED AND RUN INDEPENDENTLY OF THE CARTRIDGE.
☐ SPECIAL COMPACTING TECHNIQUES TO SAVE ON DISK SPACE.

UNIQUE CODE INSPECTOR FEATURE

- Stop the action with the button then inspect any area of memory in it's "Frozen" state including all VIC + SID REGISTERS ETC.

SO SIMPLE TO USE. Just load your game as normal. When it progresses to the point at which you want to save it, simply press the button then:

- Press 'D' to save to disk to reload at high speed.
- Press 'T' to save to tape to reload at high speed.
- Press 'S' to save to disk to reload at normal speed.
- Press 'C' to enter "Code Inspector."

THE PROCESS IS FULLY AUTOMATIC – JUST GIVE THE BACKUP A NAME

PLUS

FAST LOADER SYSTEM
Two Cartridges in One!!

Yes at the flick of a switch you have a fast load cartridge that will speed up your normal disk load speed by 5-6 times.
Special switching hardware makes the fastload invisible to the system:— Uses no memory.

100% SUCCESS

EVEN THE LATEST PROTECTED PROGRAMS

Action Replay is under constant development to stay on top of latest releases. No other product will cope with as much software as Action Replay – despite our competitors claims.
In fact in our most recent tests we could not find any memory resident program that could not be backed up!!

WARNING
Action Replay is designed for the user to make backups for their own use — Datel does not condone piracy.

EVEN MULTI-STAGE PROGRAMS

☐ Now programs that load extra sections can be transferred from tape to disk.
☐ Works with most programs Nova + Standard System.

HIRES SCREEN DUMP

☐ Any hires screen from your favourite games can be saved to disk.
☐ Compatible with many graphics packages including Blazing Paddles, Koala etc.

Action Replay II is designed and produced by Datel incorporating the top programming skills of Dosoft – two of the original names in Commodore utilities.

ACTION REPLAY ENHANCEMENT DISK

Extending Action Replay's capabilities even further, this disk contains a collection of tape to disk routines for a few newer games which load subsequent parts in a non standard way. All the latest titles are catered for – more than any competing utility, and unlike other systems, ACTION REPLAY LOADS EXTRA SECTIONS AT TURBO SPEED. Disk includes file copy, disk backup and other useful utilities. Regular updates at low cost for use with Action Replay only. **Disk £7.95.**

GRAPHICS SLIDESHOW SOFTWARE

Cartridge based backup systems usually destroy loading pictures – NOT WITH ACTION REPLAY. Multicolour pictures from games, graphic packages or loading screens can be saved to disk using Action Replay and viewed singly or in sequence with this sophisticated slideshow package. Turboload throughout. Sixteen pictures per disk. Joystick or keyboard control. An interesting new use for your computer.
Disk £4.95.

SPECIAL!! ENHANCEMENT DISK AND SLIDESHOW TOGETHER **ONLY £11.99**

NEW

Disk Mate II TM

DISK UTILITY CARTRIDGE

only £14.99 POST FREE

Built in Reset Switch

If you have a disk drive then you **need** a Diskmate!!

❑ Diskmate * is a fast disk turbo loader that will speed up your normal loading software by 5 times

BUT THAT'S NOT ALL

❑ Fast save
❑ Fast format (approx 10 seconds)
❑ Improved single stroke DOS commands ie. load, save, directory, scratch, etc.
❑ Redefined function keys: ie. load, load/run, list, directory, monitor, etc.
❑ Powerful toolkit commands: ie. old, delete, merge, copy, append, autonum, linesave etc., etc.

PLUS A powerful machine code monitor/disassembler. All the usual monitor commands: assemble, disassemble, move, find, compare, fill, number conversion etc., etc. **NB.** This is a full monitor, not a token effort like some available.

* Diskmate incorporates special switching techniques which make it "invisible" to the system. Therefore the fastload will work with more software than other types. In addition this makes the other commands including the monitor more powerful. For instance the monitor 'floats' and is able to look under ROMs and even under itself!

SPECIAL OFFERS

Buy Action Replay II and Diskmate II together on the same cartridge for only. This must surely be the most powerful cartridge available for the Commodore	£34.99 POST FREE
Buy Action Replay II and Fast Hack'em for	£39.99 POST FREE
Buy Action Replay II and Diskmate II on the same cartridge plus Fast Hack'Em for	£49.99 POST FREE

Diskmate II was designed by Datel and the programming is by Dosoft. Need we say more?

IT'S HERE... **AMERICA'S BEST SELLING DISK BACKUP SYSTEM NOW AVAILABLE IN THE UK!**

FAST HACK'EM TM

FOR THE COMMODORE 64/128 £19.99 POST FREE

A MULTI-MODULE SYSTEM - ALL ON ONE DISK

FAST HACK'EM IS QUITE SIMPLY THE BEST DISK COPYING SYSTEM AVAILABLE, ANYWHERE AT ANY PRICE.

SIMPLE TO USE FULLY MENU DRIVEN

SINGLE 1541 MODULE

- FAST COPY: Copies a disk in under 2 minutes
- FILE COPY: Copies any file in 5 seconds
- FILE TRACKER: For making any changes to the above items or protected files. The module allows you to examine or alter any track on the disk.

SINGLE 1571 DRIVE (64 OR 128 MODE)

- FAST COPY: Enters 1571 mode and copies a disk in under 1 minute
- SINGLE OR BOTH SIDES: Will copy C64 or plus 1/2B software
- C64 mode: 38 Master

TWIN 1541 DRIVES MODULE

- AUTO NIBBLER: Copy an entire protected disk in under 1 minute. Features auto track/sector analyzer.
- FAST COPY: Copy entire disk in 36 seconds with verify.
- AUTOMATIC FASTCOPY: As above but with completely automatic operation. In fact once set up doesn't even need the computer. A must for duplicating disks on a large scale.

1541 PARAMETERS MODULE

This is the module that gives Fast Hack'em its power. The parameters module contains dozens of "Parameter Keys" that are used to unlock those heavily protected programs. Each parameter is designed for a particular software brand or even a particular program. Other copy programs may make strong claims, but without special parameters they just can't cope. Datel will be offering updates to Fast Hack'em on a quarterly basis, featuring 20-50 new parameters plus other improvements as they're made. Prices to be £6 plus old disk.

****WARNING****
FAST HACK'EM IS A VERY EFFECTIVE PRODUCT DESIGNED TO ENABLE USERS TO MAKE BACK UP FOR THEIR OWN USE. DATEL IN NO WAY CONDONES SOFTWARE PIRACY

BECAUSE FAST HACK'EM IS PRODUCED IN THE U.S. IT WILL ALWAYS BE ON TOP OF THE LATEST PROTECTION TECHNIQUES SINCE MANY OF OUR LATEST PROGAMS APPEARED IN THE U.S. MANY MONTHS AGO.

SPECIAL OFFER! QuickShot II ONLY £6.99 or for C16 including interface £8.99 POST FREE

Save wear on your expansion port: 3 slot Motherboard for 64/128

ONLY **£16.99** POST FREE

- ☐ ACCEPTS 3 CARTRIDGES
- ☐ SWITH IN/OUT ANY SLOT
- ☐ ON BOARD SAFETY FUSE
- ☐ HIGH GRADE PCB/CONNECTORS

AVAILABLE NOW!!

Now a full Midi Interface for your 64/128 at a realistic price! POST FREE

NOW ONLY £24.99

- ☐ MIDI IN
- ☐ MIDI THRU
- ☐ 2x MIDI OUT
- ☐ Compatible with most leading software packages
  - Advanced Music System • JMS • SEIL, etc.

Special Offer! Buy Midi Interface + advanced music system only £49.99 + £2 postage (disk only)

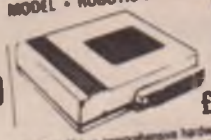
COMPUTER DATA RECORDER

ONLY **£24.99** POST FREE

- ☐ QUALITY COMMODORE COMPATIBLE DATA RECORDER.
- ☐ PAUSE CONTROL ☐ COUNTER.
- ☐ SUITABLE FOR 128/64.
- ☐ ALSO AVAILABLE FOR: C16/PLUS 4 PLEASE ADD £1.00.
- ☐ SEND NOW FOR QUICK DELIVERY.

MODEL • ROBOTIC CONTROL MADE EASY WITH

ROBOTEK 64



£39.99 POST FREE

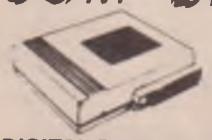
Robotek 64 is a comprehensive hardware/software package to interface your 64 to the outside world, models, robots, lighting, sensors etc., etc. The features make Robotek 64 the most sophisticated unit available at any price.

- 6 output channels each with on board relay • 4 digital inputs fully buffered. • Analogue input with full 8 bit conversion.
- Sound input for voice recognition and voice controlled switching.

☐ Software features: sequences to control output, Analogue measuring module, Test Program, Voice Activation Module, much, more. Voice recognition software to be released soon.

Total package no more to buy!

COM-DRUM



ONLY **£29.99** POST FREE

DIGITAL DRUM SYSTEM SPECIAL OFFER AUDIO TV LEAD (WORTH £6) FREE!!

Now with the Com Drum digital system you can produce studio quality drum rhythms with real drum sounds. All the features of systems 10 times the price.

- A complete digitally recorded drum kit, i.e. 8 voices – kick drum, snare, tom-tom, hi-hat, cymbal etc. etc. N.B. these are real drum sounds – not synthesized.
- Real time and step time sequences • Full editing system. • 16 Alternative voices supplied free.
- 8 pre programmed rhythms to start you off.
- External sync facility • Very simple to use.
- Line output to hi-fi amp or through TV with optional audio TV lead (see offer). • On screen menus. • Stylish case. • Please state tape or disk software.

COM-DRUM EDITOR

Enables you to construct your own drumkits. 24 Drum sounds supplied on disk which you can arrange yourself to make custom kits. Names are then added and saved as a complete set for use in the Com-Drum. Existing kits as supplied with Com-Drum can also be editing to your choosing. Available on Disk only £4.99 post free

NEW **Turbo Rom II**

Replacement Kernal

New upgraded routines! PLUS

Fast Format Fast Save

Turbo Rom actually sits inside your computer and replaces the normal 64 Kernal Rom with superfast disc loading routines plus extended DOS commands

POST FREE! **£14.99**

- Loads most programs at 5.5 times speed
- Improved single key commands
- Fits inside computer so all ports are free
- Return to normal kernal at flick of switch
- Fitted in minutes – no soldering usually needed (on a few C64's the old Rom may have to be de soldered)

Turbo Rom II can be upgraded for £8 plus old chip

NEW **smart cart**

An 8K or 32K pseudo ROM cartridge

£14.99 8K version **£29.99** 32K version

Now you can have a cartridge that you program as if it were computer RAM then acts as if it were ROM

- ☐ Battery backed to last for over 5 years (when current). Simply load in the program and flick the switch. The cartridge can be removed and will retain the program just like ROM.
- ☐ Make utilities cartridges without the need for an EPROM burner.
- ☐ Can be switched on/off board from keyboard
- ☐ 32K version offers 4 x 8K pages under software switching.
- ☐ Some knowledge of m/c is required but full instructions included.

DIGITAL SOUND SAMPLING

COMPLETE PACKAGE

£49.99 POST FREE

FREE AUDIO TV LEAD!!

NOW FOR YOUR COMMODORE 64

The Datel Sampler now brings you this technology at a sensible price!

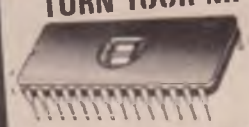
- The Sampler allows you to record any sound digitally into memory and replay it instantly at any pitch, backwards, forwards ascending scale, descending, with echo, reverb, flanging, endlessly looped etc. Truly professional hardware incorporating
- Full 8 bit D and ADC conversion
- Line or MIC input, line output and feedback control

A comprehensive software package including

- A live effects menu with echo, reverb, digital delay, etc
- Full sample editing facilities with review and on screen frequency plotting
- A powerful real time sequencer

Copy Drum Software available separately at £9.99 to turn your sound sample into a Com-Drum system as well as a sampling system

TURN YOUR MPS 801 INTO 4 PRINTERS IN ONE!



PRINTER IV ONLY **£19.99** POST FREE

Alternative character Rom fitted in minutes – no soldering required.

- At the flick of a switch you can choose between any of 4 different superb new character sets.

DESCENDER • SCRIBE
ECLIPSE • FUTURE

All 4 sets can be mixed within one document.

Printer IV is a direct replacement for the normal printer ROM so it is 100% compatible with your existing software

Graphics – No Problem either.

SEND NOW FOR QUICK DELIVERY

"For anyone who uses their printer often this chip is a must. It's quick and easy to use and the end results are impressive. YOUR COMMODORE Jan '87"

IT'S A COMPLETE LIGHTPEN SYSTEM... IT'S AN ALL IN ONE ILLUSTRATOR/GRAPHICS PACKAGE.

IT'S BLAZING PADDLES ILLUSTRATOR

DEALER ENQUIRIES WELCOM

complete with the

An Advanced Lightpen featuring state of the art fibre optic technology.

ONLY £24.99 POST FREE **TAPE OR DISK (PLEASE STATE WHICH)**

Yes Blazing Paddles is one of America's top selling graphics packages. Fully Icon/Menu driven, comes complete with the Datel Lazerwriter – A lightpen featuring the latest polymer fibre optic cable and sensor for pin point accuracy of a calibre simply not possible with conventional system.... ....But that's not all – Blazing Paddles will also work with any standard input device including Joysticks, Touch Tablets, Paddles, Mice, Trackball and Professional Graphic Tablets

A SUPERB PACKAGE WITH ADVANCED FEATURES

- ☐ Advanced Colour Mixing to create over 200 textured hues
- ☐ Painting with a range of brushes ☐ Air Brush ☐ Ovals
- ☐ Rectangles ☐ Lines ☐ Rubberbanding ☐ Text Mode
- ☐ Fill ☐ Single Dot Mode ☐ Freehand Draw
- ☐ Shape Library ☐ Clear ☐ Printer Dump
- ☐ Hires Screens saved from Action Replay can be loaded and edited etc (Disk)

PLUS A zoom feature for single Pixel editing while viewing, the results at full scale. ☐ Powerful cut and paste facility, shapes can be picked up, moved around, repeated and saved. ☐ Full Load and Save feature for pictures, shapes and windows which are supplied.

If you think the Software you got with your Mouse/Graphtablet is a bit weak then you can buy Blazing Paddles Software alone. FOR ONLY £12.99 TAPE OR DISK (PLEASE STATE)

(Note conventional Lightpens cannot cope with the high Pixel resolution of Blazing Paddles – only Lazerwriter is suitable as a Lightpen input)

BLAZING PADDLES ILLUSTRATOR

PADDLES ILLUSTRATOR IS FOR EVERYONE!

Using the Lazerwriter a child can use it as a colouring book or a computer artist can create superb graphics.

DATEL ELECTRONICS

USUALLY SAME DAY DESPATCH ON ALL ORDERS

SEND CHEQUES / P O's TO:

UNITS 8/9
FENTON INDUSTRIAL ESTATE,
DEWSBURY ROAD, fenton,
STOKE ON TRENT TEL 0782 273815
FAX (0782) 264510

24 HR CREDIT CARD LINE

FOREIGN ORDERS ADD £2 POSTAGE

SEE US ON PRESTEL
PAGE No.
258880000A
12 Page
Catalogue +
Order Page

POCKET PLANNER 128

In today's cut and thrust professional world, one thing is doing very well and thriving despite everything — the business computer. It has the ability to manipulate numbers with the same sort of speed as a whole office block full of busy accountants working away with pen and paper. The software which makes this possible, the spreadsheet, is the computer's accompaniment.

There are many kinds of expensive computers and many kinds of expensive spreadsheets. But today we have powerful home computers that are relatively inexpensive. These, backed up with serious software, allow almost anyone to handle a small company's accounts with ease. The C128 and Pocket Planner 128 is just such a combination.

The office at work has an IBM with Symphony and when I am at home I have a C128 with Pocket Planner and in my opinion when value for money counts, the latter takes the pride of place. I find I can do just as much with Pocket Planner or possibly even more.

Digital Solutions Inc from Ontario, Canada have recently released in this country a trio of business packages under the titles of Pocket Writer, Pocket Filer and Pocket Planner. What makes them really useful is their ability to handle and integrate each other's files so that you can combine them to produce one complete finished piece of work. Last month we reviewed Pocket Writer, now it's the turn of Pocket Planner.

User Friendly

Loading takes only 40 seconds. You are presented with a choice of printers to output your copy. The configurations are automatically set. The opening screen gives a matrix as usual but with a range of other commands available to you on the help display. This to me is what "user friendly" really means as there is always help at hand at every stage. It is possible to use this program without even reading the very comprehensive reference manual that accompanies it.

As with all spreadsheets it is simply made up of cells, but this program has nearly 25,000 cells available for you to

use. It is possible to change the colour of nearly everything on the screen if it doesn't suit your taste and you can display more cells on the screen if you omit the help display from the screen, although help commands are still available.

Manipulation of the matrix is very easy indeed. Sizes can be from only 2 characters up to an incredible 200 characters although only a maximum of 78 are displayed on the screen or printed out, yet data is still evaluated. If you want to make entry into part of the spreadsheet difficult, you can set horizontal or vertical "locks" which establish boundries for scrolling the cursor. In a different way titles can be preserved down the side and along the top of the display so they are visible all the time.

Windows are possible and if you wanted to view two distant parts of the Spreadsheet at the same time it is very easy to create the display and view these together. Find/replace load, save, overlay, trigonomic functions, smart evaluation etc etc along with all the usual arithmetic calculations make this a truly versatile spreadsheet comparable to my beloved symphony.

Better Presentation

Pocket Planner allows cells to be protected, have fixed values or indeed be sorted alphanumerically or reverse order. Entering labels and values is very much the same as with many spreadsheets although this version allows you to produce a document very much as though this were a word processor. Wordwrap and variable margins are employed. This permits you to enter explanations of statistics or headings to be printed wherever necessary to make your finished piece of work easier to be understood or better presented. French characters can also be produced such as à é ç etc, probably because of its Canadian origin and could be very useful.

One nice point is the graphing facility. This lets you illustrate up to nine groups of values in a spreadsheet into four kinds of graphs — simple bars, stacked bars, lines and pies. These can be outputted to the screen or printed out to paper if you own a dot matrix printer. This version is one of the easiest and best presented utilities I have come across.

If I were to advise a first time buyer on purchasing a professional spreadsheet **I would not hesitate to recommend Pocket Planner. Don't worry if you already own one and are feeling its limitations, break free, you'll not regret this purchase.** The producers say it will be able to handle VisiCalc files, although this wasn't tested. **B.C.**

Contact: Digital Solutions Inc., 30 Wertheim Court, Unit 2, Richmond Hill, Ontario, Canada L4B 1B9. Tel: (0101 416) 731-8775.
UK & Europe Distribution: HABA Systems Ltd., Pier Road, North Feltham Trading Estate, Feltham, Middx TW14 0TT. Tel: 01-751 6451.
Price (64) £39.95.
Price (128) £49.95. Prices inclusive of VAT.

MICROCOMPUTER SUPPLIES
OFFICIAL COMMODORE AMIGA DEALER

COMPUTERS	
THE COMMODORE AMIGA FOR NEW LOW PRICES	PHONE
Systems 1 & 2, versions 256K & 512K Full on-site maintenance	
Commodore 64C New Connoisseur's Collection	199.00
Commodore 128	207.00
Commodore 128D inc Built-in 1571 Disk Drive	439.00
Commodore 128D inc Built-in 1571 Disk Drive + Mono Mon	489.00
PRINTERS	
Citizen 560P two coour 40 col Dot Matrix	43.47
Citizen 120D Dot Matrix 120 cps & NLQ fricl/trac	195.00
Commodore MPS1000 Dot Matrix 100 cps & NLQ fric/f/t	220.00
MONITORS	
Commodore 1901 14in Colour Monitor for C64/C128	263.00
Philips 8533 14in Med Res Colour Mon for C128 incl lead	245.00
Philips BM7502 Green Monitor for C64/C128 incl lead	72.00
MISCELLANEOUS	
Commodore 1541C Disk Drive	159.00
Commodore 1571 Disk Drive	226.00
Cent Interface for C64/128	26.04
Cent Interface for C64/128 with 89k buf & graphics	51.30
IEEE Interface for C64/128	69.95
RS232 Interface for C64/128 with disk software	49.95
Commodore 64 Compatible Power Supply	23.00
Commodore 1530 Cassette Recorder	31.00
Surge Protector 13 Amp Plug (Adapter £13)	10.39
The Final Cartridge II	33.91
C64 Official Programmer's Ref Guide (p&p £2)	7.95
C128 Official Programmer's Ref Guide (p&p £2)	21.95
Horosoft 80/40 Column Switch for C128	11.26
The Anatomy of a Commodore 64	5.95
Machine Language Book for the C64	5.95
Printer Ribbons	P.O.A.
SOFTWARE	
AMIGA Software	PHONE
NEOS Mouse Cheese with cassette for C64	39.13
GEOS for C64/128 — Desk Top geoPaint geoWrite etc	42.61
Microclerk 128 Accounts/Spreadsheet/Typing/Filing	85.00
Pocket Wordstar Word Processor (CP/M)	43.00
dBase II Programmable Database for C128	86.09
Superbase 128 Programmable Database	52.00
Superscript 128 Word Processor	64.00
Tasword 64 80 Column Word Processor — Tape	15.61
Tasword 64 80 Column Word Processor — Disk	17.35
VizaWrite Classic 128 Word Processor with Spell Check	69.00
VizaStar Spreadsheet & Database for C64	69.00
DISKS (Examples)	
5.25in SS/DD Precision (10)	7.74
5.25in DS/DD Precision (10)	8.69
3 5in DS/DD Goldstar (10)	28.00

DELTA PI PROCESS INTERFACE FOR COMMODORE 64/128
8 Analogue Inputs (12 bit) & 32 Digital Input/Output lines £199.00
DELIVERY: 4 day £8 Next day £12 S/ware & small items FREE
Please add 15% VAT to all prices. Make cheques payable to

Delta Pi Software Ltd

8 Ruswarp Lane, Whitby, N. Yorks YO21 1ND. Tel: 0947 600065 (9am-7pm)

POOLSWINNER

THE ULTIMATE POOLS PREDICTION PROGRAM

Boxed, with detailed instruction booklet

- **MASSIVE DATABASE** Poolswinner is a sophisticated Pools prediction aid. It comes complete with the largest database available - 22000 matches over 10 years. The database updates automatically as results come in.
- **PREDICTS** Not just SCOREDRAWS, but AWAYS, HOMES and NO SCORES
- **SUCCESSFUL** SELEC guarantee that Poolswinner performs significantly better than chance.
- **ADAPTABLE** Probabilities are given on every fixture - choose as many selections as you need for your bet. The precise prediction formula can be set by the user – you can develop and test your own unique method.
- **SIMPLE DATA ENTRY** All team names are in the program. Simply type in the reference numbers from the screen. Or use FIXGEN to produce fixture list automatically (see below).
- **DISC/MICRODRIVE COMPATIBLE** Tapes supplied with conversion instructions.
- **PRINTER SUPPORT** Full hard copy printout of data if you have a printer.

PRICE £15.00 (all inclusive)

NOW AVAILABLE

FIXGEN 86/7 AT LAST! No more struggling for hours to get the fixture list into the computer. FIXGEN has been programmed with all English and Scottish fixtures for 1986/7. Simply type in the date, and the full fixture list is generated in seconds. Fully compatible with Poolswinner. Yearly updates available.

POOLSWINNER with FIXGEN £16.50 (for both)

COURSEWINNER V3

THE PUNTERS COMPUTER PROGRAM

NOT JUST A TIPSTER PROGRAM. Coursewinner V3 can be used by experts and occasional punters alike.

You can develop and test your own unique winning system by adjusting the analysis formula, or use the program in simple mode. Coursewinner V3 uses statistical analysis of major factors including past form, speed ratings, course statistics, prize money, weight, going, trainer and jockey form etc. etc. It outputs most likely winners, good long odds bets, forecasts, tricasts etc. The database includes vital course statistics for all British courses. You can update the database – never goes out of date.

PRICE £15.00 (all inclusive) includes Flat AND National Hunt versions.

ALL PROGRAMS AVAILABLE FOR AMSTRAD CPCs, AMSTRAD PCWs (ADD £3.00), All BBCs, All SPECTRUMS, COMMODORE 64/128, ATARI (48K+), SINCLAIR QL.
Supplied on tape (sample conversion to disc) - except PCW (on 3" disc) and QL (on microdrive)

Send Cheques/POs for return of post service to

VISA phone 24 hrs

selec SOFTWARE

phone 24 hrs

37 COUNCILLOR LANE, CHEADLE, CHESHIRE. ☎ 061-428 7425

(Send for full list of our software)

TOP QUALITY PRODUCTS FROM
Precision Software

NEW **UNIPRINT**

This low-cost serial port to Centronics parallel printer interface is just what you need to interface your Commodore 64 to an Epson, Canon, Star Gemini, BMC, Panasonic, Smith-Corona, Okidata etc. or to a daisy-wheel such as Juki, Star Micronics, Qume, Diablo, Brother, Silver-Reed, etc. Uniprint addresses your printer's special features, including dot-addressible graphics. It converts Commodore ascii to standard ascii, emulates Commodore 1525, and has a fully transparent mode.

Commodore 64 **£29.95**

NEW **PICASSO'S REVENGE**

Picasso's Revenge comes complete with light pen, powerful graphic software and print utility. Enjoy hours of fun creating computer art and graphics. Simply point the pen at the screen and add the colour as you go! Draw in 15 different colours using 8 brush widths. Choose from 35 textures or define your own. Zoom in for detailed work. Picasso's Revenge is compatible with most popular matrix printers and will also print colour pictures created with other graphics packages.

Commodore 64 disk **£29.95**

Super DISKDOC

Super Diskdoc is the ultimate Commodore disk utility program, and the best protection there is for your valuable data. Zoom in on the bytes on your disk, interpret them in hex, ascii or plain English, make any changes you want, then replace them. The benefit of Super Diskdoc is the extra security it brings you. You know that in the event of an accident to your data, you have the best tool available to repair the damage.

Commodore disk **£19.95**

NEW **THE AMIGA SYSTEM: AN INTRODUCTION**

Your first book for the amazing AMIGA! The Commodore Amiga is already a legend, and if you're at all curious about it, Bill Donald's book can give you some solid answers. Packed with practical tips for the user, The Amiga System: An Introduction is also a mine of technical information. Whether you are already an Amiga owner or simply considering the potential of the machine, this book is certain to become a valued addition to your computing library.

200 pages **£9.95**

Available from your local dealer or directly from Precision Software on

01-330 7166

VISA

Precision Software Ltd.
6 Park Terrace
Worcester Park
Surrey KT4 7JZ
Telex 8955021 Precis G

Cut-Price Disks – Lowest Yet!

from only £14.99 for 25 disks delivered to your door

Cash 'n Carry prices on disks from Direct Disk Supplies

Offer 1 – 5.25" 'Universal' HIgrade disks

to suit all drives SSSD, SSDD, SSDD, DSDD & DSQD 48 or 96tpi (40/80)

Disks are packed in 25's, complete with envelopes, label sets and write protect tabs. Nothing wasted on fancy brand names, just plain good value you can rely on!

- £ 14.99 – 25 disks
- £ 26.99 – 50 disks
- £ 49.99 – 100 disks
- £ 96.99 – 200 disks
- £119.99 – 250 disks
- £219.99 – 500 disks

★ Full spec HIgrade disks, made to 60% clipping level
★ Life-time no quibble warranty
★ Hub-rings on 5.25" disks
★ Label sets & envelopes included
★ No extras – VAT & delivery included.

ALL PRICES INCLUDE VAT & DELIVERY TO YOUR DOOR! – NO HIDDEN EXTRAS

Offer 2 – HIgrade Rainbow Coloured disks

Coloured 'Universal' disks at lowest prices!

Use coloured disks to code your files. Buy our rainbow pack of 5 different coloured 'Universal' disks. Without doubt the best value in quality and price.

- £ 18.99 – 25 disks
- £ 35.99 – 50 disks
- £ 69.99 – 100 disks
- £129.99 – 200 disks
- £149.99 – 250 disks
- £279.99 – 500 disks

Offer 3 – 3.5" HIgrade disks

(single or double sided 135tpi)
Life-time Warranty & fully certified

Single sided	or Double sided	Qty
£ 39.99	£ 49.99	25 disks
£ 75.99	£ 85.99	50 disks
£139.99	£159.99	100 disks
£259.99	£299.99	200 disks
£319.99	£365.99	250 disks

Same day despatch – at no extra cost

Offer 4 – Reversible Media Life

Save money by using both sides

floppy disks complete with 2 notches and two index holes. Again, packed in complete sets of 25 disks.

- £ 18.99 – 25 disks
- £ 35.99 – 50 disks
- £ 69.99 – 100 disks
- £129.99 – 200 disks
- £149.99 – 250 disks
- £279.99 – 500 disks

Offer 5 – Direct Prices for Printer Ribbons

Top quality British printer ribbons in 6 packs

Printer	Group	9	12	24
Brother HR15/25/35	696SC	£14.63	£25.51	£42.[illegible]
Brother HR15/25/35	696MS	£23.11	£39.58	£67.[illegible]
Cannon PW1080A	223	£24.43	£42.71	£7[illegible]
Diablo Hytype II	567MS	£14.08	£24.71	£4[illegible]
Epson LX80	454	£16.50	£29.95	£4[illegible]
Epson FX/MX/RX80	273	£23.39	£39.99	£[illegible]
Epson FX/MX/RX100	320	£33.23	£66.[illegible]	[illegible]
Juki 6100	561SS	£1[illegible].43	£1[illegible]	[illegible]
Juki 6100	562MS	£1[illegible].33	£2[illegible]	[illegible]
Ricoh 1300/[illegible]	691MS	£1[illegible].07	£29.2[illegible]	[illegible]
Shinwa CP80	698MS	£27.[illegible]	£46.[illegible]	[illegible]

MS = Multistrike
SC = Standard Correctable
SS = Single Strike

Ribbons available for most other printers. Please ask.

Offer 6 – BOX CLEVER! Cheapest Storage Boxes

Library Boxes – 10 disks [illegible] 6 boxes
Vision-10 etc (clear fro[illegible] [illegible] 5 boxes
SEE-10 (Strongest Box[illegible]

Lockable Boxes – [illegible] top

- 5.25" 50 disk
- 5.25" 100 disk
- 3.5" 40 disk
- 3.5" 80 disk

Offer 7 – 3M – The BRAND leaders

at CASH 'N CARRY prices

If it's quality, reliability and security then it's 3M. Direct Disk Supplies always give the best price. Attach it's so special that the minimum quantity is 20 disks.

- SSDD-48tpi 74[illegible] [illegible] disks £24.99
- DSDD-48tpi 74[illegible] [illegible] disks £28.99
- DSDD-96tpi 747 [illegible] disks £35.99

Remember VAT & Delivery are included – No extras from [illegible]

How to Order

1. DIAL-A-DISK on 01-979 7811, and give [illegible] ACCESS or VISA number and expiry date
2. Send your cheque etc. to Direct Disk Supplies Ltd.
3. Official Orders, Bona-fide orders [illegible] Universities, Colleges, Schools, Charities, etc [illegible] welcome

VISA

DIAL-A-DISK ☎ 01-979 7811

Direct Disk Supplies Ltd.

Dept CC, FREEPOST, 129 High Street, Hampton Hill, Middlesex TW12 1BR

commodore

128 64C

Commodore 128D computer	£499.95
128D + 1900M 40/80 monitor	£579.95
Commodore 1571 disk drive	£259.95
MPS 1000 fast NLQ printer	£269.95
NEW 64C computer	£194.95
NEW 1541C disk drive	£194.95
64C Connoisseur Collection	£244.95

1 year guarantee on Commodore products. Prices subject to availability. VAT included. Hardware delivery: please add £5 for 3-day delivery or £10 for our overnight service.

£975+VAT! AMIGA

A sensational offer of £500 off the List price of the Amiga has been made by Commodore, to qualified users and for a LIMITED PERIOD only... so HURRY and PHONE US NOW for full details!

FREE HOTEL GOLD CARD!

when you buy your Amiga from Calco... stay at over 200 top hotels as often as you like for a year, and for each night's stay, just pay for breakfast and dinner!

SELECTED SOFTWARE FOR YOUR NEW AMIGA!

SuperBase Personal	~~149.95~~	£139.95	K-Seka Assembler	~~99.95~~	£74.95
Logistix	~~299.95~~	£164.95	Modula 2	~~99.95~~	£94.95
Analyse	~~99.95~~	£94.95	De Luxe Paint	~~149.95~~	£139.95
Scribble	~~99.95~~	£94.95	De Luxe Print	~~99.95~~	£84.95
Dynamic CAD	~~495.00~~	£479.95	De Luxe Video	~~99.95~~	£84.95
MCC Pascal	~~89.95~~	£84.95	Aegis Draw	~~199.95~~	£159.95
A/C Fortran	~~295.00~~	£284.95	Aegis Images	~~99.95~~	£64.95
Lattice C	~~129.95~~	£124.95	Aegis Animator	~~119.95~~	£114.95
Cambridge LISP	~~149.95~~	£144.95	Marble Madness	~~39.95~~	£34.95

SELECTED SOFTWARE FOR YOUR COMMODORE 128

Pocket Planner 128	Easy to use spreadsheet with 40/80 col mode	£49.95
MicroClerk 128	All-in-one business system from Commodore	~~99.95~~ 94.95
Microclerk S/Ledger	Sales Ledger package for Microclerk 128	~~75.00~~ 69.95
Microclerk P/Ledger	Purchase Ledger package for Microclerk 128	~~75.00~~ 69.95
Swiftcalc 128	Spreadsheet from Timeworks, UK edition	~~59.95~~ 54.95
Data Manager 128	Database from Timeworks, UK edition	~~59.95~~ 54.95
Wordwriter 128	Wordprocessor from Timeworks, UK edition	~~59.95~~ 54.95
Super C 128	Complete C language, with extensions	~~64.95~~ 59.95
Matrix 128	Run 64 programs on your 128 – in 128 mode!	49.95

VIZAWRITE Classic 128

VizaWrite Classic 128 is a much enhanced successor to the best-selling VizaWrite 64, which THE TIMES featured in three articles, calling it 'a creative writer's dream! VizaWrite Classic is certainly the best wordprocessor we've yet seen on any computer, ever! Written specially for the 128, VizaWrite Classic makes maximum use of the speed, memory and 80-column display, showing your document exactly as it will be printed... with a 30,000 word disk dictionary, massive 55K text area, proportional printer support plus built-in NLQ fonts for CBM/Epson type printers, easy-to-use 'pull-down' menus, full function calculator, 'newspaper style' columns, mail merge... and much, much more!

VizaWrite 'Classic' 128	~~99.95~~	£79.95	VizaStar 128	~~129.95~~	£99.95
VizaWrite 64 'Professional'	~~99.95~~	£79.95	VizaStar 64 XL8	~~99.95~~	£79.95
VizaWrite 64 (cartridge)	~~89.95~~	£69.95	VizaStar 64 XL4	~~79.95~~	£69.95

VIZASTAR 128

The information processor... spreadsheet, database and graphics: the most powerful integrated system yet for the Commodore 128! The latest design techniques provide the ultimate in ease-of-use with all the sophistication of a fully integrated product... VizaStar's advanced spreadsheet includes high speed maths formulae, date functions, lookup tables, enormous 60K worksheet (1000 by 64) programmability, windows, cell protection, ease search and sort, text editing, wordprocessor merge, variable column widths... PLUS database with split-second access, up to 8K record size, 9 screens per record, unlimited file size, 16 files per database, full support for data exporting, reporting and select... PLUS displayed or printed hi-res graphics automatically scaled, with 2 & 3... graphs, colour pie charts... and much more!

UNBEATABLE SUPPLIES

SuperBase 128	~~£59.95~~ £57
SuperScript 128	~~£69.95~~ £64
SuperBase: The Book	~~£14.95~~ £11.95

SUPERSCRIPT BARGAINS!

SuperBase 64 & Plus/4	~~79.95~~ £57.95
SuperScript 64	~~69.95~~ £57.95
SuperBase Starter 64	~~24.95~~ £19.95

HACK-PACK 128

The ultimate utility pack for your 128... a full Programmer's Toolkit (FIND, DUMP, CHANGE, MERGE, etc.) plus ... style RAM-DISK for using disk data at ... speeds, plus program comp... assc... £39.95

Oxford PASCAL 128

A full J&W Pascal compiler with both interactive mode (90K user area) & disk compiler mode (120K)... graphics & sound extensions... and both stand-alone and modular run-time options! ~~49.95~~ £44.95

...tS... 128

The heavy-duty compile... ...es all Basic 128 instruc... ...the whole 128 memory... ...ts ... ...ten Basic extensions... and compiled programs can run up to 40 times ... ~~49.95~~ £44.95

GEOS 64

With DeskTop, organizer, file manager, GeoPaint, a powerful graphics editor, GeoWrite, graphics-based word-processor, DiskTurbo fast file loader, plus alarm clock, calculator, notepad, photo & text manager and many fonts... £49.95

SOFTWARE PROGRAMS FOR YOUR COMMODORE 64!

SuperType 64	Professional touch-typing keyboard trainer	~~29.95~~ £19.95
SuperType 64 (tape)	...typing trainer as above, on tape	~~19.95~~ 14.95
Simon's Basic 64	...mmer's cartridge from Commodore	~~50.00~~ 35.00
PetSpeed 64	...ndard 64 Basic compiler from Oxford	~~19.95~~ 14.95
Oxford Pascal 64	...plete J & W Pascal for your 64	~~49.95~~ 34.95
Oxford Pascal 64	Pascal ... 64 tape users	~~29.95~~ 19.95
Print Shop 64	Desk-top publishing for your Commodore 64!	~~49.95~~ 39.95

IF YOU WANT IT TOMORROW... CALL US TODAY! ON 01-546-7256

Prices are POST FREE & include VAT. Order by phone with your credit card, or send cheque/PO or your credit card number. Official orders welcome. We despatch same day by FIRST CLASS post. If our lines are busy, why not try our 24-hour recorded order service, on 01-541-5185. Ref. A45

VISA

Calco Software

LAKESIDE HOUSE, KINGSTON HILL, SURREY, KT2 7QT TEL. 01-546-7256

TOP QUALITY PRODUCTIVITY SOFTWARE FROM Precision Software

Superbase

Superbase is the most powerful Database System ever developed for 8 bit computers. Why? Because not only can you access its commands from menus but you can string them together with BASIC commands to form your own complete programs. Superbase can import data from and export to other programs via sequential files. In addition the C-128 version will load together with the Superscript word processor to create a completely integrated office system.

Commodore 64 disk NOW ONLY **£49.95!**

Commodore 128 disk NOW ONLY **£69.95!**

Superbase THE BOOK

Superbase is recognised as the leading database system for Commodore computers, with more than 100,000 users of 10 national language versions worldwide. Now Dr Bruce Hunt has produced the first in-depth guide to using the Superbase system, from first steps through to advanced programming techniques. The wealth of hints, tips and practical examples makes Superbase: The Book required reading for anyone working or contemplating working with Superbase.

194 pages **£11.95**

Superscript

Superscript gives you everything you need for professional word processing in one easy-to-use package. Its menu command structure puts you immediately at ease, with no complicated commands to memorise, yet Superscript combines business-style editing, spell checking, calculator, row and column arithmetic and full mail merge facilities. The phrase glossary feature enables you to store whole passages of text, or command sequences and recall them with a single key.

Commodore 64 disk **£49.95**

Commodore 128 disk **£79.95**

PRACTICALC II

PractiCalc II combines a fast, easy-to-learn spreadsheet with database and word processing functions all in one powerful program. Set the width of each column individually on a spreadsheet up to 100 columns wide by 250 rows deep. With PractiCalc II you can sort information numerically or alphabetically, and carry out searches through columns or rows. Using its built-in word processing you can prepare impressive financial reports and documents with the utmost ease.

Commodore 64, disk NOW ONLY **£39.95**

Available from your local dealer or directly from Precision Software on

01-330 7166

VISA

Precision Software Ltd.
6 Park Terrace
Worcester Park
Surrey KT4 7JZ
Telex 8955021 Precis G

Electronic Funds Transfer

Money as an abstract? DARTS, CHAPS and SWIFT. New ideas and new terms in banking. Len Keighley explains.

For a number of years the Banking world has made extensive use of computers. These are not the micro-computers with which everyone has become so familiar, but the large and powerful mainframe computers, the IBMs and ICLs etc. More recently this use of computers has become apparent to us the customers. The most obvious being the cashpoint machines or auto-tellers that many banks and some shops have installed. In banks such as the TSB a computer terminal is present at every counter to update the customers account immediately with any cash transations or amendments to their accounts. However, this is only the tip of the iceberg as computers are used more and more to carry out automatically the transfer of funds from one customers account to another, no matter which bank they may reside at or even what country. All this comes under the heading of Electronic Funds Transfer or EFT but the field of EFT has far greater implications to us the customer than just the transfer of funds.

Point of Sale — POS

Electronic Funds Transfer at Point of Sale (EFTPoS) has been discussed by the banks, building societies and major retailers for quite a number of years and over the next few years is set to become a major part of the way in which we pay for our purchases. It revolves around the use of a credit card style piece of plastic to initiate the 'transfer of funds' transaction. No one standard method of processing the card or even the way in which the transaction is authorised by the customer has yet been agreed upon. However, a number of pilot schemes are in operation at present as well as those installed solely by some major retailers.

DARTS— Organised initially for use with the VISA card so that a purchase can be authorised against the customer account at the time of the purchase. However, the final authentication still remains by sight in the comparison of signatures. Use of the ACCESS card should soon follow. The system is currently in use at the Brent Cross Shopping Centre and the exclusive food store Fortnum and Masons. A similar system is in operation at Debenhams stores for use with their own chargecard.

PISCES—This is run by the NATWEST subsidiary computer bureau Centrefile and was set up in conjunction with the credit card companies. It is used by petrol stations for the processing of credit card transactions. Each transaction is stored at the petrol station until the end of the day. It is then automatically collected, usually during the night, by the Centrefile computers for collation and further processing with each credit card company being supplied with its own information via the BACS system (see later).

CRESTA—This system is being tested by British Telecom in conjunction with Cresta Communications. So far one million transactions valued at £20 million have been processed from high street stores and petrol stations.

Money Transfer

The EFTPoS systems have a high profile and are easily seen in operation however, other more extensive money transfer systems have been implemented to handle the high volumes of money transactions that occur day to day. These systems however, are not for the general public but are to assist the banks to quickly obtain transactions for their customers. Some large businesses are also involved in this area particularly the multi-nationals. The major systems used in this area are . . .

BACS— The Bank Automated Clearing Service was set up some years ago by the major clearing banks as a clearing house for computerised transactions. Each bank sends a tape of transactions or in some cases transmits them over Telecom lines to the BACS ICL computers. These transactions are then sorted and collated into those belonging to each individual bank and returned by the same manner as they are received. Some larger companies supply tapes of their payroll transactions to the local bank branch for transfer to BACS and subsequently the banks of their employees. Therefore if you are paid

monthly it is likely that your money has gone through the BACS system.

CHAPS— The Clearing House Automated Payments System is used to handle the sterling settlement for the inter-bank money market dealings and stock transfers. The twelve 'settlement' banks use the British Telecom Packet Switching System (PSS) via Tandem NonStop computers. Other 'participant' banks can only access the CHAPS system by one of the Tandems using Olivetti, ICL or NCR equipment.

SWIFT— The Society for Worldwide Interbank Financial Telecommunications was set up to provide an automated facility for inter-bank funds transfer on an international basis. Originally it was designed to alleviate the problem of increasing volumes of paper transactions. However, other problems were solved in the removal of the language barriers between international banks by use of the common code of SWIFT.

Another major system which has just been implemented is the new automated Stock Exchange system which was nicknamed 'the Big Bang'. This system consists of a number of different computer systems one of which is the automated buying and selling of shares. When a preset price is attained the computers initiate the buy or sell without human intervention. Recently this was at least partly blamed for the large drop in share prices on Wall Street. Another part is SEAQ, the Stock Exchange Automated Quotation system which streamlines the obtaining of a share-price for the customer.

The Future

The future is, as always, difficult to predict and with the rapid introduction of computers into banking the prediction is made even harder. The introduction of EFTPoS over recent years has slowed, probably due to a number of unrelated reasons such as the cost and the poor response to a cashless society from us the customers. However, this can only be a delay as both the banks and retailers have a vested interest in the savings such a system would give them.

One future development in the personal computer area is the facility to access your own bank accounts via your own micro and telephone line. This is in fact already available to a limited number of people who are customers of the Nottingham Building Society and who have accounts with the Bank of Scotland. This sort of facility would of course be extremely useful to large businesses in the control of their spare funds.

Recent developments in credit card technology have been pointing the way to a more secure card which will be a computer in its own right, the 'Smart-Card'. The micro-chip implanted in the card can also be used for a variety of applications not only to do with banking. This includes such as medical records for allergies and even recent X-ray pictures.

Micro-computers like the PC are beginning to appear in the back offices of banks and are used for such things as credit scoring and an analysis of the customer account base.

Whatever happens the increasing use of computers will continue to affect the way in which we buy anything and even the form that money takes. For remember money can be viewed as an abstract and therefore it does not need to be pieces of paper or lumps of metal only, like so many other pieces of information, as a binary yes or no.

● CBM 64 AND 128 ● TRANSFER ALL MAJOR TURBOS ● AUTOMATIC ● NO USER KNOWLEDGE

DOSOFT'S BACKUP BREAKTHROUGH SHATTERS PRICES AS WELL

● TAPE TO DISK ● DISK TO TAPE ● DISK TO DISK ● HARDWARE TRANSFERS MULTI-PARTS ● DUMPS HI-RES SCREENS

FIRST TAPE, THEN DISK, NOW CARTRIDGE!

NEW! NEW!

Action Replay Cartridge 2

This is the one you have been waiting for! Designed and produced by Datel, using the programming skill of DoSoft, the new Action Replay Cartridge Mark Two is really two cartridges in one. Completely self-contained it gives you almost total back-up capability, and offers disk drive owners a superb fast loader—all independent of computer memory. Just see what it can do for you!

● Freezes the action on your computer at the touch of a button at any time ● Works with both Disk and Tape ● Backups reload at Turbo speed without cartridge ● Built in reset switch ● No screen blanking during load ● Handles programs which load in several stages ● Backs up Multi-Stage programs to Disk ● Special compacting techniques save Disk space ● Three or more programs per disk side ● Unique Code Inspector allows you to look at whole memory, including program, registers, etc. ● Saves high res screen pictures—you select format ● No other software necessary ● No user knowledge

We have tested literally hundreds of games—including the latest titles—and have yet to find one which will not transfer. We think that Action Replay Mark Two has more features at a better price than any other cartridge. See for yourself just plug it in and take complete control over your computer. We don't think it can be beaten! For only £24.99

Action Replay Mark Two cartridge also available from Datel Electronics.

MegaTransfer Disk V 4.0

The one the others try to follow! MegaTransfer 4.0 is vastly extended over previous editions and will back up programs that no other utility can handle. And now it's at a price you can't afford to miss

● Backs up all major Turbo Systems ● General purpose routines for Nova, Burner, Visiload, Flash, early and recent Pavloaders, and more ● A collection of specific routines for individually protected programs, including Multi Stage games ● Transfers programs which won't normally load with Disk Drive present ● Economical use of Disk space ● Program identifier ● Diskus 1, 2 makes backup of ordinary programs so simple ● Improved Disk Turboloader fastloads your regular software. This just has to be the most capable, best value back-up software on disk for only £12.50

SAVE! SAVE! SAVE!

The DoSoft Collection

A special offer comprising MegaTransfer, MegaUtility, MegaTape and Prosprite sprite editor/library on one disk (usually £32.50) together with 10 FREE Disks and Storage Box (worth £11.95) for our bargain price of £24.99. How's that for value!

MONEYSAVING OFFER!

MegaTape SuperValue

So simple to operate, our famous Tape-to Tape Utility for one Datassette requires no additional hardware. MegaTape also features DoSoft's RBS Plus Turbotape converter.

● No user knowledge required ● Backs up major Turbo Systems ● Vast collection of specific routines to handle most Turboload games ● Often increases loading speed ● VisiScreen Striped Turboloader ● RBS Plus converts ordinary programs to load at SEVEN times normal rate

A *must* for heavy tape users it is a real bargain £7.50

MegaUtility Disk V4.0

Lots of really useful programs, designed to make your programming life easier ● Programmer's TurboDisk Utility: fast load, save, verify; display start and end addresses; easy DOS commands and more ● New AlphaLoad Disk TurboLoader: no menu required; much improved version ● Whole Disk Copier (THREE minutes) ● Turbo File Copy at five times normal speed ● Nibble Disk Copy backs up most protected disks in just five minutes ● Fast format ● Disk to Tape Plus. Tremendous value at only £12.50

SAVE! SAVE! SAVE!

3M Disks at Low Prices

Top class 3M branded Disks at low, low prices ● SS3DD 744D-0, suitable for all 5¼" drives ● Complete with labels and write protect tabs ● Tough Tyvac spun acrylic sleeves ● FREE High Impact Plastic Storage Box (worth £2.75)

Our inclusive price is just £11.95 per box of ten. No extras. No catches. This is the price you pay. UK POST FREE £11.95

All DoSoft's programs are unprotected for your convenience. DoSoft customers will receive details of future updates and can buy new DoSoft Programs at advantageous prices.

Action Replay Mark Two carries a twelve month replacement guarantee against mechanical failure of the device.

How to get your DoSoftware

Please send cash/cheque/PO with order for fast despatch (SAE only for full details). Send off now to:

DoSoft (Dept Y), 2 Oakmoor Ave, Blackpool, FY2 0EE

UK Postage included. Europe add £0.75, or £2 if order includes Blank Disks. Overseas add £1.50 for Airmail, or £3.50 if order includes Blank Disks.

DoSoft

You'll Do it Better with DoSoft

● FAST DISK UTILITIES ● LOADERS ● 3-MIN DISK COPY ● FAST DISK FILE COPY ● FAST FORMAT ●

CADPAK—128

Cadpak-128 is a high-resolution design and draw package for the Commodore 128. The software is supplied on a single 1541 format disk together with a 86 page manual and runs in 40-column colour display mode. Full printer support is offered which extends beyond Commodore serial printers to Centronics and colour printers from the User Port. The resolution of the printed output is 640 by 360 which is adequate for the bulk of potential users. The system allows for the size of the drawing to varied on the printer thus an imaginative user could produce some very creative work by means of overlays. The Cadpak drawing can be stored on disk for later recall in addition to being accessible from BASIC or 6502 assembly language for incorporation into your own programs through the user of the *template* function, discussed later. Within the manual there are several programs in BASIC detailing the interface operation. The manual was not only clear and comprehensive, but included the all-important examples as well as some sample drawings for inspiration.

Unlike other drawing packages this product allows the user to produce an exactly scaled printed output. This also means that you can operate in the chosen units of your drawing i.e. metres, miles, etc., with all dimensions exactly scaled. The scaling factor is set when the screen is initialised. The software also solves the problem of circles on a dot-matrix printer so that circles are printed out as such and not flattened at the circumference.

Cadpak-128 operates on a menu. Support for lightpens is also provided which speeds up the creation process considerably. An example of the flexibility of this package is shown with lightpen operation — the user can switch this device on or off from the menu as for certain operations it is more convenient to use the cursor keys — a very nice touch. Some other drawing packages I have used with lightpens seems excessively sensitive or difficult to calibrate with a lightpen. Not so Cadpak-128, it was literally a case of *plug-in-and-go* and I found the responsiveness of the system both fast and accurate without undue sensitivity.

There are two display screens for the user to work with. The first is the very large screen which is sized 640 by 360 points and termed the *Main Screen*. Note that this is not the screen resolution, this is set at 320 by 200 by the hardware and in effect you are moving around on a high resolution area which is twice the normal size. The secondary screen is 320 by 200 points in size and images may be freely copied between screens, although always within each screen *window*. The copy operation will also allow rotation in 90 degree steps as well as increases in the image size. A *mirrow* or reflection function is also provided. Text in 4 different sizes may be entered anywhere onto your drawing and the system disk provides 3 special fonts — *tech, olde-english* and *3-D*.

An advanced feature of this product is the *object management system* which controls images of 16 by 16 pixels defined on the second screen. After the creation of one of these *OMS* images it may be saved to disk for later recall into another drawing. Cadpak-128 will support no less than 104 *OMS* images at any one time and control of the placement of these is very precise. An object-editor is provided to produce additional fonts for drawings. This allows for the replacement of the default Commodore character set and the new font can be saved for later use.

There are 7 different patterns available for area-fills and an editor is included in the package to allow the user to redefine these. The size of these patterns is 8 by 8 pixels. One of the most thoughtful features of Cadpak-128 was the *Try-Again* function which allows a retraction of the last menu command.

Templates in Cadpak-128 are line drawings which the user can create and merge into other drawings. A *template* is formed in the same way as a drawing by selecting the functions and positioning the line elements viz. *line, box, circle, arc, curve,* etc. In addition to this the *template* can be saved to disk which provides even further flexibility to the user. The *template* file has a very simple structure and is easily accessible from BASIC.

The manual contain many tutorials to get you up and running providing a genuine insight into serious computer-aided design techniques. If this were not enough the disk contains in the *OMS (object management system)* section some files with electronic and mathematical symbols. There are maps of the USA and several state maps within the *templates* section which can be used in conjunction with the main country map.

Cadpak-128 is a genuinely useful product for the Commodore 128. The more I used this the greater my admiration became for the programmers who created this package — I was really surprised by the capabilities of both the hardware and software which seemed to be operating in complete harmony, unlike some other Commodore 128 drawing packages. My only criticism lies in the lack of support for plotters, not that silly little Commodore 1520 thing but a real A4 size plotter since this hardware/software combination is perfectly capable of producing standalone work. Perhaps the next version will include this or even move into the 80 column display mode of the Commodore 128. Without doubt an outstanding and very impressive piece of software for the Commodore 128.

B.D.

Price: £34.95 (without lightpen)
Contact: Adamsoft Ltd, 18 Norwich Avenue, ROCHDALE, Lancs OL11 5JZ.

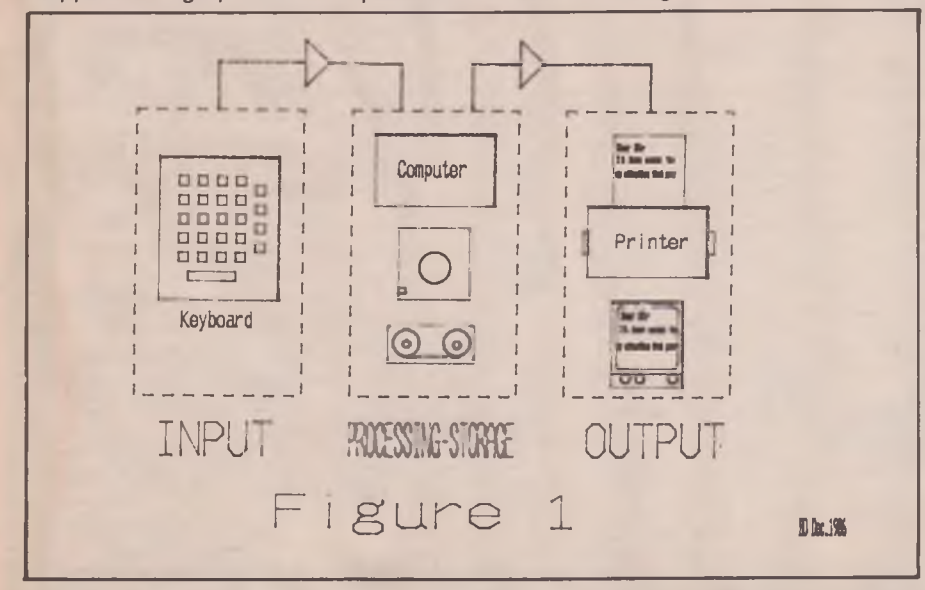


Figure 1

NEOS MOUSE AND CHEESE

ONLY £24.99 (Incl. VAT)

Limited stocks of ***Mouse and Cheese*** for sale at an unbeatable and unrepeatable price! Usually sold from £59.00 to £79.00 — Available for only ***£24.99 (incl. VAT) cassette or £29.99 (incl. VAT) disk!*** Mall order or over the counter from both our shops. UK add £1.00 for postage. Overseas add £2.50 for postage. Fully guaranteed.

Order now . . . before they're all sold out!

LOGIC SALES

17 Leofric Square, Peterborough, Cambs.
Tel: 0733 313870

19 The Broadway, The Bourne, Southgate, London N14
Tel: 01-882 4942

COBOL-64 and COBOL-128

Now you can learn COBOL, the most widely used commercial programming language, on your Commodore 64 and 128. The package includes an Editor, Interpreter and Symbolic Debugger together with a 150 page manual. The language is a subset of the ANSI 1974 standard Level 1 with extensions to utilise Commodore features. No previous knowledge of COBOL is assumed and sample programs are included. The 128 version may be used in 40 or 80 column mode.

PRICE: £34.95 for either version on disk

COMPUTER AIDED DESIGN ON THE C-64 and C-128

This package consists of a 310 page book and a disk containing the many programs listed in the book. These programs are written to run on the C128 with BASIC 7.0 or on the C64 with SIMONS BASIC. The book examines many professional design techniques together with examples. Topics include Technical Drawings from small building blocks, Macros for CAD, 3D drawings using Macros, Mirrored images, Hatching, CADDY-MAT — a complete mini CAD system, C128 MERGE and EPSON Screendump programs (in machine code).

PRICE: £19.95 (book only — £14.95)

VIDEOBASIC-64

The most powerful graphics and sound development package available for the Commodore-64, adding more than 50 commands to BASIC. Includes hi-res and turtle graphics, sprites, multiple screen handling and hard copy to most printers. Used by professionals to develop programs such as CADPAK and CHARTPAK and can read in graphics screens created by these packages. A runtime version is included to allow you to distribute your own program with paying royalties.

PRICE: £14.95 on disk. Demo disk £2.50. Buy two or more of CHARTPAK-64 (£25.95), CADPAK-64 (£24.95) or VIDEOBASIC and deduct 10%

PRINTER BOOK FOR THE C64 and VIC-20

A 340-page book that explains all the things that you can do with your printer. Includes interfacing, use of secondary addresses, text and hires graphics, hardcopy, formatted listings, MPS801 ROM listing, large characters and a mini wordprocessor. There are over 50 example programs including a full length graphics utility program for the 1520 plotter.

PRICE: £14.95 with software disk (book only — £12.95)

New catalogues are now available for the VIC-20, C16 and Plus-4, C64 and C128. Send stamp or SAE for each catalogue required or for further details on any produce.

ADAMSOFT

18 Norwich Avenue, Rochdale, Lance. OL11 5JZ.
ACCESS card orders accepted by telephone 0706-524304.

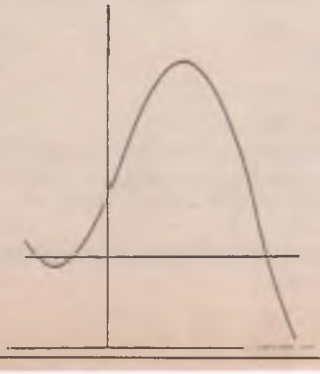
In the numbers war you can win with

Polynomial

A Computer Aided Analysis Program for the Commodore 64/128. Polynomial is a self contained menu driven mathematics porgram which can really help you win your war against numbers. Polynomial has been specially written to allow you to play with numbers, draw graphs and investigate mathematical relationships. Just look at what Polynomial can do for you:

1. Solve your most complex equations (max order 99) Polynomial can find Real and Imaginary roots.
2. Draw graphs of all your polynomial equations. As many as you like all on the same screen. Double or single axis plots possible.
3. Solve those awkward experiments. Plot all your results on the screen. Calculate accurate curves based on your data. Full Polynomial graphics available.
4. Understand Simultaneous equations. Solve 2, 3 or more equations with the help of Polynomial. Impress your family and friends with what you can do. Send for your copy to Polynomial now!

Write FREEPOST to:



INSIGHT SOFTWARE
FREEPOST
P.O. BOX 27,
BASINGSTOKE,
HAMPSHIRE,
RG22 4BR

For as little as **£14.95** you get Polynomial and a manual supplied in an attractive protective case. Free post and packaging. Faulty goods will be replaced.

Insight Software Systems Limited

Please send me ..... copy(ies) of Polynomial. Tick as appropriate
☐ Cassette £14.95 ☐ Disc £19.95☐
Cheque ☐ P.O. CCI
Name .....
Address .....
.....
Signature ..... Date .....
Please allow up to 28 days for delivery.

Pocket Filer

128

By

Digital

Solutions

Inc.

Pocket Filer 128 is one of a suite of three, the others being Pocket Writer and Pocket Planner. All three have been written with the intention of getting the user up and running in the shortest time possible (30 minutes is mentioned). They are all able to be used in conjunction with one another and can exchange data files etc.

On powering up the 128, Pocket Filer will auto-boot (assuming the disk has been inserted into the disk drive) and will go on to display the first panel in either 40 or 80 column mode depending on the state of the 40/80 column key. Should you have your monitor switched/attached to the wrong output a message will appear on the non active display telling you to either press the 40/80 key or to re-route the output (Pocket Filer 128 will work in either mode). This is indicative of the thought that has gone into the programme. Once you have decided which display mode you are going to use you are then asked the type of printer you intend to use although you can in fact change this at any time. Most of the current printers are catered for and the output can be sent in Commodore, parallel or serial format. It is possible to define this and numerous other options including screen colours, device numbers etc. In a Configuration file. This is loaded at boot time and saves you having to set them up each time you use the programme. I only wish all software had this sort of feature.

The programme is split up into four main parts. A Create module, an Enter/-Edit module, a Report module and a Utilities module. The Create module is used to design the layout of your database. It is simple to use and requires little more than the cursor keys, the enter key and the F1 function key. This makes it a little long winded at times but very easy to remember the commands. The Enter/edit module permits you to enter your data into the database you set up earlier with Create. There are facilities to search for specific records fulfilling certain criteria, to sort records into various orders again depending on criteria you may have specified, to establish passwords, to print records any many more. The Report module allows you to tailor your reports so that you can include only the fields of a record you require. Fixed data can be added and records can be arranged in columns to save space or print labels. You can also perform mathematical calculations based on data in the records, create subfiles using search criteria and make reports usable as word processing files. The utilities module lets you backup files from one disk to another or to restructure a database. Restructuring lets you convert a Commodore sequential file that has data in a regular pattern into a Pocket Filer file. Handy eh?

Conclusion

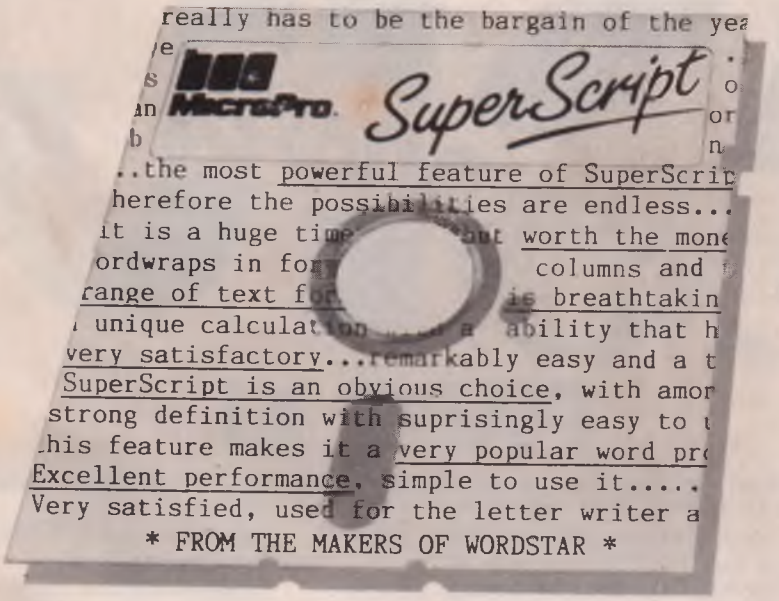
This is a well thought out Database with only a few minor gripes to taint what is an otherwise excellent programme. I found the manual a little confusing at times, with 'Getting started', 'General functions' and the four main modules often overlapping and repetitive. I would have also liked to have been able to use the layout I used when creating the databases. in the Reports module (If you can. I couldn't find out how). Once you are familiar with the basic concepts, the programme is fast and easy to get around and can be driven using only the inbuilt help facilities without much trouble. It makes good use of the 128's extra features over the 64 and implements the 40/80 column option very well. Pocket Filer has now taken over as my main Database in place of a package costing several times as much. I look forward to trying the rest of the suite. If they are anywhere near as good as Filer I may well be changing Word Processor and spreadsheet as welll

I.B.

Price: £49.95 (inc. VAT).

Contact: Haba Systems Ltd, Peir Rd, N. Feltham Trading Estate, Feltham, Middx TW14 0TT. Tel: 751 6451.

WORDAHOLIC



Now available on MIPS card

The latest storage medium 'credit card' personal memory
FULL DETAILS AND PRICES from: VIGLEN Ltd. — Sales
01-843 9903

SUPERSCRIPT
WORDPROCESSING
From the makers of WORDSTAR

Most wordprocessing packages will do the bare minimum. SuperScript can't wait to do the lot!

JUST LOOK AT THIS WORKLOAD

Takes on	writing, storing and editing all your correspondence and other documents.
And	produces letters, invoices, price lists, contracts, labels etc.
Next	runs personalised mailings with lists or database output.
Then	creates and revises top quality presentations reports and tables.
On to	typing term papers, technical reports or notes.
And even	adds, subtracts, multiplies, divides and does percentages.
At the same time	giving all round editing and printing facilities such as block-cut-paste, insert and typeover, full search and replace.
Not to mention	print review, layout options and simplified document selection. And much, much more!

*** SPECIAL MAIL ORDER PRICES ***
COMMODORE 64, ATARI 800XL/130XE £49.95
COMMODORE 128, APPLE IIc/IIe £79.95
UPGRADE FROM EASYSCRIPT £39.95

SuperScript comes complete with Comprehensive User Manual.

UPGRADE FROM EASYSCRIPT TO SUPERSCRIPT – JUST £39.95

* Improved performance *
* Maths *
* Spelling checker *
* Print or view *
* Integrate with SuperBase *
(on Commodore 128)

ORDER NOW

By calling MicroPro on 01-879 1122 Ext 207
quoting your Access or Visa no.

Also available from all good dealers.

MicroPro.

To Dept CCU MicroPro International Ltd, Haygarth House, 28-31 High Street, Wimbledon Village, London SW19 5BY
Please supply the following (All prices include VAT & Postage)
Commodore 64, Atari 800XL/130XE £49.95; Commodore 128, Apple IIc/IIe £79.95
QTY ____ SuperScript package(s), for computer (state model) ____
QTY ____ † Upgrade for Easy Script £39.95 for computer (state model) ____
(Your existing Easy Script disk should be returned with this order)
I enclose remittance for £ ____ (Cheques made payable to MicroPro International Ltd)
Or charge my credit card
Access/Visa No. ____
Signature ____
Name ____
Address ____
Postcode ____ Tel ____

BASIC for beggginners

PART XI

In the last issue we looked at *relative files and disk files* in general — this portion of the series is concerned with delving deeper into the disk drive through *direct-access* programming. The disk drives that Commodore have produced for the 8-bit home-user machines, that is the 1541, 1551, 1570 and 1571 drives are all *intelligent drives*. This means that the drives contain their own micro-processor and are capable of operation without the continuous involvement of the controlling machine's [illegible] sor. They contain some RAM [illegible] put controllers ([illegible] CIA's a[illegible] input/output as fo[illegible] C128) and a ROM fo[illegible] *operating system* [illegible] the disk drive's equivalent of your [illegible] hine's *KERNEL*, a term [illegible] u may have come across before. In e[illegible], your disk drive is a computer in [illegible] own right, albeit a rather slow one with an input/output mechanism that relates to m[illegible] netic media only i.e. the disk, rathe[illegible] a keyboard and screen.

Using intelligent drives has advantages and disadvantages over a *dumb* drive such as those the AMIGA uses. An intelligent drive gets [illegible] the job it has been instructed with [illegible] the *controller* — the computer. Th[illegible] means that the controlling proces[illegible] an [illegible] on with something else su[illegible] accepting keyboard input. For exam[illegible], if you *validate* a disk you should find that you still use the cursor keys and enter fresh instructions into your machine. Try this and see [illegible] forget to *close* the channel.

Open [illegible],15,"[illegible]"

When the drive warning light has extinguished, close the file, in this instance the file number is 3. The disadvantage to using intelligent drives are the limitations over the degree of control the programmer can make over the disk drive. This is shown with the dumb drives of AMIGA which can be made to read and write to any disk format such as Apple, Atari, BBC, MS-DOS, CP/M, even Commodore DOS! The reason [illegible] a dumb drive has this ability is [illegible] use a dumb drive will execute **exac**[illegible] instructions sent to it. In simple [illegible] the drive has no electronic cir[illegible] similar to those in an intelligent dr[illegible] other than those to switch t[illegible] motor on or off an[illegible] the read/wi[illegible] head mechani[illegible]

[illegible] why both [illegible] *access* [illegible] gramming [illegible] everything [illegible] are several [illegible] ndsat [illegible] the BAS[illegible] gramme[illegible] useful and powerful. How[illegible]r, be [illegible] ned that direct-access programming [illegible] potentially dangerous to disks since a [illegible] ber of the built-in system safe[illegible] is to protect the disk are removed. [illegible] fore *practice on a disk that con*[illegible] *data you can afford to lose* [illegible] in [illegible] words, backup the disk before [illegible] [illegible] programming.

[illegible] modore BASIC [illegible] des the low [illegible] command [illegible] ect-acce[illegible] programm[illegible]

Command	[illegible]
U1	Read a [illegible] block in [illegible] drive RAM.
U2	Write a [illegible] block from drive RAM to disk.
B-P	Set a poin[illegible] to a data byte in a disk [illegible]fer.
B-A	Set a bit in the disk RAM to show sector in use.
B-F	Set a bit in the disk RAM to show sector free.
B-E	Load and execute machine code into drive RAM.
M-R	Read (PEEK) byte to drive RAM or ROM.
M-E	Execute a routine from drive ROM.
M-W	Write (POKE) byte to drive RAM.

Some of these are obviously very advanced and my initial reaction was to avoid mentioning these. However, on reflection I decided that it better that readers are aware of the facilities offered to them by the disk drive even though [illegible] never use them. You will also not [illegible] some of them require a knowledg[illegible] format structures which is bey[illegible] scope of this series. Readers who [illegible] Commodore DOS shoul[illegible] many books on this subjec[illegible] e to start is with the User Manual supplied with the drive itself, although you may find that this merely follows the Commodore tradition of being bad[illegible] writ[illegible] and the going is rather difficult. Knowledge of direct-access programmin[illegible] ows you to recover deleted files, display tracks and sectors as well as re[illegible] disks.

I'll start with a very simple example of one of these commands, the Block-Read facility. Enter the following program which must be saved before running it. Ensure that the drive contains a formatted disk that you can afford to lose **before you RUN this program.**

```
10  OPEN 15,8,15
20  PRINT#15,"10"
30  INPUT#15,MN$,MM$ MT$,MS$
40  IF MN$ <>"00" GOTO 190
50  OPEN 1,8,1,"#"
60   PRINT#15,"U1 1,0,18,0"
70  INPUT#15,MN$,MM$ MT$,MS$
80  IF MN$ <> "00" GOTO 170
90  FOR X = 0 TO 255
100 GET#1,Y$
110 IF Y$ = "" THEN Y$ = CHR$(0)
120 Z= ASC(Y$)
130 PRINT ST,X,Z
140 IF Z >31 AND Z<96 THEN PRINT
Y$
150 PRINT:PRINT
160 NEXT X
170 CLOSE 1
#80 INPUT#15,MN$,MM$, MT$,MS$
190 CLOSE 15
```

This program transfers the contents of a pre-determined track and sector into the disk drive RAM — the 15xx series of disk drive have 2k of RAM divided into four 500 byte blocks or *buffers*. The programmer can utilise three of these buffers at any one time, the remaining one is used by the operating system of disk drive. The program above reads the contents of track 18 sector 0 into a buffer which is then read from the screen. The format for the Block-Read command is:

PRINT# *filenumber*, **"U1:** *channel drive, track, sector"*

There are several alternatives to this format but this is the one I prefer. OK, back to our program -- the first line opens the disk drive command channel which is **always** channel 15 while line 20 initialises the drives.

```
10  OPEN 15,8,15,
20  PRINT#15,"10"
30  INPUT#15,MN$,MM$, MT$ MS$
40  IF MN$ <>"00" GOTO 190
```

These two lines are re[illegible] process to keep us out of trouble. [illegible] reason for opening the [illegible] channel is to read any error [illegible] drive may return to the [illegible] a wise programming practice to incorporate this into any program involving the disk drive. Commodore DOS can warn you that an error has occurred by flashing the disk drive light, it cannot explicitly inform you of exactly what has gone wrong unless you have previously [illegible] command channel **and** [illegible] to read this channel. This is done in our program in lines 30 and 40 by means of the string variables **MX$**. Variable **MN$** takes the error number, **MM$** takes the error message derived from the error number, **MT$** and **MS$** inform you of the track and sector where the error has occurred.

Line 50 may cause some consternation to you with the use of the hash (£) symbol. What we have done here is to open channel number 1 and requested the disk drive to select one of the buffer blocks mentioned earlier in the text.

```
50  OPEN 1,8,1,"#"
60  PRINT#15,"U1:1,0,18,0"
70  INPUT£#5,MN$,MM$, MT$,MS$
80  IF MN$ <>"00" GOTO 170
```

We finally begin to use the Block-Read command in line 60 — note that the *drive-number* is **always** zero using the 15xx series of drives. Those readers who are lucky enough to own a dual-drive can select either 0 or 1 according to the drive they wish to use. Lines 70 and 80 are querying the command channel for any errors that may have occurred during the execution of the Block-Read command. If an error has occurred, program control is moved to line 170 which closes channel 1, the channel we opened to perform the Block-Read.

The next lines are concerned with translating the contents of the buffer which the drive has placed the data from track 18 sector 0 into a readable form.

```
90  FOR X = 0 TO 255
100 GET#1,Y$
110 IF Y$ = CHR$(0)
120 Z = ASC(Y$)
130 PRINT ST,X,Z
140 IF Z >31 AND Z<96 THEN PRINT
    Y$
150 PRINT:PRINT
160 NEXT X
```

First we set up a loop using the [illegible] to lift the data [illegible] using the GET [illegible] the data into a string variable [illegible] the **GET** [illegible] data at a time. When [illegible] a data value that [illegible] a screen [illegible] a *null* value [illegible] Y$ to a value that represents [illegible] the screen. Data that can be [illegible] into a screen character is handled by line 120 using the variable **Z**. In [illegible] matic form, lines 100 to 120 [illegible] represented by:

READ the buffer ONE CHAR at a time to T$ IF the character unrecognisable THEN set to ZERO Change character to a form that can be PRINTed

*Line 130 [illegible] the system status reserved variable **ST** as another safe-guard to the program integrity as well as the loop counter variable **X** and **Z** the numeric value equivalent to a character value. Line 140 the test is made to see that Z remains within the bounds of a screen printable character, if not then Y$, The null* character is printed instead. The remaining two lines are a basic screen formatting routine and the residual part of the loop counter mechanism.

```
170 CLOSE 1
180 INPUT#15,MN$,MM$ MT$,MS$
190 CLOSE 15
```

The final lines form the shutdown procedure for the program — lines 170 and 190 acting as the end-points of the two GOTO's while line 180 serves to turn off the disk drive light if this has been lit by any error or otherwise during the execution of the program.

I do not think that you should have found any difficulty in following this program and it could form the platform for a simple disk reader utility. The first place you could start at is with the screen design of user input/output through the use of clearing the screen and employing colour to make it more attractive. What about using red to signify an error message, of even make it flash and emit some type of warning noise? Another area is to allow user selection of a track and sector, thus you would need to look at line 60 and create a routine involving numeric data capture from the keyboard after assigning the *track* and *sector* to numeric variables. Please do not simply sit and look at a program — always try to find ways to improve and enhance it, this is undoubtedly the best way to learn about programming. Remember that there is no [illegible] thing as the perfect computer program [illegible] a program can **always** be [illegible] in some way no matter how [illegible].

[illegible] do not have a disk [illegible] this particular section [illegible] the series [illegible] seem to be of any value or interest to you. However, I think most readers would appreciate that if you intend to carry on any serious programming then a disk drive is essential and really opens up you horizons. The only drawback to disk drive is the expense of purchasing one although most owners would agree that using a cassette unit after using a disk drive is rather like watching monochrome television after watching the same thing in colour — not recommended! The next part of the series is unfortunately the final one and in this part I will be revising the topics we have covered in the series. Judging by the letters and phone call to me it seems that string handling and arrays continue to prove the most contentious areas in BASIC programming. I will also make efforts to tie up any loose ends that I managed to miss during the course of this series.

S.D.

LASER GENIUS By Ocean Software

Laser Genius from Ocean Software is a comprehensive machine code development system for the C64/128. It comprises three modules; the first two, 64 MAC/MON, which load as one file, and a Monitor/Analyser. 64 MAC/MON supports more than 70 commands to help you with the creation of source code, and includes a two pass macro assembler, a line editor, a machine code monitor and a tracer. You may load one of two versions of 64 MAC/MON; one resides in low memory from $0800 to $47FF, and the other in high memory from $9000 to $CFFF. Once you've loaded 64 MAC/MON, you are given the option of reserving memory for your object code and after a press of the return key you are in command mode. In this mode, there are commands to initialise auto line numbering, move, copy and delete blocks of lines, find all occurrences of a particular sequence of characters (and change them if you wish), and list to screen and/or printer in various formats. 64 MAC/MON allows all the usual pseudo-opcodes such as ORG, BYTE, WORD and DBYTE, plus a number of not so usual ones such as PAD (to fill an area with NOP bytes) and BLOCK (to reserve space). All lines are checked as they are entered and in the event of an error, even its position along the line is pointed out. Once you have entered your source code, it an be saved to disk with the save command and disk space is kept to a minimum by compacting the text in a sequential file. There are also options to save the object code, once it is assembled, either as pure machine code or in ASCII format. The assembler can be operated in either RESIDENT or DISK mode, the latter for chaining files on disk that may be too long to hold in memory as source code. The monitor part of 64 MAC/MON is fairly standard and all the normal machine language commands are there plus a very nice relocation command which moves object code from one area to another, updating all JSR's and JMP's as it does so! The tracer included in 64 MAC/MON is also a handy option, allowing, as it does, single stepping through machine code with options to print the registers at each step along with the contents of selected memory locations, so that you may see exactly what is going on as your code runs.

As you can see by now, this is a very powerful programming tool already, but the best is yet to come. The thing that sets Laser Genius apart from the competition is the Monitor/Analyser. Occupying a cool 12k of memory (don't worry — ocean have provided a relocatable version as well), this module is a programmers dream come true! The Analyser will not only allow you to single step or slow run your object code but also let you define conditions and signal you when they have been fulfilled. For example, it is possible to define an Analyser word that will be checked any time a particular area of memory (or indeed a single memory location) is written to and to stop at that point in the program. Couple this with the ability to slow run in various modes with or without a memory dump and/or register display, and you have a very powerful tool indeed. Working your way through any part of Laser Genius is made very easy by the extremely comprehensive (70 page) and well presented manual, and Ocean do provide a technical backup service for anybody having problems.

Conclusion

To sum up then, Ocean are to be congratulated on providing 64/128 machine code programmers with an extremely powerful tool at an excellent price (17.95 disk — 14.95 tape). It is my personal favourite program for the 64 and I highly recommend it to advanced and novice assembly language programmers alike.

IB

Price: £17.95 (disk) — £14.95 (tape).
Ocean Software, 6 Central St., Manchester M2 5NS Tel: 061 834 3939.

ROBOTEX 64 By Datel Electronics

No it's not a robot. It's an interface for the commodore 64/128, providing control for motors, robots (hence the name maybe?), models and all manner of electrical gizmos. Robotek 64 comes as a 5" x 4" plastic box with an integral 24 way plug which plugs into the user port, a small microphone, a 20 way IDC plug with a couple of feet of 20 way ribbon cable and some software. Once plugged in, all that shows to the front is a small red LED which illuminates when the computer is powered up. At the rear of the unit you will find 3 sockets comprising 1 x 20 way IDC socket, 1 x 9 way D type socket and a 3.5 mm jack socket. There is also a three position switch which governs how or what type of input is to be used. The IDC socket provides 4 buffered logic level inputs, 4 relay outputs (50 volt at 1 amp) with both normally open and closed connections and type socket has two analogue inputs. One with a range of 0-2.5 volts and the other of 0-25 volts. It also has a 5 volt 50ma output supply. The 3.5 jack is for use with the microphone and has been suitably biased so as to enable it to read the AC signals generated by voice etc. The 3 way switch simply selects which socket to take its input from.

The software comprises a small machine code programme which demonstrates and tests the various inputs and modes. It includes an output sequencer with speech/sound input.

Conclusion

If, like me, you are the experimental type (or a mad professor!) you will find the Robotek 64 a wealth of inspiration. It has a comprehensive range of input and output and can be driven from Basic or Machine code with ease. I have hooked mine up to the wife's exercise bike and with a little software it provides her with a display of miles per hour, distance travelled and pounds shed (I hope she doesn't read this). I feel, however, that the instructions were a little muddy and it would have been nice if they had included a page of ideas with which to put the Robotek 64 to task. The software could also be a little more dynamic by, again, including more options and thereby more ideas. Even a few simple Basic routines could help. The only problem I have with my Robotek 64 is leaving it alone long enough to do some of the more important things in life like — eating, sleeping etc etc etc!

IB

Price: £39.95

Datel Electronics, Unit 8/9, Fenton Industrial Estate, Dewsbury Rd, Fenton, Stoke-on-Trent. Tel: 0782 273815.

COBOL 64/128

by Abacus

ADAMSOFT has for a number of years been an importer of the software products of the American software house, ABACUS. A COBOL Compiler for the C64 is now available, as is one for the C128.

COBOL is the mnemonic which stands for Common Business Oriented Language. It was conceived in the late 1950s as a language that would be capable of easy transfer between different manufactures computers, be easy to amend and extend as requirements changed and that relatively inexperienced staff would be able to use to write the programs. The US Department of Defence undertook most of the work and the now Vice Admiral Grace Hopper is credited with the invention of COBOL. The first working version of COBOL, COBOL-60, was available in 1960 and COBOL as a language has continued to advance over the years with new versions in 1965. 1974, and 1980 with a new version due out soon.

The American National Standards Institute (ANSI) is responsible for drafting guidelines for COBOL and the ABACUS version conforms to their 1974 standard, better known as ANSI74.

The ABACUS package consists of a disk containing the COBOL compiler programs and some sample COBOL user programs, and a manual explaining the peculiarities of the language. As far as I am aware no cassette version is available. The COBOL compiler programs are different for the Commodore 64 and 128 versions. The difference being that the C128 holds all the compiler modules in core, while the C64 has to read in various programs for specific menu actions and this suggest why no tape version is available. The COBOL programs written on the C64 version are not immediately compatible with the C128 version and vice versa. Therefore a conversion process is necessary before they can be used on the opposite machine. This is done by making use of a temporary file created as part of the CRUNCH option. This file, prefixed with 'CS', is read into the opposite machine by use of a CRIP command not identified in the main menu. However, apart from these there are no differences in the actual use of the packages.

After loading the COBOL programs which consists of an Editor, Compiler, Interpreter and Symbolic Debugger, a menu is displayed in the bottom few lines of the screen. The various options provided in the menu are selected by entering the appropriate option number. The full list of options is...

CRUNCH — This option is designed to reduce the amount of space your program requires. The reduction is gained by re-using the lines that have been previously deleted.

DEBUG — This is similar to the RUN option except in addition a series of debugging processes are included. A further debugging menu is displayed for user selection.

EDIT — This option is where the COBOL program is entered or amended and a further set of commands are available such as LIST, DELETE and AUTO (automatic line numbering). The AUTO feature is extremely useful as all six digits of the line number must be entered. Some of the commands are duplicated from the main menu.

GET — This option reads in the required COBOL source file. These are stored as two disc files with a prefix to the user name of C1 and C2.

NEW-NAME — This option will change the program file name on disc.

NEW PROG-EDIT — This deletes the current program from core and then enters the EDIT function for user input.

PRINT ON/PRINT OFF — These options switch the printer output feature on and off. While on, all keyboard input and screen output is output to the printer.

RUN — This runs the program, however, the COBOL program is first tested for syntax. If any syntax errors occur control is returned to the main menu. Otherwise the COBOL program begins to execute.

SAVE — This allows the current program to be saved to disc.

COBOL has four main divisions which are self explanitory and must be present in all programs. These are the IDENTIFICATION, ENVIRONMENT, DATA and PROCEDURE divisions. In mainframe COBOL compilers each has a part to play. However, I feel that in this version they are only cosmetic and while they are required, or syntax errors will occur, they have very little impact on the program itself.

COBOL is a highly complex and sophisticated language which in its full implementation consists of a large number of procedural verbs. For obvious reasons not all of them can be implemented on the C64 or C128 but the most commonly used are present such as ACCEPT/ADD/DIVIDE/MOVE/PERFORM/EXIT. One of two unique verbs have been added that map onto features of the C64 and C128 such as ACCEPT-1-KEY which equates to the BASIC GET verb.

The first of the main Divisions is DATA where all data requirements need to be described. However, a record structure is easily available which is not in BASIC. The second is the PROCEDURE Division in which each statement consists of one or more actions for the computer to do in grammatical English form, such as...

```
MULTIPLY PRICE BY QTY GIVING
COST.
or
PERFORM VALIDATE-ONE THRU
VALIDATE-END.
```

This makes it far easier to understand for inexperienced programmers than BASIC. However, careful use of data and paragraph names must be made or this easier understanding is lost. Also DO NOT forget the period '.', because COBOL is grammatical the period has a significant part to play in the program, particularly in the use of the 'IF'.

As it states in the manual, which is quite well written, COBOL on the C64 and C128 is not the best way to write programs. However, it would bring to the micro arena, a large number of computer professionals who write COBOL programs. Its best market area will be the students of schools and colleges who are learning COBOL and would like to continue the process on their own micros. At a price of around thirty five pounds for both versions it is not cheap but I believe well worth it, and after all no computer is complete without a COBOL compiler. **LK**

Contact: ADAMSOFT, 18 Norwich Avenue, Rochdale, Lance. OL11 5JZ.

SPEEDIPEN By JCL Software Ltd

Word processors are a little like adventure games. There are hundreds of them and they all contain the same basic commands. So what makes Speedipen any different from the rest. PRICE! £9.95 for a disk based machine code WP is very competitive. I suppose Speedipen is closer to a modern electronic typewriter than a professional word processor but the end result is much the same—an error free document. It can handle 250 lines of 80 columns (20,000 characters) with the option to store and retrieve all or part of a document to/from disk or tape. Full screen editing, much the same as the 64's BASIC screen editor, is provided which gives it a familiar feel and makes it very easy to use. If you are part-way through a word as you reach the right hand margin, that word will be brought down to the next line. This avoids having half-words on the screen. However, this 'word-wrap' feature can be turned off if you don't like it. There are facilities to set margins and tabs, to right justify all or part of a document, to centre a line of text, to locate any word within a file and several others. Most of the more common Dos commands can be accessed, allowing you to format a new data disk or delete a file etc etc. There is nothing worse than finding you can't format the disk onto which you want to save your 4 hour masterpiece without leaving the programme AND YOUR TEXT. A non destructive directory is also included. Options are available to change the device numbers of disk and printer with additional commands to allow you to alter your printer set up. If you specify your printer as device 7 this will send all printer commands to the user port. This, with a suitable cable, will enable the use of a non Commodore printer such as the Epson FX80. The Centronics/user-port cable I use did not work with this option. However, by loading in a popular Centronics driver routine prior to loading in Speedipen, I overcame this without any problems.

Conclusion

For the casual word processor user Speedipen should more than fit the bill. It is fast and easy to use and yet sophisticated enough to remain flexible. The 28 page manual is both clear and concise and includes a handy quick reference guide. It is not going to take the WP market by storm but will fit into the as yet sparsely populated low cost business software niche. The only problems I encountered were the inability to enter auto insert mode and finding myself unable to exit the programme by the means they described. Neither of the problems caused me any heartache and may well be fixed in the final version.

IB

Price: £9.95
Contact: JCL 1 Sheffield Rd, Southborough, Tunbridge Wells, Kent TN4 0PD.

MICRO MEDIA Computer Supplies

0707 52600 or 0707 50913

Rydal Mount, Baker Street, Potters Bar, Herts EN6 2BP
Dept YC.

Unbranded 5¼" Discs
Certified lifetime warranty hub rings, envelope, labels
Prices per 10 Discs

	10+	30+	50+
SS/DD	6.50	6.00	5.50
DS/DD	7.50	7.00	6.50

3M 5¼" Lifetime Guarantee

SS/DD	10.80	10.40	10.00
DS/DD	12.80	12.40	12.00

3M 3½" Lifetime Guarantee

SS/DD	20.50	20.00	19.00
DS/DD	27.50	27.00	26.00

Unbranded 3½" Discs

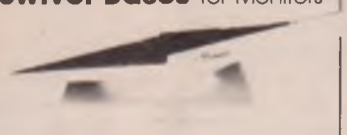
SS/DD	17.00	16.00	15.00
DS/DD	19.00	18.00	17.00

Disc Care
Discs with 15ml cleaning solution
5¼" Head Cleaner 4.00
3½" Head Cleaner 5.00

5¼" Disc Doubler
Utilise reverse side of single sided discs
Accurate position guide **£5.50**

Dept. CC1
Next day delivery available.
Please ask for details.
All prices inc. of P & P UK only.
Please add 15% VAT.

Swivel Bases for Monitors



Pan tilt revolves around 360°
12.5° tiltable up and down
adjustable by front mechanism.
12" Monitors **£12.00**
14" Monitors **£15.00**

Copy Holder
Adjustable with desk clamping arm
£13.90

Printer Stand
For 80 column printers

Dimensions 405 x 325 x 100mm
Made from 5mm clear perspex **£17.90**

PRINTER RIBBONS
Mixed types for quantity breaks
1 off if ordered with other products

	2+	5+	12+
Canon PW1156/1080	3.20	2.70	2.50
Red Brown Blue Green	4.70	4.20	3.90
Commodore			
1516/1526/4023 MPS 802	3.80	3.00	2.80
2022/4022	2.80	2.40	2.20
Red Brown Blue Green	4.00	3.30	3.10
MPS 801	3.70	3.10	2.90
Red Brown Blue Green	4.90	4.60	4.20
Vic 1515/1525	2.80	2.30	2.10
DPS 1101	2.30	1.90	1.70
MPS 1000	2.80	2.40	2.20
Red Brown Blue Green	4.00	3.30	3.10
MPS 803	3.50	3.00	2.80
Red Brown Blue Green	4.95	4.65	4.25
Epson FX/MX/RX 80	2.80	2.40	2.20
Red Brown Blue Green	4.00	3.30	3.10
Kaga KP 810/910	3.20	2.70	2.50
Red Brown Blue Green	4.70	4.20	3.90
Shinwa CP 80	3.80	3.00	2.80
Star Gemini 10x 15x	1.50	1.20	1.10
Red Brown Blue Green	2.40	2.00	1.80

If the ribbon you require is not listed ring 0707 52698 and let us quote

Computer Paper
Plain, fanfold, micro perf edges

Size	Weight gsm	1000's per box	Price per box 1 box	2 bxs+
11 x 9½	60	2	12.50	11.80
	80	2	15.50	14.20
EXACT A4	70	2	20.90	18.50
11⅞ x 9¼	90	1	13.20	11.00

Computer Labels

Cont fanfold Sprocket fed	Price per 1000 1,000	2,000+
70 x 36	4.20	3.80
89 x 36	4.30	3.90
89 x 49	5.90	5.30

Please state no of labels across sheets (1, 2 or 3)

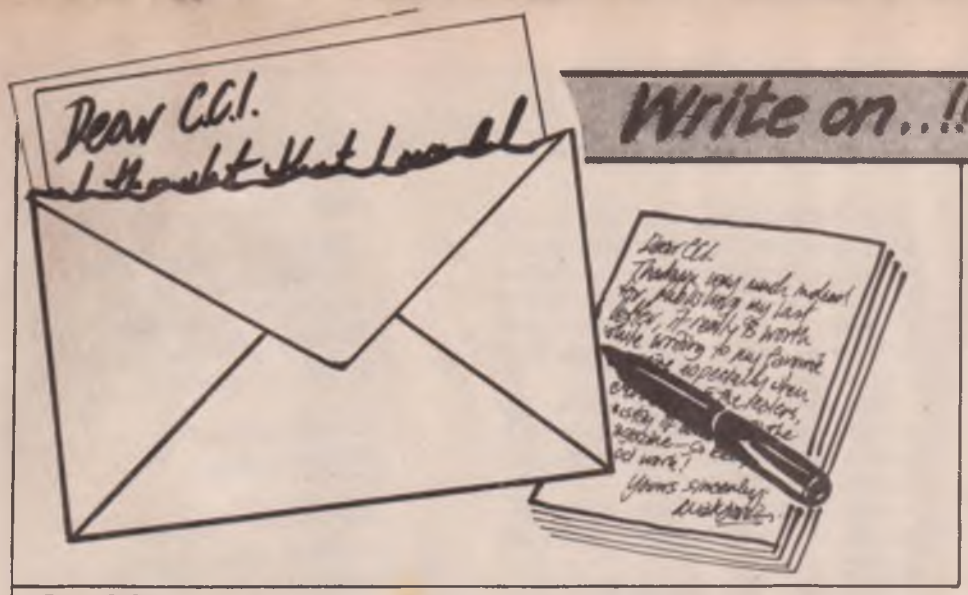
Disc Boxes

MM 100	5¼ x 100	11.70
MM 50	5¼ x 50	8.70
MM 80	3½ x 80	11.90
MM 40	3½ x 40	8.50

All MM boxes anti-static with lock

24-Hour Credit Card Orders
VISA
0707 52698

Write on..!!



Dear C.C.I.
I am a teacher at the Secondary School named below and this week I looked at a copy of your magazine (Jan '87) brought in by a pupil.

I was worried by two things. On page 52 an advert for 'Hot Software' was accompanied by explicit pictures and an offensive description. Also, on page 66 a picture of a very scantily clad girl — Miss International Road Safety Year '86. Your magazine is aimed at, and presumably read by many young, games playing, Commodore users. Although there are daily newspapers with scantily clad girls in, at least they are aimed at older readers. Do you not feel that you have an editorial and moral responsibility for your readers? Or do you feel bound to accept adverts purely on a financial basis. Your magazine's content is bound to influence its readers and I am saddened that you have not taken this more seriously.

Incidentally the child who had your magazine was aged 11.

Yours faithfully
Ms E Nicolson, Hampden Park School, Eastbourne

There is always a problem when an advertisement or photograph which may offend some readers is presented to the magazine. However, there are a number of considerations — apart from the financial. In this case 'Hot Software', in the advertisement text there is, in fact, no offensive description. There may be in the program but we have not seen that and therefore have no right to offer an opinion. We think so-called 'Beauty Competitions' absurd and infantile but have no right to deny those who do not share our opinion their right to enjoy them 'bikini' clad or nude. The 'scantily clad' Miss International Road Safety, might be considered a joke in bad taste — our Super Felix column is intended always *to be that kind of light relief. In any case, she is wearing substantially more than girls on any beach these days.*

Our audience is largely over 16 and by far the majority of the material published is of a technical nature (hence Super Felix) but all *aspects of life are these days influenced by computers, and we personally do not see any need to protect even 11 year olds from the sight of the female or male human body. We would rather you had objected to the amount of violence in computer games and the advertisements for 'Cobra' (Sylvester Stallone) on P.59 or 'Blood and Guts' (P.67) or '1942' (P.64) or 'Star Soldier' (P.70). Why is it that sexuality is considered more offensive than killing?*

Dear C.C.I.
It seems that all the magazines get letters of complaint but very few about the good things concerning Commodore computing.

I started my computer "career" with a CBM 64 when it was first released in Great Britain, since then I have upgraded to a CBM 128 which for me in a business status is excellent (I have used Superbase 64 and Easyscript to catalogue an entire video library and also to produce monthly top 50 lists) and the data that I've produced using a 64 is transferable to the 128 in its native mode.

Dolphin Dos... phew what can I say? Having this fitted to your drive and CBM 64/128 is like buying a new computer imagine, all you adventure players with disk drives, what it would be like to have a game llike Zork in constant memory. The response times would be excellent and this is the sort of effect you can get with Dolphin Dos. Furthermore I copied a whole disc in little under 20 seconds and when your handling large amounts of data this is a boon, believe me.

Many thanks to Evesham Micros. Well done chaps/ladies you're the best company that I've dealt with.

Being a CBM owner has introduced me to lots of other people around the world, something that I think hasn't had the same impact with other computer users.

For instance I now play STARGLOBE 3, a play by mail game run by TimePatterns and it is excellent. I use my computer for sending in my moves and also Superbase for keeping tracks of all my tariffs. Nice one, TimePatterns.

The CBM 64 isn't just a HOME COMPUTER! One of the firms in Stamford where I live called Bowman and Sons use a 64 connected to a electronic box to cut and shape stone for building work and believe it or not the routine for doing so was done in basic (this place is a fine example of a 64 doing more than play games).

Admittedly Commodore seem to have got their marketing strategy a bit twisted but now with reductions in the price of the Amiga and a lot more software coming out for it I think I will have to invest in one. Mind you, I'll still keep the trusty 64/128 because it has its uses.

One final thing Direct Disc Supplies are brill. This company is very fast in coming up with the goods; impressed; yes certainly.

Malcolm James Harnden
CAPTAIN PASIMOV OF THE STARSHIP THE ADVERSARY

Dear C.C.I.
Congratulations on producing an excellent mag, the bumper January edition (200 pages) is fantastic. Talk about value for money. "Not Many Benny".

I am a Plus/4 owner (stop laughing), I was wondering if you could send me a list of all text adventures for the Plus/4. I am a dedicated adventurer, you known, up all night bribing Trolls, fighting witches, exploring castles etc, "Oops there goes another television tube".

It will probably take me a couple of months to read this months issue, the Oskars compilation was fantastic, although there wasn't a text adventure Oskar for the C16.

Out of this year'sMagazine Oskars, I think CCI should get one. You get my vote. (Grovel, Grovel).
Yours, very satisfied,
James Bissell, 26 Yews Lane, Kendray, Barnsley, Yorks.
P.S. If anybody has any free goodies floating about, send them to my address (any FREE 64 computers you don't want!).

Dear C.C.I.
There appear to be a few readers of CCI who are having problems entering my 'Printer Enhancer' program published in the November issue. The listing is in fact correct, so if you find persisting errors then they are just typing mistakes. There is a very short machine-code routine at the beginning of the program, and at least one reader entered this incorrectly. If this is then executed, errors can occur where there were none, which causes much confusion. So, my final words, must be to just persevere, and make sure you enter lines 60-83 correctly!
Yours
Duncan Anderson, Sittingbourne, Kent.
Hope this clears up any problems.

Dear, C.C.I.,

I would be most grateful if you could possibly mention my address in the next available edition of your magazine, as I hope to start a User group in my area. Could you also mention that a S.A.E. needs to be supplied.

Yours most faithfully,

Mr. Stephen Hamer, 98 Crebilly Road, Ballymena, Co. Antrim. BT42 4DS.

Good luck with your project!

Dear C.C.I.

Having read your January issue I feel compelled to write to you after seeing a letter by Jack Harris of London concerning the purchase by the Ministry of Defence of a large number of Ladybird's 'How computers work' books.

I left the service myself quite recently and I know for a fact that these books are used as an introduction before attendance for students about to attend a basic computer users course, who have no knowledge of computers or programming whatsoever.

Rest assured Mr Harris, soldiers do not sit in their missile silos waiting to nuke Russia reading 'How computers work' by adybird!

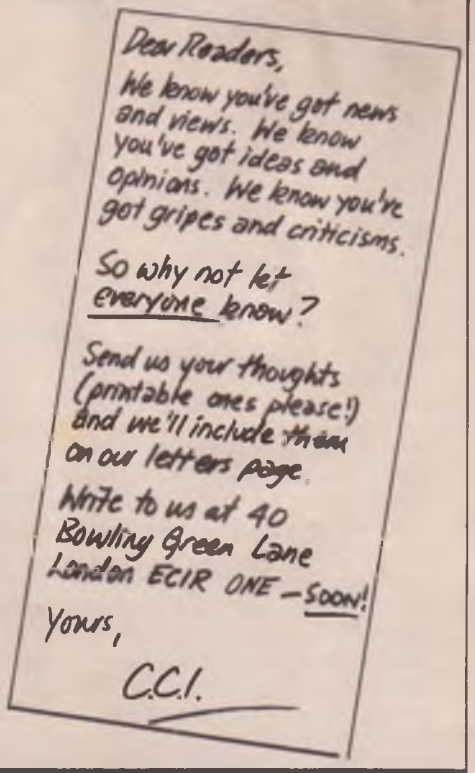
Please publish this letter as the gentleman in question needs to be put straight.

By the way your magazine is the best Commodore publication on the market catering for the whole spectrum (no relation) of the home computer field.

Your faithfully

D. M. May, Hookwood, Surrey.

What do soldiers read while sitting in their missile silos? (Answers on a post-card to....)



Dear Rae...

This month your letters are answered by Rae West. Rae is the author of three large reference books on Commodore computers; the latest is Programming the Commodore 64, following Programming the VIC and Programming the PET/CBM. All are published in the UK by Level Ltd. Rae is also published in the USA by Compute! Books.

Dear Rae,

I would first like to say how much I liked your book "Programming the Commodore 64". It was well written, with lots of good examples and information. For the last month, I have been writing a game in machine code. One routine is a four-way scroll, similar to yours, which runs on the raster interrupt, with the bottom ten lines kept stationary for the score etc. The scroll is very smooth but quite slow. Could you please tell me if there is any way of speeding the scroll up?

Kevin Hunt, Sompting Lancing

The scroll routines I've written are about as fast as it's possible to get them. For example, scrolling up or down requires a poke into a register controlling the vertical position of the screen, with an entire screen shift every 8th poke. So 7 times in 8 the scroll is instantaneous; the other time the limitation is imposed by the chip speed.

It's best to understand the limits of the 64 (as with any computer) and take these into account when designing games, or any other programs.

Dear Rae,

'In November CCI you said you'd sent Mr Fletcher a copy of a diagram showing graphic combinations available with the C64. Could you post me a copy? I would find it very helpful. I don't know how to put sprites higher than 16320 in memory'.

J. Bradby, Coatbridge.

Yes — to do this you have to alter the way the VIC chip is connected to memory. It can be wired in 4 different ways, but the subject is too complex to fit here.

Dear Rae,

I recently took a Plus/4 computer to a friend of mine who resides in Spain. Prior to this, I had tested the computer and found that in all respects it functioned correctly.

However, after it had been set up with a Spanish-manufactured TV set I found that it functioned perfectly with the exception of the sound. As far as I know most European countries (except France) have the same vision and sound channel facilities as Britain, and it seems stupid to conclude that Spanish TV manufacturers exclude the rest of the European market from their product. Any helpful comments or suggestions?

Tony Wright, York

No; I'd also guess your computer would work there. Personally, I'd contact a technical person (not a salesman) from the relevant TV company.

Obscure Hardware Dept:

It's impossible for me to check out all hardware combinations. Can anyone out there help?

D. H. Findell, Ruislip, wants to konw if an Ibica LTR-1 printer is suitable for a Plus 4.

E. N. Daniels, Merriot, is trying to track down a product called 'UPCI'.

P. J. Cooper, Hendon, wants an IEEE interface to connect his C128 to Commodore's 8023 printer, which will work with Wordcraft, Busicalc, and Micro-Swift.

And finally, **C. G. Hooker, of Minchinhampton,** wants to know how to get an English £ sign on his Texan/Kaga KP-810 printer with Vizawrite.

The Art of MIDI
Part 2

— Ian Waugh Draws the Outlines: MIDI Messages, Channels and Modes

Last month, MIDI messages were glibly described as digital signals running along MIDI cables. Other than that, the only other thing I said about them was that there are lots of them. Time for a few more details. Let's see just exactly what MIDI messages do.

Consider a typical synthesiser and think about what you would need to do to play it by remote control. You'd need to be able to specify which notes were switched on and off — and when. You'd want control over such things as modulation, pitch bend and patch changes. Many keyboards are touch sensitive (the harder you hit a key, the louder the note) and many have an after touch facility which will activitate, say vibrato, if you press the key down further after striking it.

Well, this is exactly the sort of information which MIDI messages convey. There is a different code for each of these things and the interface built into each instrument either converts your performance into MIDI messages or converts the messages into a performance. Let's look at this a little closer.

MIDI messages are generally a series of eight-bit bytes — just like the eight-bit bytes whizzing around your Commodore. (if you're not *au fait* with bits and bytes, don't worry as you can manage with MIDI quite well without them. The more you do understand, however, the better you'll be able to utilise your equipment.) It takes a few bytes to tell the receiving instrument exactly what is supposed to happen.

The first byte will indicate a function (this is known technically as a status byte) such as note on or off and the second byte will be a data byte (that *is* its technical name) specifying exactly which note is to be turned on or off. It's even a little more complicated than that as the status byte also specifies the MIDI channel but I can see your eyelids beginning to close so that's enough of that.

You'll only need to know the exact format and construction of MIDI bytes if you use editing software which gives you access to such depths of the system. Then you can pore over tables of MIDI messages to your heart's content but most users will not want to get so involved, at least not at first, so we'll stop there.

All this is worth mentioning, though, to show that MIDI isn't anything terribly clever: it's just an application of standard eight-bit computer technology which you use whenever you switch on your Commodore.

So, with all these messages flying around from instrument to instrument, in order to avoid cacophony of the first order we need a way of specifying which messages are intended for which instruments. MIDI handles this quite simply by allowing us to allocate a message to any one of 16 channels. Individual instruments can then be tuned in to receive on a particular channel.

This brings us to the vexed question of MIDI modes. These are extremely important and sometimes apt to be confusing (you'll see why in a moment) so we'll take them slowly. First, a short explanation of polyphonic and monophonic.

A monophonic (mono) instrument can only play one note at a time. This includes the trumpet and violin. A mono synth would only sound one note no matter how many keys were pressed down. A polyphonic (poly) instrument can sound many notes at once. Examples include the piano, harp and organ. Most synths nowadays are polyphonic but as full polyphony still costs money most are only so-many-note polyphonic. For example, Yamaha's famous DX7 is 16-note polyphonic and Casio's equally famous CZ101 is 8-note polyphonic (although combining oscillators reduces this to 4-note polyphony).

Now to the MIDI modes. There are actually four modes and to make matters even more complicated their operation can vary depending upon whether the instrument is transmitting or receiving.

Mode 1 is Omino On/Poly Mode often referred to just as Omni Mode. 'Omni' means 'all' and a receiving instrument will accept messages on all channels (1 to 16) and attempt to play them accordingly. A transmitting instrument will usually transmit on channel 1 but some let you select the transmitting channel. This mode was originally designed as an idiot-proof mode but other modes are more versatile. Some instruments, especially organs and older synths, still use it.

Mode 2 is Omni On/Mono Mode. This is similar to Mode 1 except incoming information is assigned to just one voice (mono, see). When transmitting, messages for only one voice will be sent.

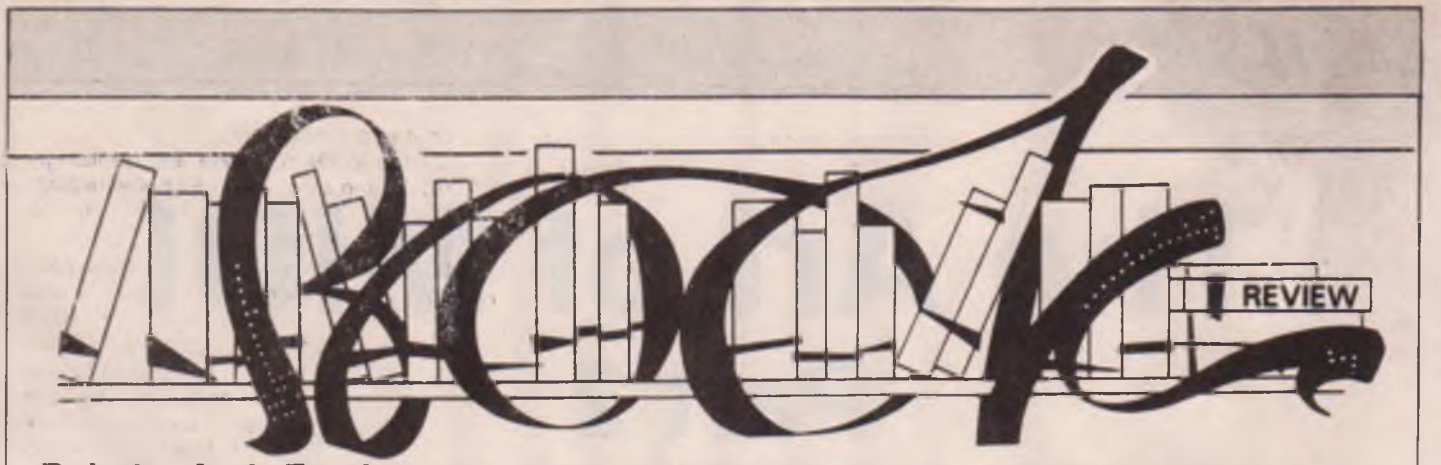
Mode 3 is Omni Off/Poly Mode, usually just called Poly Mode. Omni is off therefore the receiving instrument will filter out information not assigned to its channel. Poly is on so it responds polyphonically. When transmitting, it sends polyphonic messages on the set channel, exactly like Mode 1. Obviously, in order to work, the receiving instrument must be set to the same channel number as the transmitter. This is probably the most often-used mode.

Mode 4 is (you can probably guess) Omni Off/Mono Mode, usually just called Mono Mode. This is rather special but it's also the most confusing of the four modes so read carefully. When this is selected, each voice is assigned its own channel number. For example, if a 4-note synth was tuned to channel 1, voice one would respond to information coming in on channel 2... up to voice four, which would play whatever was sent on channel 4. A transmitting instrument, thankfully, behaves the same way, transmitting voice one on channel 1, voice two on channel 2, etc.

Mono Mode is especially useful for multitimbral synths such as Casio's CZ range as you can play several parts each with a different sound from one instrument. It is also useful for use with guitars.

Next month we'll look at the applications of each mode and the transmission and reception of MIDI messages — and some of the problems which can result. Yes, MIDI isn't all a world of milk and honey.

I.W.



Robots And Empire — Isaac Asimov — Grafton Books — £2.50

Robots as heroes are no new phenomenon, there have been countless tales where the protagonists have been non-humans answerable only to the Laws of Robotics. The difference with the two created by Isaac Asimov in 'Robots And Empire', is that not only are they almost human, but also they are entirely believable.

Giskard and Daneel are, in fact, superior to most humans — as robots in all good robot stories should be — but then, of course, their creator is one of the most prolific and experienced SF authors alive today. If he doesn't know how to bring robots to life — if you'll excuse the expression — who does?

The two robots are the protectors and companions of 'spacer' Madam Gladia Solaria who lives in semi-retirement on Aurora. Middle-aged by 'spacer' standards, (although she looks to be only in her mid-forties she is actually 235 years old!), she still remembers a passionate though short-lived affair with Earthman Elijah Baley, which resulted in the birth of a son; an incident which was hushed-up at the time and which she hopes has been forgotten with the passage of time.

Gladia is disturbed by the arrival of Levular Pandamus, a right-hand man to the evil Mr. Amadiro, villain of the piece and would-be conqueror of the Galaxy. Pandamus, who turns out to be Gladia's unknown great great great grandson, wants her assurance that he is not also the great-great great grandson of Elijah Baley who, when he last was the sworn enemy of Amadiro. For he is, then his career is finished.

Also involved in the story is Baley — descendant of Elijah's wife, Jessie — and an inch bit Baleyworld, named for his illustrious ancestor.

How D.G., Galia and, above all, Daneel and Giskard endeavour to thwart Amadiro's dastardly efforts to bring about inter-galactic warfare is the basis of 'Robots And Empire', but it is the characters of the two robots that grip throughout. Are they really what they seem or — something more?

The book is well up to the usual Asimov standard. What more can one ask than that?

D.M.

The Encyclopedia Of Science Fiction Movies — Phil Hardy — Octopus Books — £12.95

The first Science Fiction movie was made — would you believe? — in 1895, by the appropriately named Lumiere brothers, Louis and Auguste. 'Charcuterie Mechanique', ('The Mechanical Butcher'), ran for all of one minute and showed a futuristic automated factory in which a machine converted a live pig into processed products. The pig was pushed into one end of the machine and out of the other end came ham, spare ribs, bacon and sausages. The film was catalogued under the heading 'Humorous Subjects!'

This is one of the numerous nuggets of knowledge contained in 'The Encyclopedia of Science Fiction Movies'. It's also a 'must' for the SF movie buff, or any other film buff for that matter, with over 450 black and white stills and 50 colour photographs.

Phil Hardy, and his collaborators, have collected annotated and commented on over 1300 movies in this magnificently researched encyclopedia. There are comprehensive plot summaries as well as complete statistical information on directors, producers, some writers, cinematographers and credits of every film but what makes the book even more enjoyable are the additional pieces of information which the authors throw in for good measure.

For example, Lloyd Wilcox who made 'The Forbidden Planet', in which the lovable Robby the Robot made his screen debut, first directed 'Lassie Come Home'.

Another interesting snippet is that 'The Black Sheep' (and what a prophetic title that turned out to be), was Bela Lugosi's last film for the star died (after de-addiction to morphine), soon after it was released in 1956. All these extra items make reading the book, or just dipping into it, almost like a voyage of discovery.

And what titles there are! 'Abbot & Costello Meet The Killer, Boris Karloff' . . . it turned up on T.V. a few weeks ago . . . 'I Was A Teenage Werewolf', but how about 'Jesse James Meets Frankenstein's Daughter', 'I Married A Monster From Outer Space' (1958), or 'The Attack of The Killer Tomatoes', (1978)?

But the way, tomatoes have not been our only assailants. Variously we've been attacked by 'Crab Monsters', (1956), 'Puppet People' (1958), 'Mushroom People', (1963), 'Phantoms', (1978), and — in 1958 — even by a '50 Foot Woman', who squeezes her unfaithful husband to death in one oversized hand, and in which film the special effects were so dire that her hands was the only piece of her ever seen on the screen!

When Mr. Hardy thinks films are lousy he says so. He calls 'High Treason' (1929), a British film which starred Benita Hume — the wife of Ronald Colman, 'a mixture of political naïvet and downright silliness'. And 'The Creature With The Atom Brains', (1955) which starred Richard Denning twenty years on to be the Governor of Hawaii in 'Hawaii Five-O'. 'It is', says Mr. Hardy not mincing words, 'an atrocious film'. Such honesty is delightfully refreshing.

As with many encyclopedias a few errors are bound to creep in. Some of the stills are incorrectly captioned. It includes foreign-made films as well as American and British, and appendices on the All-Time Movie Flops', showing that, as of 1985, the top box office SF film was E.T. – The Extra Terrestrial', The film which appears most frequently on the critics list is the 1926 German-made 'Metropolis', Phil Hardy calls it 'the classic of the genre' but it flopped at the box-office, nearly bankrupting UFA the company who financed it.

The encyclopedia is updated to 1985, not so SF movies as such, would be useful if Octopus Books would bring out an up-dated edition, and make it just as good as this one all enjoyable count of possibly useless but absolutely fascinating information.

D.M.

Ski Writer

When I grow up I'm going to be a Circus Elephant. Circus Elephants learn one set of tricks which they perform every now and again. In return, they get fed, watered, housed, loved by the kids — even mated once in a while. Software Reviewers, on the other hand, have to learn a new set of tricks every month and nobody loves them. We don't even get scantily clad ladies sitting on our backs and waving to the crowds.

The set of tricks I've been learning this month have enabled me to operate yet another Word Processor. It's called Ski Writer and I've nobly resisted the temptation to make appalling puns about Winter Sports. The name's got nothing to do with snow and mountains anyway. The program was written by a man called Ken Skier and it's received some pretty good reviews in it's native North America. Which is not surprising, as it's a pretty good Word Processor.

Ski Writer is marketed in the UK by Mastertronic, who made a lot of friends when they started selling goodish games at pocket money prices. If this is a sign of what they intend to do with serious software, I'm certainly in favour. Whilst £15 (£13 for the cassette version) is not exactly pocket money, it's less than half the price of a number of Word Procesors which aren't anything like as good.

For a start, it's F-A-S-T. Moving around the text is almost instantaneous if you use the "up a screen", "down a screen", "start of text" or "end of text" facilities. It incorporates wordwrap (i.e. you don't get confusing broken words at the end of screen lines), but then so do most others these days. On-screen underlining is useful (provided you have a Commodore printer or hardware interface — like so many transatlantic products, Ski Writer doesn't have a facility for using Centronics-type printers direct). The usual Word Processor facilities are all there — Find, Replace, Format, Justifying, Centering, Block manipulation, Previewing, Headers, Page numbering.

All formatting instructions are issued by what Ski Writer calls "Dot lines". Any line that begins with a full stop is considered by the system to be an instruction. Some printer instructions can be entered in this way provided the "dot instruction" is defined in advance.

I didn't like the single sheet instruction manual. Help screens are available and can be printed out but surely a package of this calibre deserves a more comprehensive manual. Even at £15.

Users of other Word Processors might find some of the features of Ski Writer a little confusing. For instance, the Delete Key erases the character under the cursor and not the one to the left as we have come to expect from the C64. The Word Processor is in permanent "Insert" mode, which prohibits overtyping. CLEAR and HOME move the cusor to the beginning and end of the current line respectively.

Notwithstanding these little winges, I have no reservation in recommending Ski Writer as excellent value. It's a professional Word Processor at a toy price.
Contact: Mastertronic, 8-10 Paul St, London EC2A 4JH. Tel: 01-377 6880.
T.L.

Oil Magnate

Mention *oil* and in most people's mind the image of the television series *Dallas* will start to form. I happen to be one of those unfortunate individual's whose spouse is hooked on this *soap-opera* and on the evening it is broadcast I remove myself poste-haste from the room and now play 'Oil Magnate'. The aim of this game is to amass a very large sum of money which I thought was the idea of the characters in *Dallas* — although in *JR*'s case it seems to be a series of object lessons in back stabbing people.

This game follows the normal rules of a board game — you are given a quantity of money and then have to buy and utilise resources. In this case the player has to purchase the service of geologists in order to locate the oil itself. A choice of varying levels of skills of the geologists opens the risk element and this is followed by the purchase of the drilling equipment. Both of these resources have variable cost depending on your selection and your bank balance by this point has declined considerably. The final stage is to purchase the plots of land on which to drill and a large selection is given.

At least you reach the stage where things start to happen and you make your choice of which plot of land to drill. If everything is in your favour you should hit oil — if not, you can continue drilling deeper until either you hit oil or zero bank balance (whichever comes sooner). Good use is made of the PLUS/4 graphics to animate the drilling sequence. When oil is struck the display indicates how much profit you have made from this episode, although the profit is also dependent on the prevailing price of oil. If you are unfortunate enough to strike oil and you have also run out of money you are declared bankrupt and the option is given to leave or start a new game.

I found **Oil Magnate** antagonisingly frustrating since it rapidly became clear that I do not have a great future in the oil business. A game with an addictiveness that was difficult to break since there are so many elements of uncertainty and permutation. In addition to the PLUS/4 high resolution graphics the game also makes use of the sound abilities for the drilling sequence — perhaps in my case the sound of the bailiffs from the bank smashing down the front door would have been more appropriate. The game is single-player only although I have a feeling that it would not be too difficult to change it into multiple-player. I would have liked to have seen a selection of levels of difficulty, or maybe this an subconscious admittance of how bad my performance was with **Oil Magnate** Recommended.
B.D.
Supplier: Tri-Micro Inc., 14072 Stratton Way, Santa Ana. CA 92705. USA.

Ten Pin

Ten-pin bowling was last in vogue in the UK during the late 1950's through to the early 1960's. Seemingly, the advent of television removed the need for people to actually leave their homes for entertainment and since this particular pastime had barely established itself, it suffered declining audiences together with the cinema and football matches. Anyway, enough of the social history and some explanations since many younger reader have never experienced the real thing such as the elation of *smash* or the cringing embarrasement of the ball grinding to a halt halfway down the lane. You mean it happened to you too?

Having played Ten-pin in younger days and learned the golden rule — that is to make sure that your approach is clear of the hole in the ball at the moment of release. It is quite difficult to knock the pins down given the combination of distance to the pins and the fact that the bowling lane has a degree of curvature (*cumber* towards each side.

This simulation from Tri-Micro accurately reproduces this effect and makes good use of the PLUS/4 graphics to give the player a feeling of the pleasure and frustration of ten-pin bowling. On immediate benefit of involving a computer is the complete elimination of cheating on the scores. The simulation allows for two players and has kept both myself and others occupied for many hours. Happily use is made of the PLUS/4 software skips mask out the naughty language when playing. A nice one.
Supplier: Tri-Micro Inc., 14072 Stratton Way, Santa Ana. CA 92705, USA **B.D.**

THE FINAL CARTRIDGE II®

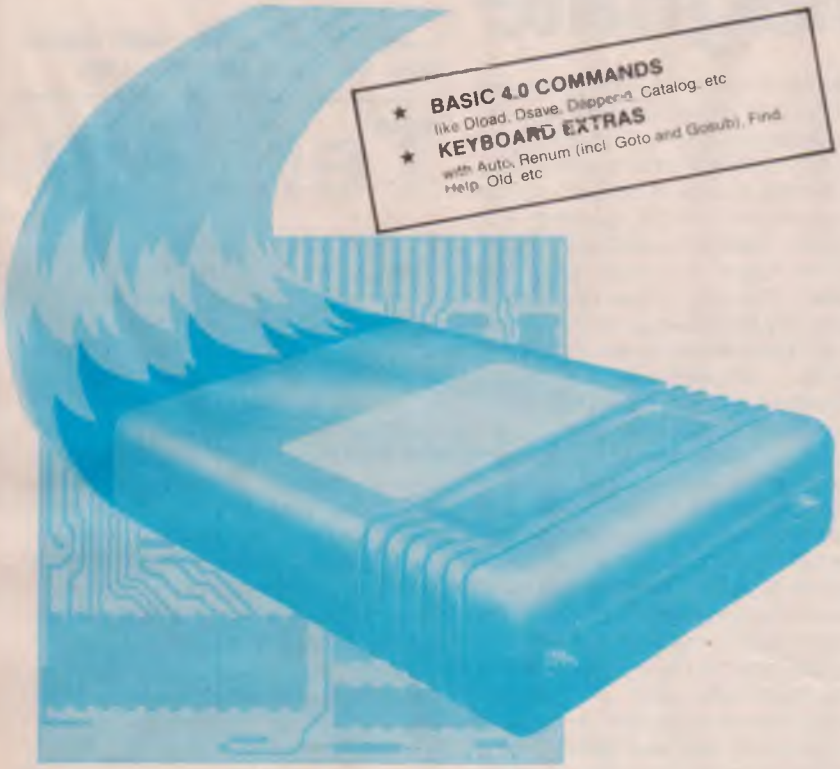
START 1987 WITH THE GREATEST UTILITY EVER!
OVER 50,000 ALREADY SOLD WORLDWIDE!

★ **DISK TURBO**
★ **TAPE TURBO**
10 times faster — compatible with standard turbos

★ **KEYBOARD EXTRAS**
Pokes and Syscalls in Hex. Type command operates your printer as a typewriter

★ **BASIC 4.0 COMMANDS**
like Dload, Dsave, Dappend, Catalog, etc
★ **KEYBOARD EXTRAS**
with Auto, Renum (incl. Goto and Gosub), Find, Help, Old, etc

FREEZER
★ **MENU DRIVEN**
16 SUB MENUS
Colour changes
4 resets
Centronics/serial screendumping
Print vector setting
Reverse printing
Tape to disk Back up
Disk to disk Back up
Disk to tape Back up
Back ups are packed files on tape or disk, including their own fast loader and starter
★ **GAME KILLER**
Kills sprite to sprite and or sprite to background collision
★ **COMFORTABLE EXTENDED M.L. MONITOR**
INCLUDING
Relocated load, Scrolling up and down, Bankswitching, printing
MONITOR DOES NOT RESIDE IN RAM!
INCLUDES DISK DRIVE MONITOR
★ **FREEZER SWITCH**



★ **ADVANCED CENTRONICS INTERFACE**
Compatible with all the well-known centronics printers and Commodore printer programs. Prints all the Commodore graphics and control codes (important for listings).
Including screen-dump facilities. Prints Low-Res, Hi-Res and Multicolour. Full page! Even from games and paint programs, like Doodle, Koala Pad etc. Searches automatically for the memory address of the picture.

★ **RESET SWITCH**
Resets all protected programs

★ **PREPROGRAMMED FUNCTION KEYS**
Run, Load, Save, Catalog, Disk commands, List (removes all list protections)

★ **24K EXTRA RAM FOR BASIC PROGRAMS AVAILABLE**
Two new commands "Memory read" "Memory write". They move 192 bytes with machine language-speed anywhere in the 64K Ram of the C64. Can be used with strings and variables.

£39

STOCKISTS
COMPUTER CENTRE
(Hornchurch)
174 High Street,
Hornchurch,
Essex
Tel: 0424 75613

MEGATEK COMPUTERS
221 Tottenham Court Rd.,
London W1
Tel: 01-323 4698

HI VOLTAGE
53-59 High Street,
Croydon,
Surrey
Tel: 01-686 6362

MEEDMORE LTD.
28 Farriers Way Ind. Estate,
Netherton,
Merseyside
Tel: 051-521 2202

SOFT CENTRE
2 Bruntsfield Place,
Edinburgh
Tel: 031-229 3484

Or direct from:
H&P COMPUTERS UK
9 Hornbeam Walk,
Witham,
Essex CM8 2SZ
Tel: (0376) 511471
Trade enquiries welcome

Adventure!

Welcome again to another journey into the world of adventuring. Did you get Ultima IV? Are you hopelessly stuck? I bet you are, because this latest inthe Ultima series has definately been the best and trickiest of the lot. This month I have taken a close look at it and can reveal a few of its secrets which will make it clearer for you without completely giving the game away. A sort of New Year-New Clues resolution from us to you (if you are the sort of Person that likes to battle on regardless, then don't read the tips, I give you fair warning!). Also there is the rewritten and repackaged Silicon Dreams trilogy from Level 9, a couple of tapes from the Incentive Adventure Writer system and a good look at Activision's Labrynth.

Before all this though I must say that the New Year came and went with a sort of whimper as far as good new adventure software was concerned. Up to now it was always considered to be THE time for releasing the mega game of the Year. Or is it because the complexity and inventiveness of adventures, are simply taking too long to write? Time will tell, but personally I think its all a marketing ploy. They've got finished product, they're just waiting for the right "time" to release them. Come on software houses lets have the goods now!

Adventure News
Sherlock Goes Soft

US Gold is set to release 221b Baker Street which is a 3-d graphics only adventure based on that popular board game of the same name. There are 30, yes folks, 30 cases to solve with additional case disks to follow. Holmes along with Watson, Lestrade and a female detective by the name of Irene Adler, (Remember her in the original? Holmes said she was the only woman he could have loved. She certainly wasn't a 'tee hee!) compete with each other to try and be the first to solve each case from the many clues given in each location on screen. The board game is great fun, lets hope the software is just as good. Its disk only and retails at 14.99

Ket Goes 64

Incentive Software is releasing their famous Ket Trilogy for the 64, but with a difference. Included in the game is a map drawing routine, so you can forget that Pen and Paper, the computer does it for you. There is even a small man with a Pointer to let you know where you are on the map. Great idea. The three adventures are bundled on one tape for £7.95

A Plea for Help

Dear Andy,
Last month I bought the Triple cartridge adventure pack for the C16 by Scott Adams and am stuck on Strange Odessy.

I went outside the scoutship and found the boulder in the cave, how do I read it before blowing it up? What are the goggles for, and what do you do with the alien painting. Also my biggest problem is how to open the maintenance hatch. Thats all I want thanks.
M. Frantzis.

Well, you don't want much do you Mr Franzis? Still, that's what we're here for. The boulder just needs to be blown up. There's nothing to read; the goggles are to be used in the mine. Take no notice of the painting, and to open the hatch you need to pry it open with the metal from the mining colony. A.M.

Dear Andy,
Whilst enjoying your New Adventure Section, at least to start with, both my wife and I were outraged by your crass and ignorant comments about the 'Archers'.

If you find the finest programme on radio so boring, you have no right whatsoever to review the game of the Archers as there is no way you can be objective. You Moss, are dangerous and we, and other Archer's fans, demand an apology.
Larry & Suzanne Viner LONDON

Why? Some people enjoying watching paint dry and you might call that boring, but they wouldn't. I respect your feelings on the 'Archers' and I suggest you stick to just listening to it on the radio as the combined effect of playing the game and listening to the radio would be a permanent cure for insomnia!!! A.M.

Winter Wonderland/Apache Gold
Incentive Software £7.95

Since Gilsoft released The Quill, the number of home produced adventures has soared, and in a remarkably short period of time. The obvious reason is that the Quill is a very user friendly utility, allowing someone who has the ability to write a cracking good yarn, but no programming skill to implement his/her creation on to a computer. Indeed, the number of software houses who have taken on board freelance "quilled" games is testimony to its worth.

It did have its drawbacks though, only two word entry, a limited vocabulary, and the awful "have a nice day" at the end of play. Agreed Gilsoft have now updated their program and now also have a graphics package to add to it, but still there are limitations in use.

There has not really been anything to touch it-up until now. Incentive's Graphic Adventure Creator (GAC) is a very professional program, and scores a few points over the venera-

Adventure!

continued...

ble Quill system. To show this, they have produced a **MEDALLION SERIES** which will release adventures that Incentive reckon to be the best possible using the GAC program.

Two to look at, and first up is Apache Gold, which puts you in the wild west, hunting for the legendary grave of the Apache chief where it is rumoured lies gold gold gold! Its very wittily written, the most important ingredient, and I found it nice and easy to get into. The Parser understands multiple instructions, and also the IT command, which is very handy. For instance if you find a rope tied to a tree, you can type "untie rope and take it north."

Speed however is a minus point for the GAC, it kept me waiting, sometimes up to 20 seconds, for a response to a command. The Quill is instant in that respect. The puzzles are pretty easy and very logical, all in all an entertaining game.

Winter Wonderland is next, and is set in the Himalayas. It chronicles your efforts to find a lost civilisation that has co existed with mankind but in a totally independent manner.

The story opens just after you have crash landed your plane in the icy wastes. A cold way to start. Although not as well written as the other game (the location descriptions are a bit sparse) the general feel of the game is quite fair. The graphics in both adventures are simple and colourful, not state of the art, but effective, and you have the option to switch them off if you wish. Priced a little too high for my liking as there is plenty of good budget software around, so about a fiver is more realistic.

Silicon Dreams
Rainbird/Level 9 £14.99

This is a repackaged, reprogrammed (only so far as to include Level 9's new type ahead Parser system) all in one version of the Silicon Dream Trilogy, namely Snowball, Return To Eden and The Worm In Paradise. Rainbird have done a fine job with these classic games, by including a meaty 64 page novella to accompany the software, which does a fabulous job of scene setting for the Player as Kim Kimberly secret agent extrodinaire.

Snowball, one of my all time favourites, is set on a giant space ship transporting sleeping colonists to their new home — the Planet Eden.

Kim is also on board to ensure that all goes according to plan. In case of trouble, Kim would be automatically woken up. Guess what, you are woken up- there's trouble about, and the trouble is sabotage. Snowball is off course and heading on a collision path towards Eden. Some ingenious puzzles abound (my favourite is the ticket machines in the store room) and many many locations. Pete Austin's finest hour as far as I'm concerned.

Return To Eden, continues the tale. You have saved the Snowball from disaster, but due to mangled tapes the crew hold you responsible for the sabotage attempt and sentence you to death! Just managing to escape, you crash land you shuttle on Eden and find a strange world of vegetation and robots. The robots built the City of Enoch to be the home for the colonists, but are not expecting them to arrive so soon, so naturally any ship which lands is considered hostile and will be destroyed. Kim must go to Enoch to let them know that Snowball is friendly and that he is innocent.

Worm In Paradise is set 100 years after Kim's heroic deeds, and this time you play a descendent of the great agent. Enoch has been a paradise to live in, but somethings wrong. What it is, you have to find out.

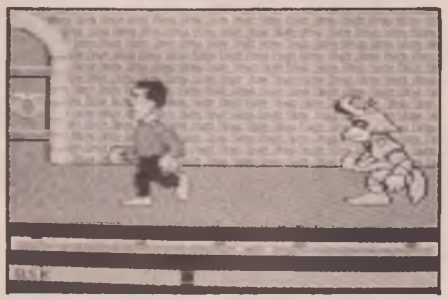
The three games can be played separately, but its best to play them in sequence to get the right atmosphere. The new type ahead Parser is a joy to use, and I still sit wide eyed at the amount of text Level 9 can cram into their adventures. The trilogy is not new, so if you already have the original copies don't buy this. However if you haven't been Kim Kimberly before, what are you waiting for?

Honourable Mentions
Bugsy CRL £8.95

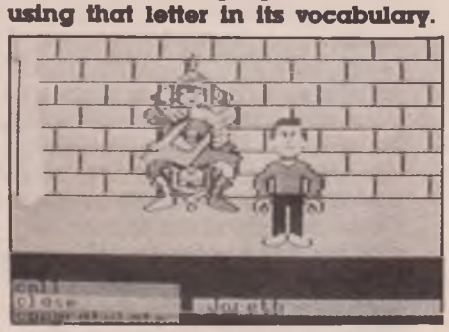
A very funny parody of Chicago gangsters from the St Brides ladies. The hero is a blue rabbit called Bugsy Maroon (groan) who has to work his way up from street urchin, to become a big time hoodlum. The most unusual implementation in the game is a "conversation menu" which lets you choose a variety of phrases to use in conversation. I think its all bunny rabbit, but add this one to your collection, 'cos its fun and shows just what a good Quilled game can do.

Labyrinth Activision £14.99

You've seen the film, haven't you? Now you can play the game, and I can honestly say, hand on heart, its one of the most enjoyable adventures I've played in a long while. The objective is simple, you must defeat Jareth, the Goblin King, in his castle in order to release his power over you. Unfortunately there are two problems here, the first is that the castle is at the heart of a fiendish maze (the labyrinth) the second is that you only have thirteen game hours to do it, otherwise you become his slave forever. As if this isn't enough, along the way you have to solve riddles, work out puzzles, collect useful objects (essential) and use them wisely in order to win.



The game uses a built in command system, so no word typing here, instead there are two 'word wheels' at the bottom of the screen. Just scroll through each wheel until you have the verb/noun you need and press enter. The words are in alphabetical order so if you are at the top end of the scale and need a word at the bottom, just type in the first letter, and the wheel will display the first word using that letter in its vocabulary.



Apart from a small text only section right at the start, Labyrinth is all arcade graphics, and excellent they are too. You can be either a male or female character and choose different colours and names.

The game is devised as lots of little playlets and each part is loaded in separately, so you need to solve one situation in order to proceed further into the maze. Otherwise you will get into a loop situation which is very fustrating, as you have to wait for those repeated sections to load in again and again!

Each playlet has a title like "The Wall Of Hands" or "The Wise Man's Garden" or my favourite "The Bog Of Eternal Stench", fall in that and you'll soon know it!

There are a number of wandering goblins which must be avoided at all costs, failure to do this results in a visit to Prison, never easy to get out of. I can reveal that after many days and nights of screen bashing, choice words and high blood pressure, I have nearly completed it. I'm inside the castle at last and am about to confront Jareth. If next month's adventure pages don't appear on time you know why! A fabulous game, highly addictive and worth every penny.

The Colour of Magic CRL/Delta 4 £8.95

Delta 4 have written an adaptation of Terry Pratchett's extraordinary novel about life on a turtle's back, called Discworld. The main character is a wizard called Rincewind who unfortunately, due to an accident in training school, cannot learn any spells, apart from the one lodged in his brain. Anyway, his task is to guide a four eyed tourist around the place, whilst trying to avoid Death in all its forms, and luggage with legs??? I'll say no more except miss this at your peril. Laugh, I never thought I'd start!

Ultima IV — The Clues

Even the most battle hardened role player can think themselves lucky that the world of Ultima IV is not real, because this latest release from Origin Systems is sixteen times bigger than Ultima III and includes conversation, more magic and more battles than in any other game in its genre. There are hundreds of dungeon chambers, hundreds of characters, dozens of combat screens and weapons of many sizes, ranges and uses.

Its all very well Playing The Quest Of The Avatar (Ultima IV), but getting anywhere towards completing it is another matter entirely. Fear not dear reader, for I have braved the numerous dungeons, fought the many beasts, visited the many towns and even spoken with Lord British himself. I have sought the answers, and have been successful in my quest! The answer lies with me, and only me, as to reveal all will almost certainly put me in grave danger, however keep reading and I will point you in the right direction. And maybe, just maybe in another issue I will reveal some more.

To become an Avatar, is to be enlightened in all eight virtues of the Avatar. This you do, by finding the runes, and meditating at the shrines belonging to each rune. Once you have found all eight, and meditated, then you will become an Avatar and have solved the Quest.

In Brittania there are 4 cities, 11 towns, and 1 ruin. There are clues to be found in each dwelling. Finally to enter the final phase, you need to pass through the gates of Cove and find the dungeon Abyss holding the Bell, Book, and Candle.

Where are the Runes?

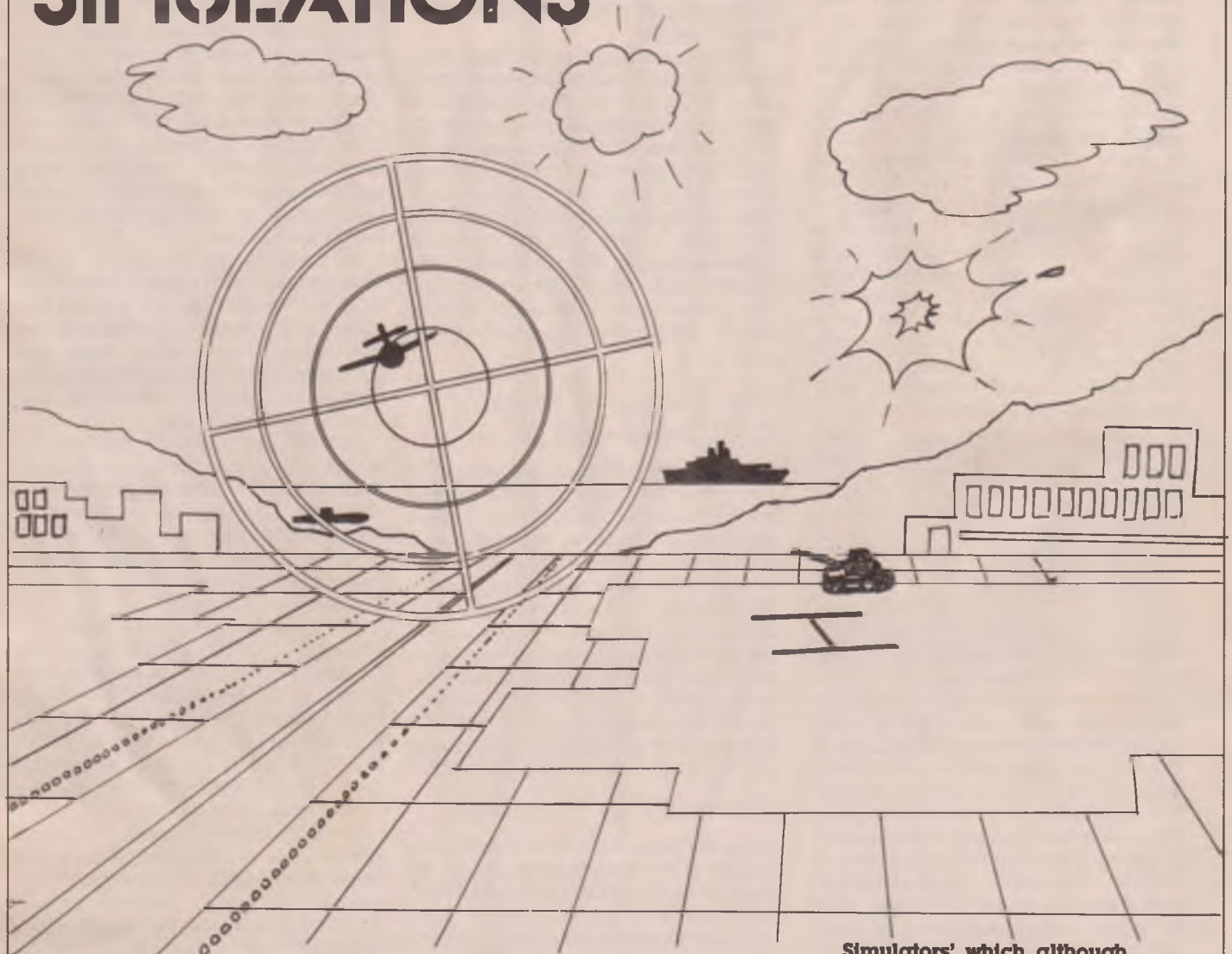
HONESTY is in the nw corner of Moonglow. COMPASSION is in the n.e. corner of Britain, in the inn. JUSTICE is in the jailhouse of Yew. SACRIFICE can be found in Minoc. HONOUR is hidden in Trinsic. SPIRITUALITY is hidden in Lord British's castle and HUMILITY is in the s.e. corner of the village of Paws.

That's it for this month, I haven't had room for some general hints this issue (doing Ultima took all my time up) so next month you can have a double does of help, along with some letters answered (a few choice words there I can tell you) and a review or two, maybe three. If you have any comments, write to me at CCI. Bye for now.

Adventure!

See you next month!

SIMULATIONS



Super Huey II (U.S. Gold/Cosmi)

Ace of Aces (U.S. Gold/Access)

Flight simulators tend to come in two categories. The first is an out and out reproduction of the aircrafts' cockpit, including every dial, switch, gauge and warning light, a 50 page manual (at least) and enough of an outside cockpit view as to make the whole thing look as realistic as possible, within the confines of the hardware available. The most classic example of this genre is FLIGHT SIMULATOR II from Sub Logic. Not only do you get all that electronic wizardry in the package, but also, detailed maps showing the many airports available to you across the whole of the American land mass along with two pilot manuals. The initial disc just concentrates on the Chicago area, but you can obtain additional scenery disks depicting the rest of the U.S.A. including New York and the Statue of Liberty which can be flown around, up and over. The aircraft in question is a Piper Cheroukee single engine job (the sort in which hard working executives pop back and forth). There are two maps which come with the package letting you plot your course across the country from beacon to beacon. If you take your flying seriously, this is the program to get as the pilot manuals take you through actual lessons, starting with simply taking off and landing and finishing with some very complicated manouveres indeed. Its expensive, around £40, but for the dedicated enthusiastic its an essential purchase and there's an AMIGA version out we hear is sensational. Into a second category falls what I would term 'Action Simulators', which, although representing flying in its truest sense, also give the player missions to perform or rescues to undertake. Now, obviously to incorporate these features in a simulator, something else has to go because after all 64k is only 64k, so generally speaking it's the amount of cockpit detail and functions of the specific aircraft that are cut down. The 'feel' of flight is usually still maintained and certainly the action simulators have a wider appeal as they portray a more exciting scenario than just taking off, flying around and landing again.

However, there are action simulators and action simulators and some are just zip zap shoot 'em ups that just need a pull back on the joystick to get you up, up and away and precious little else except finger on the fire button stuff. Then again, there are some that genuinely try to give a good account of both sides of the runway so to speak.

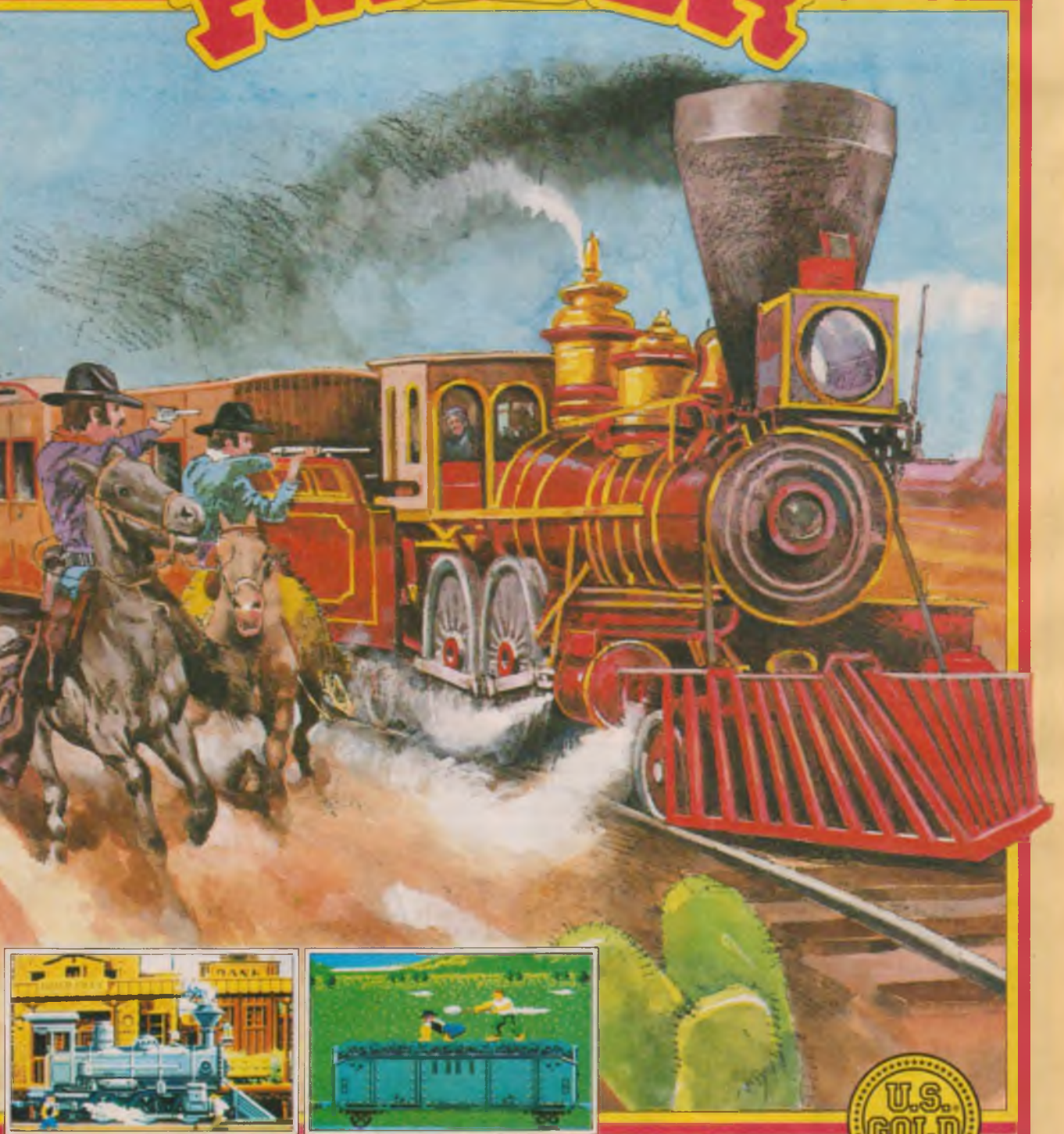
→

THE COIN-OP SENSATION FROM DATA EAST...

DATA EAST

DATA EAST

EXPRESS RAIDER



U.S. GOLD
Al American Software

Just like in the classic wild west films of old, you'll be in the thick of the action right from the start! Hold-ups, robberies and rooftop fights, Express Raider has them all!

Available in the following formats:	Cassette	Disk
Commodore	£9.99	£14.99
Amstrad	£9.99	£14.99
Spectrum	£8.99	—

U.S. GOLD – WE'RE AT HOME WITH THE ARCADE THRILLERS!

U.S. GOLD LIMITED, 2/3 HOLFORD WAY, HOLFORD, BIRMINGHAM B6 7AX.

CONTROL TOWER TO PILOT... CONTROL TOWER TO P

Super Huey II and Ace of Aces are two flight games which do just that. They look very very good, feel incredibly lifelike, need 100% concentration and give you some shooting to do, to soothe the savage beast.

Let's take a closer look at both, starting with Super Huey II. This game is a sequel to the original release of a year back bearing the same name and deals with a helicopter of awesome power officially named the UH2X (Huey for short) which can be called into action to deal with any disaster or mission of vital importance to the world as we know it. It has machine guns, heat seeking missiles and CO2 gas on board so, obviously, with all this hi-tech hardware available it wouldn't do to just fly around all day taking tourists on sight seeing trips around the bay. No, fortunately, you are called upon to undertake a series of six no-nonsense missions. ***RENEGADE*** — which is a seek and destroy scenario about a 'Huey' clone chopper whose pilot has gone berserk and is out to destroy all your bases. ***BRUSH FIRE*** gets you out in the Californian hills dropping CO2 foam on forest fires. ***OIL FIRE*** substitute forests for Mediterranean oil rigs (didn't know there were any) ***GULF OF TERROR*** puts you on terrorist alert in the Med searching for gunboats and subs to blow away. ***ARCTIC RESCUE*** gives you blizzard conditions to find some scientists trapped in the crevices on the Pole. And finally ***BERMUDA TRIANGLE*** is a very strange scenario in the Devils Triangle, including some alien spaceships and hurricane weather. There are some great sonic F/X in this game — the sounds of the chopper blades are incredibly lifelike, and there is a smattering of electronic speech.

Super Huey II is a very good flight simulator too, and the accompanying manual goes into great detail about getting the pitch level right in relation to the engine and rotor speed. It is quite a tricky business and I found myself fighting to keep the chopper at the right altitude every time I increased speed, so, you need to 'gen' up or what's what before you start, otherwise it'll be a watery grave that will welcome you.

We are very impressed with the wealth of detail available to the pilot in this program (the navigation system is mind-bogglingly complicated) and I enjoyed the game immensely. At £9.95 it's excellent value and is a good introduction to computer flying.

Ace of Aces puts you in the hot seat of a Mosquito plane during World War II. It is also a sequel to another popular release entitled Dan Dutters [illegible] a direct hit over its [illegible] in playability. Dan [illegible] too many hands to toggle [illegible] too many things to do to fly the damn (no pun intended) aircraft and getting the bouncing bombs on target was incredibly difficult.

Ace of Aces is a lot easier to play and gives you a training mode to get the feel of the plane before attempting the missions. There are some nice graphics of you flying over clouds and you do get side views looking out of both sides of the plane (the propellor effects are nicely done).

The missions can be undertaken all in one go (succeed and you earn the title Ace of Aces) or separately and involve intercepting Bombers and V.I's on their way to London, trains full of POWs that need freedom and a Boat pen full of subs. You get a choice of crew views, from the Pilot, the Bombardier (you get to look through the bomb bay to target your bombs onto the enemy below) and the navigator (which gives you your bearings and weather maps, etc.) There is also an engineer's view which controls the engines and fire extinguishers.

The game is let down by not having to actually take off or land. This is done by the novel use of showing a series of old style 'photos' depicting our brave lads in their helmets and scarves getting in their planes and rolling down the runway. Cleverly done, but nonetheless leaves you feeling a bit hard done by. Ace of Aces really might be considered suitable for a younger audience, but as it is certainly graphically superb and very entertaining, that won't stop me or you playing it not once, but many times.

Of the two, Super Huey is the business if it's a true flight simulator 'action' game you want. Ace of Aces is a really fun shoot'em up that gives you an authentic feeling of being one of the lads against the Boche and succeeds admirably as an easy and entertaining intro into flying your Commodore.

Chocks away chaps! Raiders at 12. O'clock high!

The Three Musketeers

Team up with THE THREE MUSKETEERS, Dumas legendary crusaders for justice and freedom and fence your way to England to collect the missing diamonds!

NOW RELEASED ON COMMODORE 64, 128 & AMIGA

Commodore 64 - Tape £9.95 - Disk £14.95
Commodore 128 (with enhanced graphics) - Tape £9.95 - Disk £14.95
Commodore Amiga - Disk £24.95

COMING SOON FOR

Sinclair Spectrum - Tape £9.95
Amstrad CPC - Tape £9.95 - Disk £14.95
Atari ST Series - Disk £24.95
Apple Macintosh - Disk £24.95

Distributed in the U.K. by
MICRODEALER INTERNATIONAL
Telephone (0908) 74000

Computer Novels

Computer Novels, P.O. Box 10090, S-20[illegible] Malmö, Sweden, Tel (+46) 40[illegible] 25 20, Tlx 32135 Comput S

MEGA REVIEW

CCI Rating C64

CRISP

BLOOD & GUTS

Blood and Guts — American Action

Yuk! I hated this game even before I saw it! Why the hell do we have to tear each other to pieces just to fill the pockets of a few barbaric (I use the word advisedly in this case) games writers? In the publicity they threw around words like cruel, brutal, pitiless, ruthless. Not even shooting up aliens or zoids but getting down to real violence, to our own world and its inhabitants — including cats!

But when I got to it 'Blood and Guts' wasn't half as bad as I thought. In fact I quite liked it. Even though some of the so called sports were hardly the sort of thing you'd recommend to a maiden aunt. Human Hit, Armwreck — and I kid you not — 'Cat Throwing' are not likely to turn Aunty on (Don't you touch my pussy, you nasty man!).

In fact Blood 'n Guts is a quite imaginative version of our old friend the Decathlon, (though Daley Thompson would be better off staying out of this one) with real Viking-style toughies like Nop, Hawk, Dog and Knorr (isn't he a soup?) fighting it out amongst themselves.

There is a fair measure of action strategy and skill involved and it does have some nifty graphics with clever animation and a lively combination of sound and music.

Blood 'n Guts is now topping the Swedish charts and I'm not surprised. It's surprisingly addictive and I found eventually that I'd got over my inhibitions and was shamefacedly enjoying Axe-throwing and Tower Jumping.

American Action — creators of Soldier One and Captured — are showing an interesting turn of originality and for sports (?) like Ale Drinking, Tug of War, Pole Fight and Rock Rolling, they've come up with ideas that are at least so far untouched by anyone else.

By the way, the game is marked as suitable only for 15 year olds and over. Over 15 you are apparently allowed to throw the cat around (16? Yes, you can touch my pussy!)

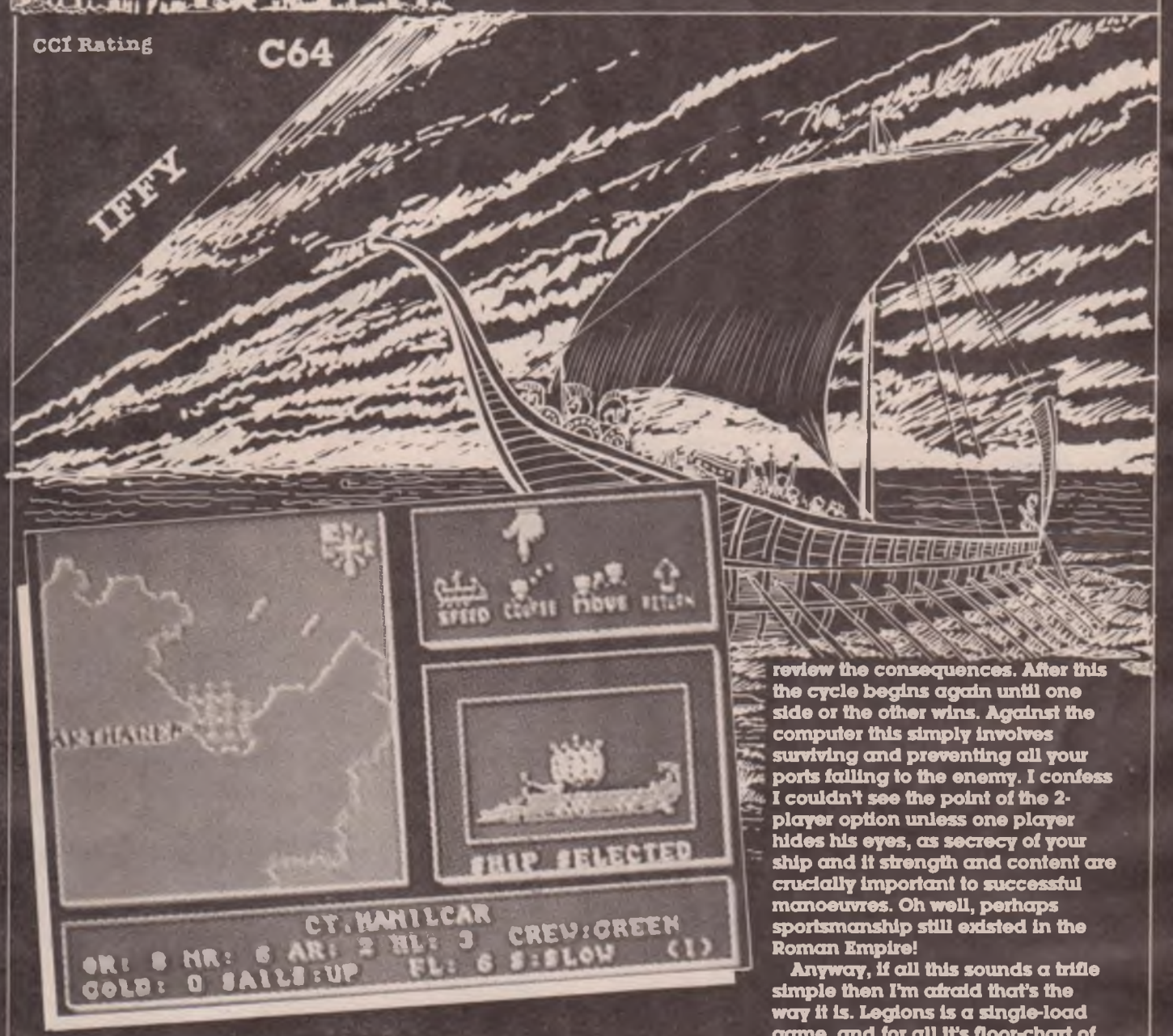
Reluctantly I have to say 'Blood 'n Guts is well worth its 'Crisp'. But with the inventiveness, obvious hard work and thought that's gone into American Action's recent releases, why don't they come up with something in their own words, less 'barbarous'?

Price: £9.95 (c) £14.95 (d)
Graphics: ★★★
Sound: ★★★
Playability: ★★★
CCI Rating: Crisp

MEGAREVIEW

CCI Rating C64

IFFY



Legions of Death by Lothlorien

Another complex and well-documented wargame from Lothlorien, the U.K. masters of the genre and the one label that seems to have survived a takeover from Argus. Once again this is an icon driven game, perhaps lacking a bit of detail and the added-value packaging we've come to expect from, say, SSI, but on the whole a well-researched and slick product. The action falls not so much into historical phases, as is the norm these days, as levels of involvement and you can make the game as complex as you wish by defining the victory conditions before you start playing. Because of the nature of the subject, the action is primarily sea-based with all the major tactics involving the capture and protection of major sea-ports.

You start the game with 1000 gold pieces to buy ships and equip your fleet. There are 8 types of ship, each able to hold different quantities of men, gold and equipment. Obviously the costs of all these items differs, and some are more useful in battle conditions than others. Beware, however, of overstocking your ships before you learn how to successfully engage your opponent or you will lose heavily in early skirmishes. I mention this because I lost my whole ship several times before I managed to discover where the dangers were.

All units are displayed on a scrolling map of the central Mediterranean, with enemy ships highlighted as they approach. You select your targets to defend or attack,-make your moves, and then review the consequences. After this the cycle begins again until one side or the other wins. Against the computer this simply involves surviving and preventing all your ports falling to the enemy. I confess I couldn't see the point of the 2-player option unless one player hides his eyes, as secrecy of your ship and it strength and content are crucially important to successful manoeuvres. Oh well, perhaps sportsmanship still existed in the Roman Empire!

Anyway, if all this sounds a trifle simple then I'm afraid that's the way it is. Legions is a single-load game, and for all it's floor-chart of commands and icons, it turns out to be a repetitive and limiting exercise. The icons are fiddly, most of the text unreadable, and you will find controlling all the ships individually pretty monotonous. There is simply none of the options, variety or challenge that makes, say, Vietnam such an addictive game. These days the odd flash of gunfire, or scrolling description of the casualties, are almost compulsory in a wargame that aims to attract a large market. Legions may be well put together but it is only barely adequate by modern standards.

T.M.

Price: £9.95
Graphics: ★★★
Sound: N/A
Playability: ★★
Rating: Iffy

Girls They Want To Have Fun

The absolute Partygag! **More than 15000 copies sold in Europe**

The hottest program in Europe (Made in Germany). Excellent graphics. Since you are reading a serious Computer Magazine we cannot show you more than a title picture and cannot explain what actually happens when you have started the program. Only one thing: we got a great review in PLAYBOY magazine (German edition) 11/86 page 33.

Surprise your friends with that super sexy programme! It is available on Disc or Cassette only by mail order

Disc £9.50
Cassette £9.90
Post and package included

Miss All Bare America

Every year in the U.S. they elect the Miss All Bare America. You usually see tiny excerpts in cinema or on your video.

But Computerfreaks – now your C-64 makes it possible: You and your party-guests are members of the jury to vote who of the 40 prettiest girls will win the competition – who will be the Miss All Bare America.

A disc full of superb graphics showing dreamgirls you'll love. Please order now

Disc only £9.50
Post and package included

Adults only! Send in cheque or postal order to:

HOT SOFTWARE
1, Coombe House
Hartland Road
Addlestone Surrey
KT15 1JU

You can now... program a game – as professional as many programs in the shops – with sprites, graphics, action, music, sound and all that.

Look at the picture: the game it shows was produced in only one evening! Horses, knights, lances, everything is moving. And everytime a horseshoe touches the ground the sound-chip makes a "tapp" synchronous with the pictures!

Too complicated? Not for you – if you use the powerful ***RP-System!***

Because the RP-System contents:
Typesets, hundreds of sprites and spritesequences (animals, robots, spaceships, phantasy-creatures, etc.), a background construction set, part screen scrolling,easy sound facilities, simply every thing you need to programme a super game.

But the RP-System is a ***complete programming system***. That means, that it contents a sub-programme which makes your games machine-code-fast. Spritesequences, sounds, music, everything works quick and independent of each other. Even beginners can program complex games because your programme that uses the RP-System-subroutines is simply programmed in BASIC. Only one line programmed in BASIC produces action you never dreamed of.

The RP-System is no Basic-Extension – so it remains compileable! The RP-System is the System you need if you want to write successful professional videogames without having month of time to spend.

The RP-System by the founder of HOMECOMPUTER* and CPU* is used thousands of times throughout the world.

Order the ***new special british version RP-System 4.0*** now.
It is available on Cassette or Disc (ca. 1300 blocks used).

Its available on ***Disc £14.90 Cassette £15.40***

* Bestselling homecomputer-magazines 1983/84 in Germany, Switzerland and Austria

For Commodore 64 C64

Free Demo Game for every purchaser

Grand National programmed with the RP-System
Compiled version + BASIC version + program-listing.

Send in cheque or postal order to:

HIGH SPEED SOFTWARE
1, Coombe House
Hartland Road
Addlestone Surrey
KT15 1JU

MEGA REVIEW

CCI Rating C64

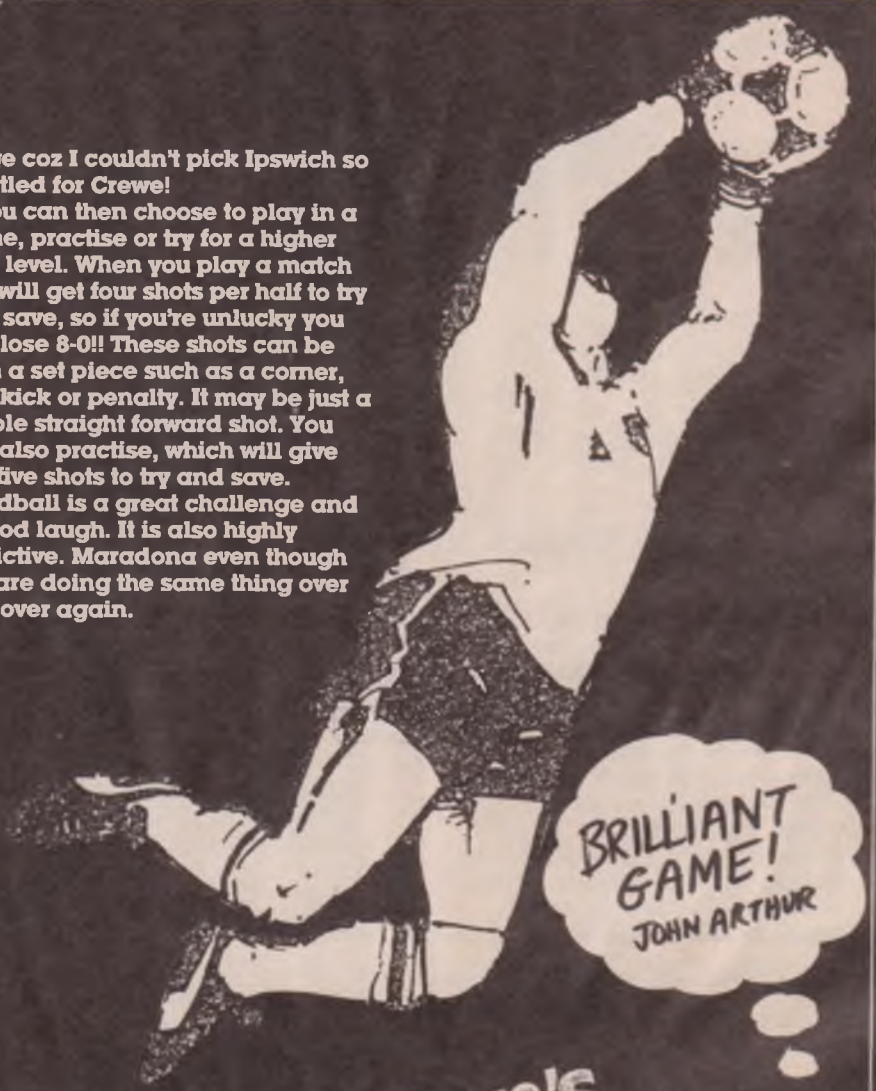
MEGA

Peter Shilton's Handball Maradona

Watch out Peter Shilton, coz here comes John Arther — a superb young keeper from Crawley Town, ready, willing and able to take your England spot anywhere, anytime, any place (sounds more like a Martini advert!).

O.K. right hands up (sorry!) all those football supporters who think Diego Maradona is a dirty little cheat? (every hand in England is raised). Well here's your chance to get your own back. In Peter Shilton's football game you play the part of your team's goalkeeper. You can choose from a number of teams including Southampton, Liverpool, Man Utd and Crewe. I thought I was hard done by at the team choosing stage coz I couldn't pick Ipswich so I settled for Crewe!

You can then choose to play in a game, practise or try for a higher skill level. When you play a match you will get four shots per half to try and save, so if you're unlucky you can lose 8-0!! These shots can be from a set piece such as a corner, free kick or penalty. It may be just a simple straight forward shot. You can also practise, which will give you five shots to try and save. Handball is a great challenge and a good laugh. It is also highly addictive. Maradona even though you are doing the same thing over and over again.



Peter Shilton's "Handball Maradona"

There is pre-programmed speech which is very good. It says "Peter Shilton's Handball Maradona" which is by far the best speech I've ever heard from my 64. It also says Goal and Save which are also pretty niffy. The graphics are small but they are very, very smooth and detailed. They move well and the diving of the goalie is very effective. One thing I thought a shame was that you do not get the chance to play on pitch, only in goal, but that didn't dampen my view of this brilliant game.

Price: £6.95
Graphics: ★★★★
Sound (speech): ★★★★
Playability: ★★★★
CCI Rating: Mega

MEGAREVIEW

CCI Rating C64

CRISP

X29 Fighter Mission by Midas

You are flying the very latest in fighter planes. It's the very sophisticated X29 fighter. It's about as sophisticated as my big toe. You are in air to air and air to ground combat with the enemy jets and helicopter. The jets are phantoms and the helicopters are the cobra range. Your view of the outside world is from the cockpit of your fighter. You have three on board computers to help you along. When these computersare destroyed

then so are the passengers and the plane. Your ultimate task in X29 is to destroy the cloaking beacons and eventually destroy the enemy headquarters. You have an up to date machine gun fitted to the fighter and you use this to defend yourself against the enemy fighters.

The graphics of the enemy fighter in X29 are pretty good and quite well detailed. I'm afraid, though, that the game is a little basic by today's highest standards and it could get boring as there is not too much going on. If you are a fan of blowing planes out of the sky then this game is for you, and for £2.99 you haven't got a lot to lose. Try it and see.

Price: £2.99
Graphics: ★ ★
Sound: ★
Playability: ★ ★
CCI Rating: Crisp

C64

DODGY

Judge Dredd by Melbourne House

Judge Dredd is the second appearance of a '2000 A.D.' character in a computer game, and no doubt he was expected to perform a bit better than Strontium Dog (Quicksilver). I was pleased to see the same loading screen I'd glimpsed on Compunet many moons ago, and some atmospheric music by Neil Brennan, but here my pleasure ended. The instructions are some of the worst I've seen; a perfect example of someone who's obviously into the comic and totally familiar with the fictitious world of his Hero, forgetting that most of us are here to play a game, not catch up on comic-book mythology. I find instructions without good screen-shots or illustrations a real cop-out (forgive the pun) and Judge Dredd suffers especially from this absense. As far as I can gather you are supposed to patrol a city looking for crimes and dealing with the 'perps' appropriately. A 'perp', by the way, is slang for an offender.

The first screen looks more than a little like Ghostbusters, with a street-plan of the city and the various crimes in occurrence cropping up as icons above their locations. Crimes vary in seriousness from petty theft tomurder, but they all count against your record if they are not dealt with. You have differing levels of response, from 'halt' (merely vocal) to 'Kill' (purely lethal) and it obviously helps not to over-react.

In keeping with the curious morality of the game, however, shooting shoplifters dead is significantly less serious than letting them get away. I'm sure this alone will assure the success of this game in America, where such a system apparently already operates.

Once you've selected the crime you want to deal with first, you press fire and you are transported to the location. Here you have a succession of simple 'Mission Elevator' type screens, linking the various locations and giving you the chance to shoot the hell out of all and sundry. You may move about the whole city like this but it's safer to do it by icon, so simply deal with the crime you've come to handle and return to the first screen. Action is fast, repetitive and largely pointless — although the perp is pointed out to you, almost all the sprites will try and club, bit or shoot you so I found it easiest to kill first and think later. The city seemed to have several layers, from sewer to side-street, and you move between them either by lift or dropping through holes in the floor. Other complications include conveyor belts, loss of amunition, and loss of your Judge's power if you fail to control your precinct.

Judge Dredd isn't a derivative and weak as it initially looks. There is actually quite a variety of weapons, approaches and dangers to deal with, and the zapping is quite good for a while. It is, however, graphically primitive and lacking in the depth and addictiveness we've come to expect from Melbourne House. The sad truth is that these days there are budget games as good as this. T.M.

Price: £9.95
Graphics: ★★
Sound: ★★
Playability: ★★★
Rating: Dodgy

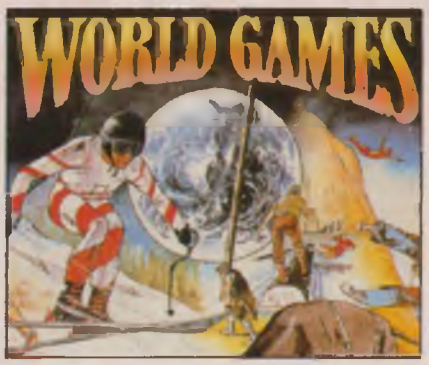
WORLD GAMES™ HOLIDAY COMPETITION

WIN A TRIP FOR TWO TO THE WORLD CHAMPIONSHIPS AT ROME

HERE'S YOUR CHANCE TO WIN A HOLIDAY OF A LIFETIME

A fantastic week for two in Rome. Combine the excitement and spectacle of the World Athletics Championships with the sights and pleasures of one of the world's most beautiful cities.

Rome is a living vibrant museum with its 2000 year old past stamped all over its modern 20th century face. Visit the ancient Colosseum, scene of athletic prowess of another civilisation. Gather with the crowds outside the Vatican, waiting eagerly for Sunday morning blessing from the Pope. Enjoy the hospitality of a nation renowned for it's friendliness and for living life to the full. Rome is not all museums and history, its also a modern city overflowing with fashion, shopping and nightlife. From the moment you touch down to the time of your final departure your week will be crammed full with excitement and fun.



World Athletics Championships '87'

Held every four years the World Athletics Championships rival the Olympics for their prestige and competitiveness. It is one of the few opportunities for athletes to gain worldwide acclaim and for spectators to enjoy history in the making.

How to Enter

Simply answer the three questions below and the three questions printed on the packaging of the game "World Games", complete the entry form and return all items to the address shown. In the event of a tie break the most original com – pletion of the caption, as determined by the judges, will be the winner.

WORLD GAMES

CBM 64/128	*Cassette* £9.99	*Disk* £14.99
Amstrad	*Cassette* £9.99	*Disk* £14.99
Spectrum 48K	*Cassette* £8.99	
Atari ST	*Disk* £24.95	

Your Holiday includes

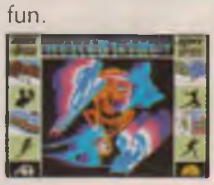
The winning prize includes two air tickets to Rome, hotel accommodation for one week, two tickets for the World Championships plus £100 spending money.

Runners-up Prizes

The 25 runners-up will each receive copies of Supercycle and Winter Games for either the CBM 64/128, Spectrum or Amstrad.

RULES.

1. This competition is open to all residents of the U.K. except employees of U.S. Gold Limited, CentreSoft Limited and their associated companies, families and agencies.
2. The prizes stated will be awarded to the entrant who completes the questions correctly and in the event of a tie break, complete the caption in the most apt and original way.
3. The winning entrant will receive two air tickets to Rome, hotel accommodation for one week, two tickets for the world championships, plus £100 spending money. 25 runners-up will each receive copies of Supercycle and Winter Games for either the C64/128, Spectrum or Amstrad.
4. Proof of posting will not be accepted as proof of delivery.
5. Entries altered, illegible or not completed in accordance with the rules of entry requirements will be disqualified.
6. All entries must be on an official entry form.
7. 'How to enter' forms part of the rules. All entries become the property of U.S. Gold and cannot be returned.
8. It is a condition of entry that the competitors agree to be bound over by the rules.
9. The closing date for receipt of all entries is 31st March 1987. The prizewinners will be notified by post. The names of the winners will be available to those sending a S.A.E. marked 'World Games Competition' to the address below.
10. The judges' decision is final and no correspondence will be entered into.
11. The competition entry should consist of six answered questions, three on the entry form and three included in the packaging of the game and are to be forwarded to:



RUNNERS-UP PRIZES

WORLD GAMES™ Competition

RUNNERS-UP PRIZES

Complete the questions and caption below together with the completed questions from the packaging and return to the address below. All entries must be received no later than 31st March 1987

Question 1. How many hills is Rome built on .....

Question 2. In what year was the Roman invasion of Britain .....

Question 3. Who painted the renowned ceiling of the Sistine Chapel .....

Caption (complete in not more than 25 words) Rome is an appropriate venue for the World Games because

.....

.....

Name ..... Age ..... Address .....

.....

Tel: ..... My computer is a .....

U.S. Gold Ltd., Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel: 021 356 3388

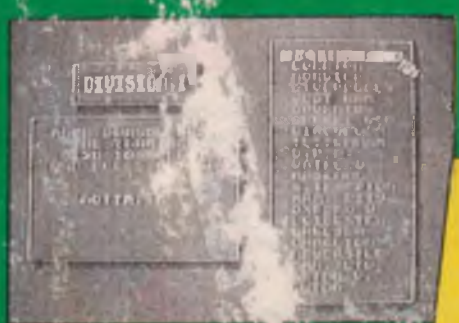
CCI Rating **C64**

FOOTBALLER of THE YEAR!

MEGA

Footballer Of The Year — Gremlin

Do you think you've got what it takes to beat the likes of Bryan Robson, Ian Rush and Peter Shilton to the top and win the award of player of the year? If so then waste no time and load up this hot new release from Gremlin. You can choose to play for any club in the English league from Liverpool to Crewe! Your main aim is to become the best player the modern world has ever seen. You can also get to play for your chosen national team. When the game has loaded, you are presented with a very slick icon driven menu. You can look at the status of your current team, your own personal status, you can buy incident cards which are like the chance card in Monopoly. You can gain a great deal of money but you can also lose a fortune. You can also buy a transfer card. A scout will watch you play and then say if he's interested in you. The other icons allow you to save the game, quit the game and play the matches in the game you automatically play but you don't have any chance of scoring unless you use one of your goal cards, (of which you start the game with ten), but additional cards can be bought. If you don't use a car you are told [illegible] via the teleprinter [illegible] in "Grandstand" if you play a goal card you will either have to try and beat the defenders and score, or take a penalty. At the end of the arcade section you will be told the final score and how many goals you scored. The results in div 1 can be a bit silly such as 5-5 draws and a defeat of 8-6! Apart from that annoying factor it's a superbly additive game that should appeal to everyone, not only football lovers. The graphics are large and chunky and do their job pretty well. There is a continuous (!?) tune that gets a bit tiring. Overall a very, very good game.



Price: £9.95
Graphics: ★★★
Sound: ★★
Playability: ★★★★
CCI Rating: Mega

martech....
LIVE THE GAME!

MEGAREVIEW

CCI Rating C64

CRISP

DESTROYER!

Destroyer by Epyx

Epyx must be turning into yet another embarrassment for U.S. Gold. Like Ultimate, no sooner were they signed up than they stopped producing exceptional software — Move Monster, Hot Wheels and Super Cycle have all failed to set the world alight and World Games, for all we know, could have been written last year as it shows no significant advancement on the winter/summer games formula. Anyway, Destroyer arrived in a hush of publicity and I must say it's a very curious package indeed.

Firstly it's vast; not really a simulation — something as big as a Destroyer is never one man's sole responsibility — but highly detailed and complex all the same. You have 7 missions to choose from, each one using a different aspect of the ship's defensive and offensive capabilities — these range from Subhunter to a full scale Rescue and between them there's plenty of variety (a rarity in itself for a simulation).

The ship has several stations, corresponding to the control areas of a real Destroyer. Each one is accessed separately from disk and put up on screen as a detailed graphic display controlled from joystick or keyboard. Obviously certain areas of control double up (i.e. there is a Navigation screen but you can make course adjustments from several areas of the ship) and with the cluttered nature of all screen displays it soon becomes hard to recall which switches or adjustments where made from which station. Worst of all is the Bridge; here major offensive stations can be activated and status reports can be summoned, but the succession of switches and tickertape messages soon confuse the eye. Other stations, in order of difficulty, are Sonar, Depth Charges, Guns (fore and aft), Anti-Aircraft (port and starboard), Torpedoes (port and starboard). Observation, Radar and Navigation. Each one is well documented but it's obviously the co-ordination of them all that leads to success, and this skill is hard enough without the frustrating pauses while the disk accesses each station.

Destroyer is a package that won't appeal to everyone. While having arcade elements (the Torpedo and Ack-Ack screens, for instance) it's not really fast enough to please the zappers and the sound is by and large poor. It's too diverse to be a good simulation, and there's not enough real strategy to make it a Wargame. For all that it's a highly professional package and well worth owning if you have the patience to master it. T.M.

Price: £14.99
Graphics: ★★★
Sound: ★
Playability: ★★★
Rating: Crisp

COMMODORE plus-4/C16

PHOTON LOAD — FAST LOAD AND SAVE

Have you ever wasted time waiting for your programs to load or save? This excellent program will make a real difference to your computer. PHOTON LOAD the new cassette operating system loads in seconds and allows you to load and save your programs at about TEN times the speed of a normal load or save. Two additional Basic commands make this extremely easy to use. Why spend money on a disc drive when you can load and save this fast. Features such as sliped screen loading and an audio warning when loading is complete assure you loading saving is going to plan (unlike the Commodore system!). A well designed Cassette loading and saving system — once you hae one you won't want to be without one!
Great value £7.95

SUPER SPRITE

This extremely clever utility allows you to use 8 sprites simultaneously over a low-resolution screen. With this program you can now imitate the sprites found on the Commodore 64! Each sprite is composed of 16 × 16 pixels for high definition. Sprites can be independently moved in any direction with VERY SMOOTH scrolling. Sprites may take on any colour and travel at any speed. Sprite priorities and collision detection are provided. Despite adding all these complex features to your computer it is very easy to use. We provide extra Basic commands to make it very easy to use sprites with your programs. On top of all this we provide you with FREE demo programs and a FREE sprite designer. What more do you need to bring real power to your games on your C16 PLUS 4. This entire package is a must for games programmers.
Excellent value — Cassette £7.95
Disc £9.95

ELECTRIK PENCIL!!!

A truely excellent high resolution art program. Magnificent masterpieces can be quickly drawn using the powerful facilities provided by this package. The program is entirely written in high speed machine code and includes Variable pencil size. Variable drawing speed. Easy select cursor menu. pixel draw plot. freehand lines. circles. flood characters letters plotted on high-res screen at any position. 121 colours all usable simultaneously. hard copy to printer. load and save of pictures to cassette or disc. joystick or keyboard operation. Many other facilities too numerous to mention. Complete with instructions.
Bring some colour into your life with ELECTRIK PENCIL. Impressive results in no time at all. Amaze your friends!!!
Cassette only £7.95
Disc only £9.95

THE MIRROR - TAPE BACK UP

Superb tape to tape back up copier catering for the majority of PLUS-4 C16 games. Backs up both standard and FAST loading software. All major loading systems catered for. Very large menu of both general back up routines and popular games. Basic, machine code and protected games all easily handled. NO extra hardware and NO second cassette. Very popular utility.
Excellent value £7.95

THE WAND — TAPE TO DISC

Make full use of your disc drive by effortlessly converting your games software to disc. Convenient and fast loading from disc. Handles all major loading systems with a very large menu of general back up routines and games. We have had many letters telling us how much people appreciate this utility. Don't be left out — buy one! Every disc user should have one.
Excellent value — supplied on disc £12.95

MERLIN ASSEMBLER

100 % machine code assembler for the plus-4 C16. Very fast assembly of source code. Easy entry/editing of code via the full screen editor. Full error messages pinpointing the errors. Full load save and printer facilities. Intelligent assembly. Variable names, labels, hex decimal, text and data statements, remarks, post indexing of variables etc. Many other facilities too numerous to mention. Highly recommended — A truely superb assembler. Comes with instruction booklet and FREE booklet of machine code routines.
Cassette £8.95
Disc £13.95

BLACK CAT — CASSETTE CONVERTER

Have you ever wanted to use your PLUS-4 Wordprocessor Spreadsheet, Business graphics etc. With a cassette unit? This program allows you to save your files to cassette rather than disc (as forced to by Commodore). Quick, convenient easy to use.
Only £4.95

BARGAIN JOYSTICKS — 3 GREAT DEALS

Because of bulk purchases we can offer you these three value for money deals to suit the needs of your computer.
1) Incredible value — Brand new Quickshot II Joysticks at only £5.95 plus £1.00 for P & P. Features include: *Autofire *Thumb and trigger finger fire buttons *Built in suction cups *New improved design — The best selling joystick in the world.
2) Quickshot II joystick and joystick adaptor (for Plus-4 C16) at only £7.95 plus £1.00 (per joystick) P&P.
3) If you already have a Joystick we can sell you Joystick adaptors at only £2.95.

CASSETTE INTERFACES

If you have a Commodore 64 cassette unit which you would like to use with your C16/PLUS 4 then you need one of these. This adaptor lead is simple to use. Just plug in and go! A sound investment £5.95.

TAPE HEAD ALIGNMENT C16/+4

The perfect cure of the majority of loading problems. Specification as for the Commodore 64 (see below).
Only £6.95

COMMODORE 64

EVER HAD A LOADING PROBLEM?

Then send off for WIZARD'S TAPE HEAD ALIGNMENT KIT 64. No one should be without one!
The most common cause of loading failure is bad alignment of your tape heads. This kit allows you to set up the tape heads of your cassette unit for the best possible loading conditions. In many cases this will make a remarkable difference in loading reliability.
Our kit comprises of:
1) A precision recorded cassette containing a sophisticated test program. 2) A special adjustment screwdriver. 3) A direction indicator. 4) A turning meter. 5) A detailed instruction booklet with diagrams. 6) A Loading Doctor — to help you diagnose any loading problems.
All of this for only £6.95!!!

RAPID dispatch of orders.

U.K. P&P FREE and by FIRST CLASS post. Europeans please ADD 50p. Outside Europe ADD £1.50 for AIR MAIL. Overseas orders welcome. All payments must be in pounds sterling.
Cheques/POs to:

WIZARD SOFTWARE *(Dept. BB) 20, Hadrian Drive, Redhills, Exeter, Devon EX4 1SR*

BARRY PAUL

Price include P&P within the UK

67 Leather Lane, London, EC1 7TS Tel: 01-405 1515

Visit our Shop Mon to Fri

DISK CODES: D1 = 8.50 D2 = 9.99 D3 = 6.50 D4 = 12.95 D5 = 9.95 D6 = 11.99

C64

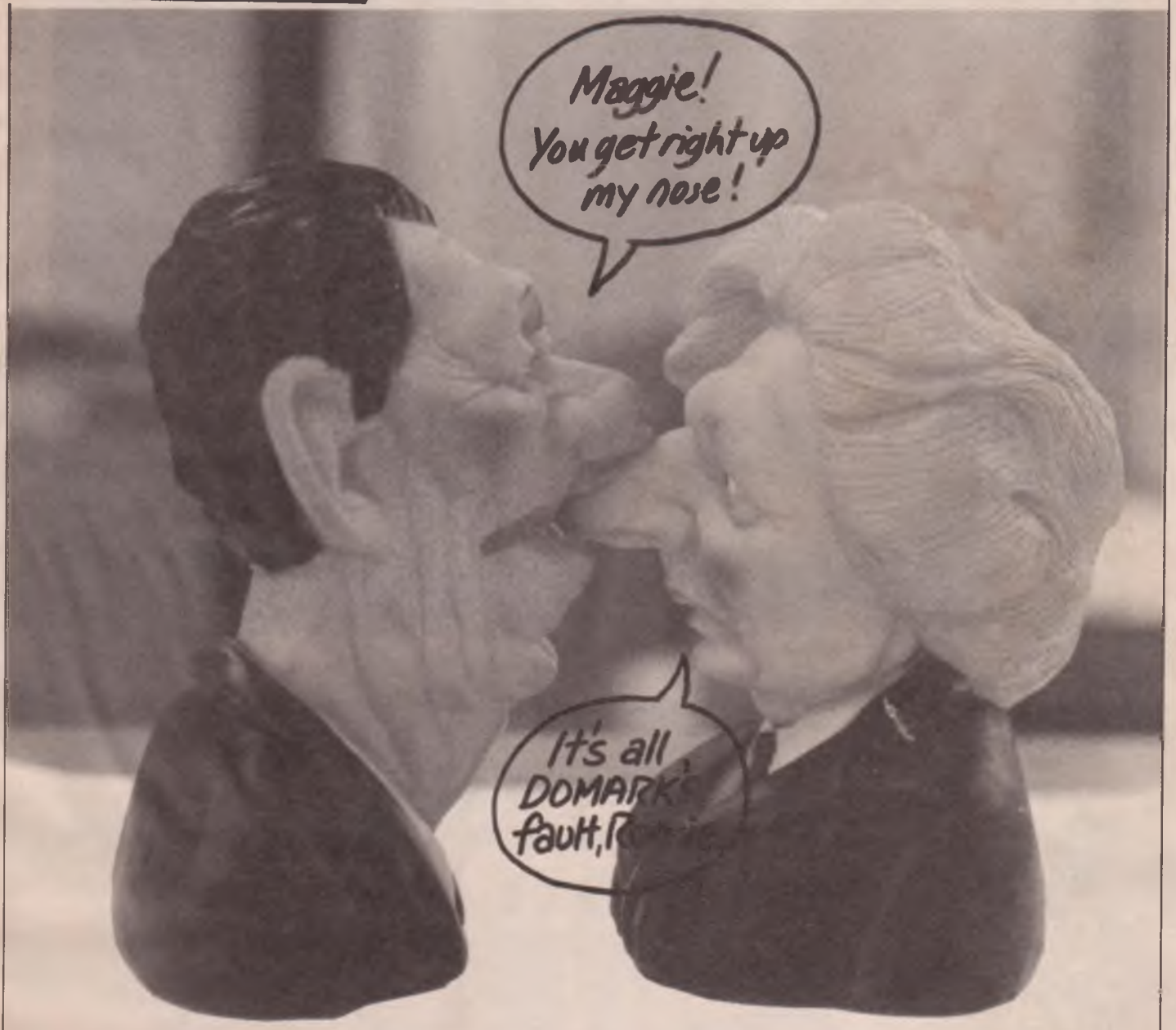
D1 Cosmic Shock Absorber 5.99
D2 Bards Tale ... 9.99
D2 Konamis Coins Op Hits ... 6.50
D2 Strike Force Cobra ... 6.50
D2 Transformers ... 6.50
D2 Great Escape ... 6.00
D3 Sports 4 All ... 5.50
D2 They Stole A Million ... 6.50
D2 Bobby Bearing ... 6.00
Blockbusters ... 5.50
Blockbusters Gold Run ... 6.50
D2 Bazooka Bill ... 6.50
D2 Shao Lins Road ... 6.50
D2 Bismark ... 6.50
D2 Future Knight ... 6.50
D2 Tobruk ... 6.50
D2 Dandy ... 6.50
D2 Cyborg ... 6.50
D2 Commando 86 ... 6.50
D4 Elite ... 9.50
D2 Bomb Jack II ... 6.50
Top Gun ... 6.50
Head Alignment Kit ... 6.50
Zeno ... 6.00
D1 Fire Lord ... 6.00
D2 Sigma 7 ... 6.50
D2 Monte Zumas Revenge ... 5.50
D2 Scrabble ... 8.50
D2 Monopoly ... 8.50
D2 Cluedo ... 8.50
Scalextrix ... 8.50
Infodroid ... 6.50
D5 Super Cycle ... 6.50
D5 Super Huey II ... 6.50
D5 Tarzan ... 6.50
D5 Terra Cresta ... 5.99
D5 Highlander ... 5.99
D5 Sam I ... 6.50
D5 Sam II ... 6.50
D5 Trailblazer ... 6.50
D5 Trapdoor ... 6.00
D4 Trivial Pursuit ... 9.99
D4 Trivial Pursuit (Young Edit) ... 9.99
D2 Uchi Mata ... 6.50
D2 Vierra Cruz ... 6.50
D2 Vietnam ... 6.50
D2 World Games ... 6.50
D2 Xevious ... 6.50
D2 Zarjaz ... 6.50
D4 Lazer Genius ... 9.99
D2 Jewels of Darkness ... 9.99
D6 Silicon Dreams ... 9.99
D6 Tracker ... 9.99
D2 Sentinel ... 6.50
Art Studio ... 9.99
Music System ... 9.99
Advanced Music System ... 9.99
Ultima IV Disc only ... 9.99
D2 Summer Games I ... 6.50
D2 Summer Games II ... 6.50
Any Mastertronic ... 1.75
Any Mastertronic Mad ... 2.50
Logo Disk Only ... 4.99
Int. Soccer (Capt) ... 4.99
GS II Plus ... 7.99
D2 Championship Wrestling ... 6.50
D2 Breakthrough ... 6.50
D2 Colour of Magic ... 6.50
D2 Cops n Robbers ... 6.50
D2 Crystal Castles ... 6.50
D2 Dan Dare ... 6.50
D2 Dantes Inferno ... 6.50
D2 Dempsey & Makepeace ... 5.99
D2 Druid ... 5.50
D2 Fist II ... 6.50
D2 5 Star Games ... 6.50
D2 Footballer of the Year ... 6.50
D2 Galvan ... 5.99
D2 Gauntlet ... 6.50
D2 Ghosts 'n Goblins ... 6.50
D2 Infiltrator ... 6.50
D2 Iridis Alpha ... 5.99
D2 Jack the Nipper ... 6.50
D2 Kayleth ... 6.50
D2 Leaderboard ... 6.50
D2 Light Force ... 6.50
D2 Mag Max ... 5.99
D2 Marble Madness ... 6.50
D2 Marble Madness Con. Set ... 6.50
D2 Movie Monster ... 6.50
D2 Now Games 3 ... 5.99
D2 Pub Games ... 6.50
D2 Power Play ... 6.50
D2 Parallax ... 5.99
D2 Sanxion ... 6.50
D2 Space Harrier ... 6.50
D2 Speech ... 6.50
D2 Spy vs Spy Arctic ... 6.50
D5 Reports 3 ... 6.50
D5 Hit Pack ... 6.50
D1 Alleykat ... 5.99
D1 Uridium & Paradroid ... 5.99
D2 Xevious ... 6.50
Scooby Doo ... 6.50
D2 Donkey Kong ... 5.99
D2 Zarjaz ... 6.50
Masters of the Universe ... 6.50
Hypaball ... 6.50
Judge Dread ... 6.50
D2 It's a Knockout ... 5.75
Space Harrier ... 6.50
D2 Yie Ar Kung Fu II ... 5.75
D2 Paperboy ... 6.50
D2 Boulderdash Con. Kit ... 6.50
D2 Ace of Aces ... 6.50
Sam III, Rambo, Kung Fu Master
D2 Fighter Pilot, Ghostbuster ... 6.50
D2 Glider Rider ... 6.50
Graphic Ad. Creator ... 14.99
10 Computer Hits ... 6.50
D2 1942 ... 6.50
D2 Arco Jet ... 6.50
D2 Aliens ... 6.50
D2 Armour of Antriad ... 5.99
D2 Avenger, Way of Tiger II ... 6.50
D2 Best of Beyond ... 6.50
D2 Beyond For. Forest ... 6.50
D2 Camelot Warriors ... 6.50
Zork I ... 3.50
Zork II ... 3.50
Zork III ... 3.50
Any Level 9 ... 4.99
Game Killer ... 4.99
D2 Inheritanc ... 6.50
D2 Blitz Kries ... 6.50
Zapp Sizzlers I ... 6.50
Zapp Sizzlers II ... 6.50
Zapp Sizzlers III ... 5.50
Computer Hits II ... 4.99
Computer Hits I ... 5.99
D2 Legend of Sinbad ... 6.50
D2 Tau Ceti ... 6.50
D2 Ace ... 6.50
Super Bowl ... 5.99
Ping Pong ... 3.99
Biggles ... 5.99
Mercenary & 2nd City ... 6.50
Spy vs Spy II ... 4.99
D1 Nuclear Embargo ... 6.50
Rogue Trooper ... 6.50
D2 Cobra ... 6.00
D2 Jail Break ... 6.00
D2 Tommahawk ... 6.50
Reus ... 9.99
Paddles ... 9.99
Micro Rhythm ... 1.75
D1 Sky Runner ... 6.50
Highway Encounter ... 5.50
Wibstars ... 6.50
Elevator Action ... 5.99
Agent Orange ... 6.50
Nether Earth ... 6.50
Grange Hill ... 6.50
Scorpion ... 6.50
Little Computer People ... 3.99
Durrell Jig 4 ... 6.50

AMIGA

Sky Fox ... 23.99
Leader Board ... 19.99
Leader Board Tournament ... 7.50
Superhuey ... 16.99
Alternate Reality ... 19.99
Temple of Apshai ... 19.99
Jewels of Darkness ... 16.99
The Pawn ... 19.99
Archon ... 23.99
Archon II ... 23.99
One on One ... 23.99
7 Cities of Gold ... 23.99
Adventure Construction Kit ... 23.99
Marble Madness ... 23.99
Instant Music ... 23.99
Arctic Fox ... 23.99
Borrowed Time ... 19.99
Hacker ... 19.99
Hacker II ... 19.99
Mindstone ... 19.99
Little Computer People ... 27.99
Music Studio ... 27.99
Hitch Hikers Guide ... 23.99
Zork I ... 23.99
Zork II ... 23.99
Zork III ... 23.99

Competitions

SPLIT PERSONALITIES!!!!



Rancid Ronnie **Meaty Maggie**

Four very special prizes are offered in this competition . . . squeaky toys of your favourite politicians (supposedly for your pets to chew, but we know how inventive CCI readers are!) Maggie, Ronnie, Neil and David are up for adoption, so if you think you could offer them a home, answer these questions:

Name these well known politicians:

1. **Which Dickie was tricky**
2. **Who is the Ferrous Female**
3. **Who left Manila in a hurry**
4. **Name one American who Speakes (well actually he doesn't anymore)**
5. **Which actor politician co-starred with a chimp? (And who was the better actor?)**

Answers on a postcard to: Split Personalities Competition, CCI, 40 Bowling Green Lane, London EC1R 0NE.
Closing date: April 15th.

TOP TWENTY

Our February issue "Game of the Month", "Future Knight" shoots straight into the C64 chart at No. 4. On the C16 front, Speed King finally makes it to No. 1 after 3 months in our charts.

C64

	GAME TITLE	COMPANY		Price (£)	Rating
1	Gauntlet	US Gold	★	9.95	T.B.A.
2	Escape from Singes Castle	Software Projects	★	9.95	T.B.A.
3	World Games	US Gold	→←	9.95	Crisp
4	Future Knight	Gremlin	★	9.95	Awesome
5	Cobra	Ocean	★	8.95	T.B.A.
6	Space Harrier	Elite	★	9.95	T.B.A.
7	Ace of Aces	US Gold	→←	9.99	Mega
8	Uridium/Paradroid	Hewson	★	9.95	Crisp
9	Flash Gordon	Mad Games	★	2.99	Crisp
10	Future Knight	Gremlin	★	9.95	Awesome

C16

1	Speed King	Mastertronics	↑	1.99	Crisp
2	Winter Events	Anco	★	7.95	Awesome
3	Powerball	Mastertronics	↑	1.99	Crisp
4	Computer Hits 10 Vol. 3	Beau Jolly	★	9.95	T.B.A.
5	Video Meanies	Mastertonics	↑	1.99	Iffy
6	Way of the Exploding Fist	Melbourne House	★	7.95	Awesome
7	Reach For The Sky	Gremlin	★	6.99	Crisp
8	Yie Ar King Fu	Imagine		7.99	Crisp
9	Ace	Cascade	★	10.99	Mega
10	Video Poker	Mastertronics	★	1.99	T.B.A.

★ NEW ENTRY

Compiled by CCI from leading distributors

Battalion Commander

US Gold.

Ian Waugh plays soliders and submits this strategic report on a mystery link between Battalion Commander and Combat Leader.

Battalion Commander is a game of modern tank warfare where you pit your wits against the logic of the computer. It is extremely complex although it need not be difficult to play. The battle is waged over 12.8 kilometers of basically green terrain which scrolls up and down over four or five screens. Movement takes place in real-time, that is the enemy doesn't wait for you to move, it just gets on with the job of wiping you out.

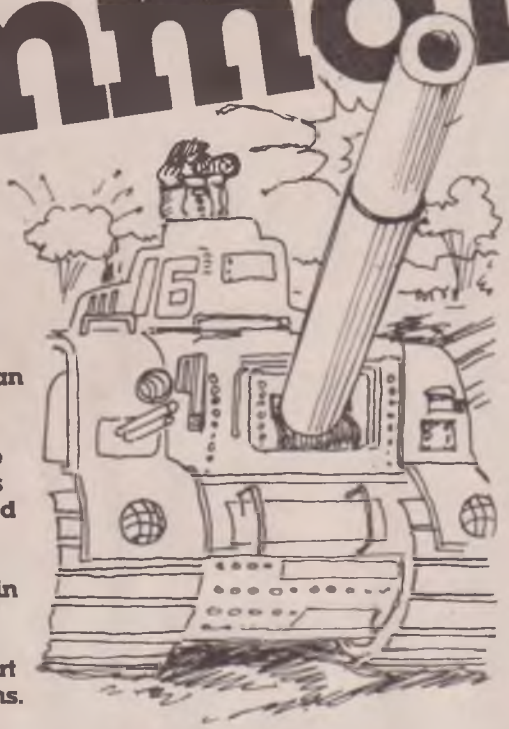
You give orders to your units using two keypresses. The first specifies the unit and the second gives the order. For example, A refers to Company A, B refers to Company B, etc. Each company can be further subdivided into 6 platoons of which you can take independant command and there is also the Battalion Headquarters which is where you are located and you lose big points if this gets blown up — as well as suffering shell shock and a winning a stay in MASH. You also have an FSO (Fire Support Officer) who takes care of your commands to give fire support to units and provide smoke screens. There are engineering, scout, mortar, infantry and anti-tank platoons.

The second keypress specifies your order. This can be moved to a given position, fire at will, give support fire, provide a smoke screen, establish or remove a bridge, dig in and mount and dismount the infantry.

You move a cursor around the board with a joystick or CTRL and the I, J K and M keys. This can be used to show where you want a unit to move to or to indicate a target to fire at. As the screen can be quite full of little tanks, trucks and men, positioning the cursor over a unit — friendly and enemy — will, quite usefully, give details about it and pressing the fire button will show which way it is facing.

There are five basic scenarios. The 'Novice' — 'levels' gets you used to the system and the other scenarios let you select the nationality of the opposing sides, determine the relative strength of the units and select one of 40 terrain maps.

As you can see there are a lot of options but the mechanics are fairly simple. The trouble is, the computer can do its sums faster than you and you really need to think of some good tactics to outwit it. The game system makes excellent use of the computer; it is not just a computerised board game, in fact it is one of the most interesting — and fun — wargames around.



If, as you read this, you experience a sense of *deja vu* be assured, you're not psychic. US Gold have also released a game called Combat Leader and sometime ago I actually bought (yes, for money — that strikes hard at the pocket of a software reviewer!) a copy marked 'Limited Edition £1.99'. Both games were designed by the same guy, David Hille, and it soon became clear that Battalion Commander is not just a dead ringer of Combat Leader, but a souped-up version of it.

Lots of gripes I had about Combat Leader have been corrected in Battalion Commander, eg.in Combat Leader the map and units were all green (talk about camouflage!) and the scoring system was more ambiguous. Combat Leader did, however, have a design-your-own-game option and included weapon ratings so you could balance one side against the other. It also had some rather good designer notes should you fancy writing a similar game yourself.

Now, it's okay to release updated and rehashed versions of a program but US Gold should inform potential buyers of how close Battalion Commander is to Combat Leader lest the unwary wargamer buy both.

There is no doubt, Battalion Commander is the better game in terms of layout and execution but if you have Combat Leader it's doubtful whether you'd also want to buy Battalion Commander, especially at full price.

If you can afford Battalion Commander then buy it,otherwise try to get a copy of Combat Leader. If you can't, buy Battalion Commander anyway. Okay men, let's go over the hill just one more time and show those Ruskies we mean business!

konix

SPEED KING

VROOM!

CAN YOU HANDLE THIS MUCH POWER?

POW!

BLAT!

ZAP!

The **KONIX SPEEDKING** packs more punch. That's why it's fast overtaking ordinary joysticks to become one of the world's most popular hand control.
As it's name suggests it's built for fast handling to give you lightening fast control. Micro switches await your slightest movement, and fly into action - ZAP, POW, SPLAT, BLAM - giving you instant reactions to every command.
Tough, rugged and made in Britain to the very highest standards, the **KONIX SPEEDKING** comes with a twelve month guarantee.

Available for:- Spectrum and Spectrum Plus, Commodore 64, 128 Vic20. All Atari Computers, Electron, M.S.X. Computers, Amstrad and Oric at **£12.99.**
Also:- BBC, Commodore C16, Plus 4, and Dragon at **£14.99.**

Trade and export enquiries contact Wayne or Sandra on **049525 5913.**

Please send me _____ Speedkings at **£12.99** each.
_____ Speedkings at **£14.99** each
(Price includes postage and packing in the U.K. Overseas orders please send **£2.50** per Speedking.)
Computer make and model _____
I enclose a Cheque/Postal Order for _____
made payable to **KONIX.**
Please charge my Access/Visa No. _____
Card holders can telephone on **049525 5913.**

Signature _____
Name _____
Address _____
_____
Postcode _____ Telephone _____

Send to **Konix Computer Products, Unit 13, Sirhowy Hill Industrial Estate, Tredegar, Gwent NP2 4QZ. U.K.**

SHADOWS

Spectrum in October, **Amstrad** in November, **Commodore 64** in December. All £9.95

DURELL

Sales dept.,
Castle Lodge, Castle Green,
Taunton, Somerset TA1 4AB
England Telephone (0823) 54489 & 54029

software getting harder . . . .

DEEP STRIKE

R.R.P. £9.95

Spectrum & Amstrad
available November 20th

Commodore 64
available January 20th

Trade enquiries to Centresoft
on 021 356 3388

DURELL

Sales dept.,
Castle Lodge, Castle Green,
Taunton, Somerset TA1 4AB
England

Telephone (0823) 54489 & 54029

software getting harder . . . .

Blood 'n Guts – An ancient barbarian decathlon with all the violence and brutality you've ever dreamed about in a computer game...
BLOOD 'N GUTS
Tape 9 Disk 14
American Action software distributed in the U.K. by Microdealer International Telephone (0908) 74000.
ACTION

Competitions

WIN!

SUPER SUNDAY PRIZES

We're giving away an American football as first prize in this super competition. Thirty runners up will receive a copy of Nexus' "Super Sunday" American football game.
To enter, just let us know which part of the U.S.A. you'd associate the following with.

1. Samuel Goldwyn
2. Mickey Mouse
3. A certain Tea Party
4. Pamela Barnes-Ewing-Barnes-Ewing
5. The Statute of Liberty

Answers on a postcard to Super Sunday competition (address below), to reach us by April 15th.

WIN!

A SKATEBOARD

There's a skateboard waiting in our office for the winner of this competition. Eleven runners up will have to console themselves with a Bubble Bus T-Shirt.
To enter, simply figure out what type of "board" the following are.

1. A storage area
2. A CCI review amongst these pages
3. A man in the water
4. A domestic appliance

Answers on a postcard to: Skaterock Competition (address below).
Postcards to reach us by April 15th.

Send your entries to: CCI, 40 Bowling Green Lane, London EC1R 0NE.

WIN!

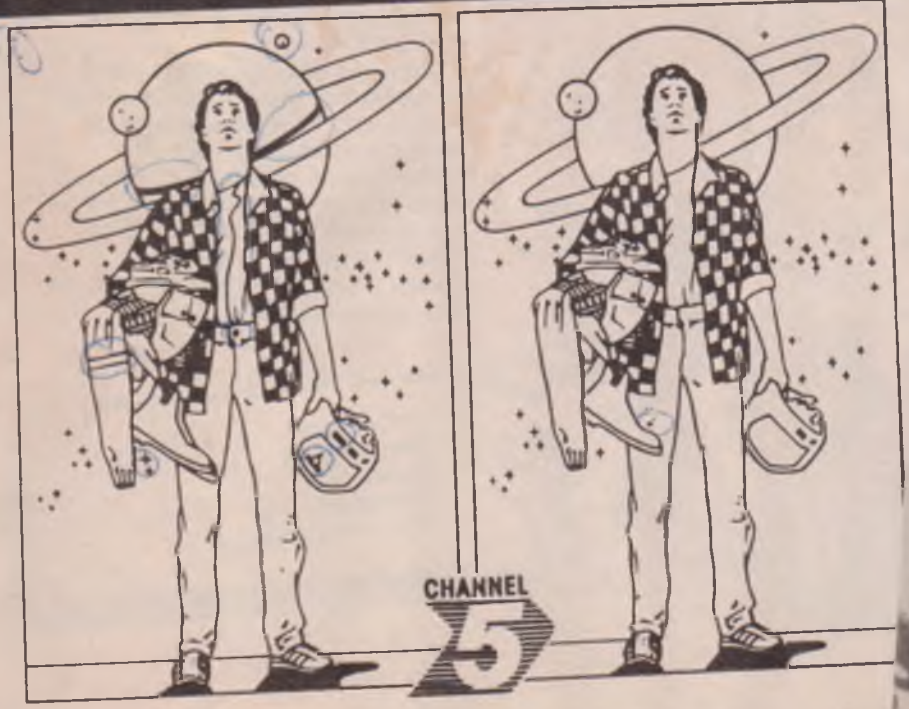
AVENGER T SHIRTS

This month we have some mega Gremlin Avenger T shirts to give away to 25 lucky readers in this simple competition. Don't forget to tell us whether you need a small, medium, large or extra large size as we're not telepathic (apart from the Editor of course).
Answer these questions about Gremlin.

1. Name Gremlin's managing director
2. Name their first big success
3. Name a Gremlin game with an animal in the title
4. To which game is Avenger the follow up?

(Hint: You can find all the answers in the CCI December '86 issue)
Answers on a postcard to: Avenger Competition
Closing date: April 15th

THE LAST STARFIGHTER — SPOT THE 10 DIFFERENCES



NAME _____

ADDRESS _____

TEL NO _____

WIN "THE LAST STARFIGHTER" VIDEOS

We have 10 copies of Channel 5's latest video release "The Last Starfighter", a fast moving space adventure.

Spot the 10 differences between these two drawings and you could win a video. (Note: Videos are VHS only!)

Send your entries to: CCI, 40 Bowling Green Lane, London EC1R 0NE.

MEGA REVIEW

CCI Rating C64

IFFY

REDMAX

Red Max — Code Masters

You and your crew are drifting aimlessly through space and are quite happily piling up the zed's. You are totally unaware, however, that throughout your complex the death lords are planting many fission mines. Your computer suddenly gives an earplecing squeal to alert you that there's and intruder in your midst. You awake with a start and your VDU screen gives you your mission details.

Firstly you must de-activate all 27 fission mines, then turn on the 8 back up Nuke-Core cooling system, shut down power plants then go and reanimate the other 9 members of your crew. Sounds easy dont it? (Is that all? Ed) a pleasant way to spend the next fortnight!

You start off on a moon-like landscape and you are perched on a motorbike. You must ride around avoiding the laser fences and other various objects to collect the 27 fission mines. If you ask me there are far too many and it's so hard, I think, that it gets a mite boring very quickly. Red Max takes quite a long time to load but there is a pretty loading screen to keep you amused. The graphics in the game are pretty weedy, but quite detailed. Red Max is very colourful and really pretty good, although it might get on your nerves after a long while.

Not my idea of a great game but OK for those who enjoy a challenge. Its certainly got its attractions. And for £1.99...

Price: £1.99
Graphics: ★★★
Sound: ★★
Playability: ★★★
CCI Rating: Iffy

CCI Rating C64

DODGY

ELECTRIX

Electrix — Players

Why oh why can't people leave things alone? If they did then I wouldn't have to be playing this trash. Vandals have damaged the Los Angeles power station and the electricity is slowly running out. You are the poor so an'so who has to risk life and limb to repair the broken lines. When you re-connect all the loose lines the city can return to normal. To get Bonus points you must collect the electrical hardware that has been left underground. Beware of the moving components, otherwise they will turn you to a piece of toast in no time at all.

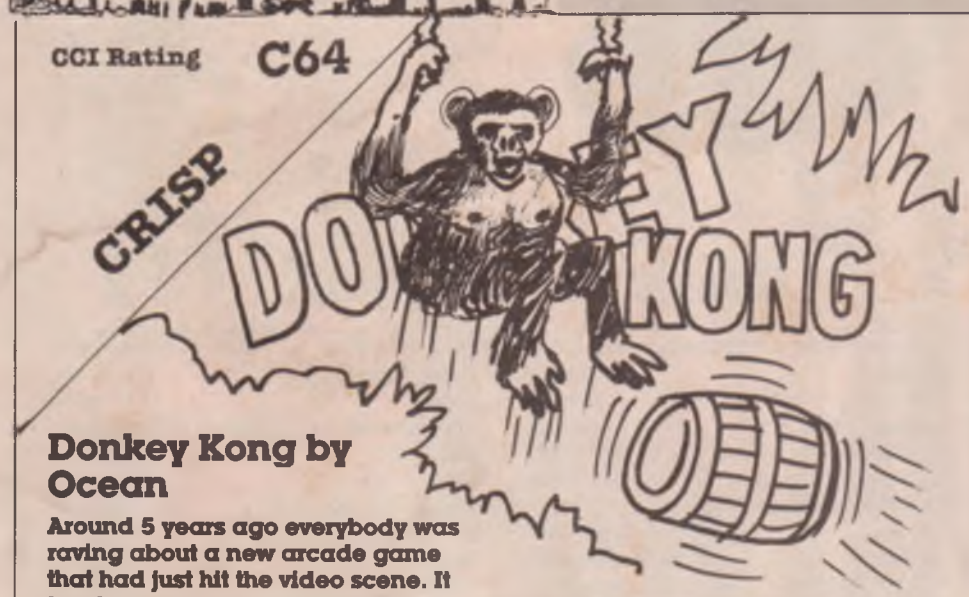
Electrix is a very simple kind of platform game, it is very primitive by today's standards. If this game had been released two years ago then I might have liked it a bit more. It's a good job it's only cheap 'coz you might end up using it as a blank tape!!

The graphics are rather boring and unimaginative and the colour is also drab and unexciting. The sound is about as good as the graphics and colour. Electrix is not all that easy to play either, but if this is your first £1-99 game then make the most of it and I can assure you that you will buy a better one next time (I hope!!)

Price: £1-99
Graphics ★★
Sound ★
Playability ★★
CCI Rating:- Dodgy

MEGA REVIEW

CCI Rating C64



Donkey Kong by Ocean

Around 5 years ago everybody was raving about a new arcade game that had just hit the video scene. It involved a gorilla, a damsel in distress and a little chap called Mario. This was, of course, Donkey Kong.

Now 5 years on, Ocean are releasing it as an old arcade classic. The plot is quite a simple one. Donkey Kong has captured a beautiful girl and has taken her to the top of a building. Just when she thinks her innings are at an end, along comes Mario the carpenter. He is her only hope. There are four levels for him to master, each one leading nearer and nearer to the damsel in distress.

The first screen is fairly easy as you probably know. You must jump over barrels that the overgrown monkey chucks your way. If you aren't feeling energetic enough for this, they you can hammer the barrels. After you reach the top, Donkey Kong climbs one level further and this becomes a little harder.

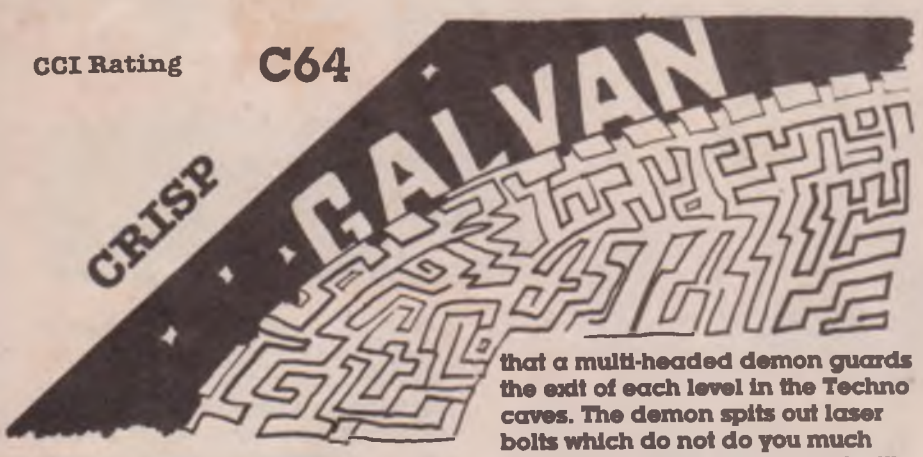
Such objects like custard pies and moving escalators are introduced, which get in your way and annoy you from time to time. However, like barrels and fireballs, the custard pies can be bopped on the head with the trusty old hammer.

The third screen is a little more difficult as you have to time your jumps pretty well. Finally on the fourth screen, Mario must remove the rivets that are holding the scaffolding together. This is done by simply walking or jumping over them. After these are all removed, Donkey Kong falls to his death. You are awarded a bonus life at 10,000 points and there are umbrellas and hats to be collected on the way.

Overall I quite enjoyed Donkey Kong and was playing on it for quite some time. The graphics and sound are about average and it was rather nice to be re-acquainted with one of my old arcade classics.

Price: £8.95 (c) 12.95 (d)
Graphics ★★
Sound ★★
Playability ★★★
CCI Rating — Crisp

CCI Rating C64



Galvan by Imagine

Picture if you will the dark, dangerous depths of the labyrinth of the planet Cynep. There you have the scene for the latest offering from Imagine. You are Galvan, the last surviving member of the Cosmo Police, who sought out and tried to banish evil on the planet of Cynep. Your task, as Galvan the Great, is to penetrate the inner depths of the labyrinths and neutralize all the defences thus bringing Cyneps evil reign to a long awaited end. None of your fellow policepeople have survived which means you have very little information on what lies ahead of you. All that is known is that a multi-headed demon guards the exit of each level in the Techno caves. The demon spits out laser bolts which do not do you much good if you come into contact with them. Each of his heads must be destroyed separately. There are many other aliens and robots who are out to make life as difficult as they can for you. You can destroy these aliens by one of four means. A punch, which is not very strong and will not do much to some of them. You've also got the use of a gun, which is a little more powerful. The best weapons you can get hold of are either Arc Blasters or White Bolt Neutralisers. These destroy both the aliens and the multi-headed beast quite easily. You cannot pick and choose your weapons though which is not that helpful. Those men who have fallen before you just happened to drop some power pyramids, which when collected give you both more strength and a more powerful weapon. The two best weapons the Arc blaster and the Neutralizer will only last for a short period of time, so use them while you've got them. Once you've disposed of the demon you can then proceed to the next, more difficult level.

Galvan's plot is a little dated now but nevertheless it's a reasonable attempt. The graphics are good, quite large, detailed and colourful. The aliens are imaginative and quite varied. The sound is also pretty good with tunes playing during the game and at the title screen. The tune during the game, does get on the nerves a little but there's always the volume control on the T.V. The movement is mostly smooth but occasionally the screen flickers a little which is a bit annoying. A below-par release from the label to which Ocean gave the kiss of life maybe they should give parts of the game the kiss of life as well.

Price: £8.95
Graphics: ★★★
Sound: ★★★
Playability: ★★
CCI Rating: Crisp

BULLETIN 1·0·0·0

Check for Yourself!

List of games and companies

The latest issue of Bulletin 1000 Video Magazine has these goodies for you.

List of games and companies

The latest list issue of Bulletin 1000 Video Magazine has these goodies for you.

Scalextric	Virgin
Arctic Fox	Ariolasoft
Butch Hard Guy	Advance
Short Circuit	Ocean
Spectrum +2 Compilation	Ocean
Star Soldier	Quicksilva
Elevator Action	Quicksilva
Hive	Firebird
Express Raider	U.S. Gold
Leaderboard Tournament	U.S. Gold
Sigma 7	Durell
Top Gun	Ocean
Double Take	Ocean
Gauntlet	U.S. Gold
Xevious	U.S. Gold
Footballer of the Year	Gremlin Graphics
Avenger	Gremlin Graphics
Future Knight	Gremlin Graphics
5 Star Games	Beau Jolly
Hypaball	Odin
Legend of Kage	Imagine
Galvan	Imagine
Infiltrator	U.S. Gold
Movie Monster	U.S. Gold
Nuclear Embargo	Micropool
Crash Smashes II	Gremlin Graphics
Zzap Accolades	Gremlin Graphics
C16 Classics III	Gremlin Graphics
MSX Classics	Gremlin Graphics
Terra Cresta	Ocean
Cobra	Ocean
Tomahawk	Digital Integration
Breakthru	U.S. Gold
World Games	U.S. Gold
Computer Hits III	Beau Jolly
Yie Ar Kung Fu II	Imagine
Konamis Golf	Imagine
Sentinel	Firebird
They Sold a Million III	Hit Squad
Ace of Aces	U.S. Gold
Crystal Castles	U.S. Gold
Maelstrom	Ocean
Donkey Kong	Ocean
The Great Escape	Ocean
Head Coach	Addictive
Deep Strike	Durell
Coin Op Hits	Imagine
Super Soccer	Imagine

MEGA REVIEW

CCI Rating **C64**

Monkey Magic — Sparklers

O.K. hands up all you who remember the television program Monkey. You remember the little oriental creature who used to fly around on a little white cloud? Well now you can experience all the thrills and spills of being your very own half-man, half ape. In the new "Sparkler" you are Darq the monkey, a powerful champion warrior of the long lost breed of half man half creatures. You are about to go on a very dangerous pilgrimage to find and recover the holy scriptures. Your journey is made more hazardous by the presence of venomous, man-eating dragon-flies who will try and knock you off your cloud if you're not careful. You do have your enchanted staff which emits Thunderbolts to help you. Once you've completed the first level, you then reach the secret peach garden. You must climb the trees and collect the magic fruits. You've got demons and other nasty creatures to contend with. After you've collected the fruits, you move onto the next stage of the quest. Monkey is attacked by flocks of swooping birds. These birds drop fire balls on you (I wanted to be an ornithologist once. Now I'm glad the examiner gave me the bird! Ed). You must jump over the cracks and throw stones to survive. If you do manage to survive, you then reach the holy temple. The temple is guarded by a fire-breathing dragon. You've got to kill this nasty before you can enter the holy temple.

Monkey Magic did hold our attention for a surprising length of time. A decent game if you've never played anything like this before. The graphics are of reasonable quality and are quite colourful. There is a continuous tune throughout the game but it's nothing special. Nevertheless fully worth its price. Recommended.

Price: £1.99
Graphics ★★
Sound ★★
Playability ★★★
CCI Rating — Crisp.

MEGA REVIEW

CCI Rating **C64**

MEGA

Indoor Sports — Advance Software

Do you remember the days back five years or so ago, when we sat bouncing a ball from side to side of our TV screens and thought we were having fun?

INDOOR SPORTS

Scoring goals brought shrieks of excitement or frustration... Well the excitement and frustration are back again only this time with a slickness that has brought the bouncing ball game up to the minute. In fact, Advance Software's new indoor sport 'Air Hockey' is the fastest growing indoor sport in the US. It grabs you with that old time compulsion to keep on and on till you score and makes you furious when your opponent slips the puck past you. You play — two players or against the computer-at 9 skill levels. It's like a snooker table with a surface of ice and at the top level the game is lightning fast. Indoor Sports has two other play sections as well — Ten Pin Bowling and Darts. Both demand tight concentration and lots of practice to get the scores up in the right place. The Bowling really does have that 'belt it down the alley' feeling and when you — very occasionally — smash down all the pins it really feels like you've made it to the team or won the championship.

But though both Air Hockey — we hear that in the real table game in the US broken knuckles are agonisingly frequent! — and Bowling are first class, we liked even more the Darts. Well you could play it on a real board but this version has such as authentic feel you might not want to bother. It's got four skill levels and, as in the real thing you have to judge flight angle and strength of throw to get the darts on accurately. Best of all, the computer, if you play against it, really gives you the chance to challenge it on equal terms. Indoor Sports is excellent value and will keep you going back to it again and again, not for weeks but months.

Super Advanced Info! Advance tells us that they're preparing to bring out an arcade/adventure style 'Laurel and Hardy' game written by the creator of 'Dan Dare'. What we saw of it made us think that Advance has a possible world winner. With top value games like Indoor Sports, they are a games house to watch.

Z.M.S.

Price: £8.95 C £14.95 D
Graphics: ★★★
Sound: ★★★
Playability: ★★★★★
Rating: Mega

MEGAREVIEW

CCI Rating **C64**

CRISP

SKY RUNNER

SKY RUNNER by Cascade

Cascade has earned a long-established — in computer terms — reputation for good flight-style games. Air Combat Emulator — A.C.E. — has come to be regarded as a classic of its kind across virtually every brand of home computer. A.C.E. can be counted the surprise hit of 1986 that just went on selling through the year and finally won, jointly, CCI's Oscar for the Best Simulation of 1986. It proved that Cascade knew exactly the formula which would keep you locked to your screen and joystick and toget you to go back to them again and again. Somewhere in the quiet ultra-respectable Yorkshire county of Harrogate were bubbling up some highly creative even evolutionary programming ideas, A.C.E. certainly proved that.

I have to say that Cascade's follow-up to A.C.E. — Sky Runner — does really break that much ground — or air. I suppose it really ought to be. But that doesn't make it less entertaining though. I don't know if it will equal the hit A.C.E, but I am sure that a lot of people are going to want it once they've tried it.

You are a Runner Squad Commander in charge of a Planetary Skimmer. You don't need me to tell you what that is, I hope. You also have three Sky Bikers which drop down to the ground, one at a time. With the Skimmer, you flash over — or try to — on-coming obstacles and you have to be really smart about it, for even at the early levels, it demands top speed reactions. Slow reflexes and you get blown to smithereens — fast! When you get past the first level, you let down your Sky Bikers and start dodging the ground objects that zip towards you at a rate of knots.

There is a neat little radar screen that gives you the whole picture so you get some advance notice of what's coming at you. The aim of the whole game is to accumulate riches which are marked up on a centre mini-screen. Sky Runner has very much that arcade "here they come at me, oh hell the swine exploded me, I'll have just one more go" feeling. I kept coming back for more, and more . . . and just one more try . . . It's not the kind of game that is so easy that you get the hang of it straight away and get sick of it pretty quick nor is it so difficult that you get knocked off with infuriating and boring frequency. Sky Runner is just about right. If you want a flight-style game that will challenge, entertain and fascinate you, and if maybe you liked A.C.E., well then Sky Runner is for you. Recommended.

Z.M.S.

Price: c£9.95, d£12.95.
Sound: ★★
Graphics: ★★★
Playability: ★★★★
Rating: Crisp

Classic Snooker

CBM 64/128 — [illegible]/PLUS 4 (ENHANCED)

AUTHENTICITY
CLARITY OF GRAPHICS
ACCURACY

Classic Snooker is entertainment at its best and a tough challenge with facilities to practice and improve. Perhaps one day beat the computer at its own game!

Computer option. Play against the computer or a friend.

Three skill levels. Amateur, Novice and Professional.

Flicker free graphics and smooth action.

Clear identification of the colours on a green table.

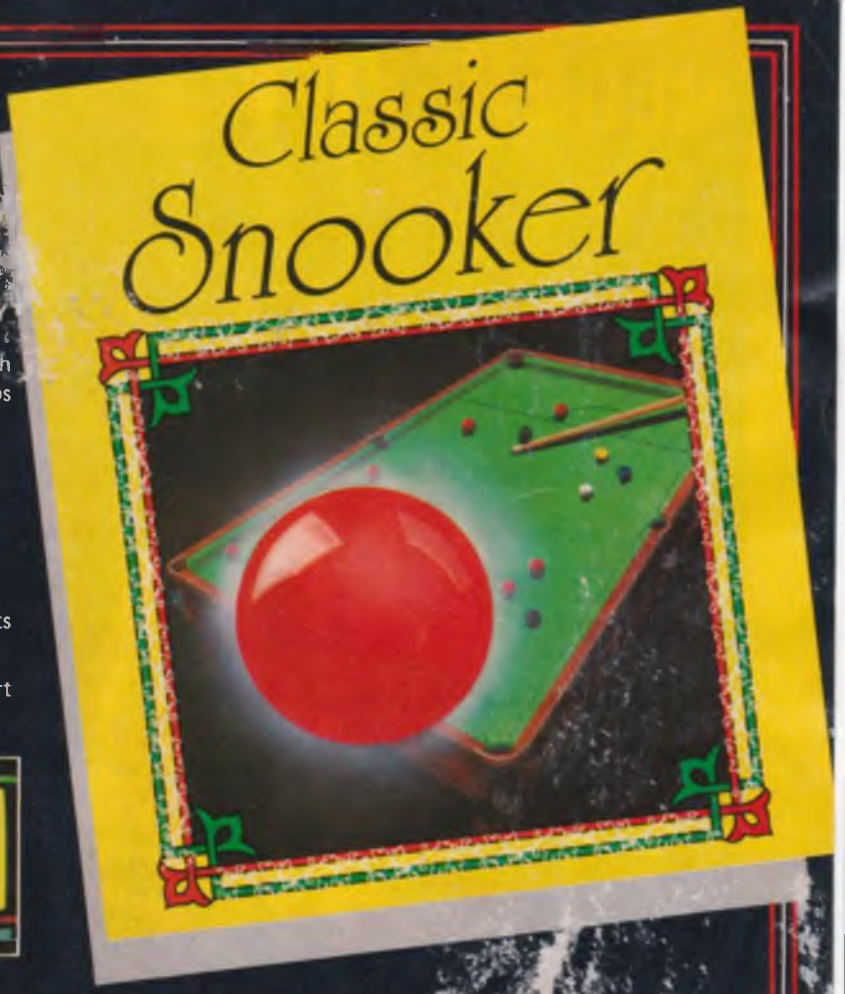
Facility to set the table and practice those difficult shots (CBM 64, PLUS 4 and C16+64K expansion).

Fine control of the power of the shot and facility to impart TOP, BOTTOM or SIDE spin to the cue ball.

PRICE **£5.95**

Screen Shot PLUS 4

Screen Shot 64



64K RAM PACK FOR C16 £39.95

VOICE MASTER

YOUR COMPUTER CAN TALK IN YOUR OWN VOICE [illegible] a synthesizer but a true digitizer that records your natural voice quality, in any language or accent. Words and phrases can be expanded without limit from disk. Speech Edit program alters or improves sounds.

WILL IT UNDERSTAND WHAT YOU SAY? A real word recognizer for groups of thirty two words or phrases with unlimited expansion from disk/tape memory. Speech playback and recognition can work together. Have a two way conversation with your computer.

Easy to use with new basic commands like SPEECH, LEARN, VM, etc. Machine code programs and memory location [illegible] enhanced programmers.

Totally transportable software. Speech recorded on a C64 using V.M. can be loaded into another CBM 64 tape or disk and reproduced without using a V.M.

[illegible] you hum or whistle to write and perform. Your composition can be edited, saved and printed out. You can [illegible] note from another in order to write and [illegible]

[illegible] an introduction to Computer speech, which that you can [illegible] your own [illegible] talking keyboard, calculator, clock and [illegible] selections. Samples of level 1 and 2 speech included.

[illegible] Available [illegible] Sampler [illegible] English. Free [illegible] Twenty-eight [illegible] Phrases 2 to [illegible] available [illegible] ANC [illegible] Retailers write to us on [illegible] letter headed note paper for a FREE sample of the [illegible] disk.

ULTIMATE HUMAN TO COMPUTER INTERFACE - You will never find a better

£59.95 AVAILABLE FOR COMMODORE CBM 64/128, ATARI 800/800XL/130XE, APPLE IIe/IIc

ANCO

ANCO SOFTWARE, WEST GATE HOUSE, SPITAL STREET, DARTFORD, KENT DA1 2BH. Telephone 0322 92513/8 Telex: 8927693 ANCO G.

24 HOUR CREDIT CARD SERVICE 0322 522631

MEGA REVIEW

CCI Rating C64

CRISP

Howard the Duck — Activision

These days Licenses are all things to all people, and if you're Ocean or Elite they're the only reason your company stays afloat. I say Licenses rather than 'games' because it's becoming increasingly obvious that once the big boys buy up the next Stallone film, and once the ads have been booked, then the last thing that actually gets serious consideration is who should write the game and how good that game should be. There is an increasingly cynical attitude in the software business that says a kid will buy any old rubbish if it's got a big name on the front, and the way some of the retailers are buying stock (often on the basis of video alone) supports this quick-scam to the full. The results were numerous in 1986, from the pathetic Knight Rider to the attrocious Breakthru, and unless you the punter give such products the reception they deserve it will continue in 1987 — You have been warned!

Activision, fortunately, are not in this mould. Having produced the most successful license of all in Ghostbusters, they continue to show that with good games designs, clever scene-stealing (remember the logo?) and perfect timing you can still make money out of what is now a risky and tacky business. Howard, A new Breed of Hero may be the kind of film where even a toddler would slash the seat in disgust, but it's only just out on national release and Activision should do well out of it if they can get it to the shops in time. While I'm not blown over by the game, I do confess to being pleasantly amused for a while and like Ghostbusters there are just enough gimmics from the film to make it a good buy.

Howard is a 4-part arcade adventure shot in gloriously pseudo 3D. The colours remind me of Spy V Spy II, but the 4-way scrolling and rather slow gameplay make it look and feel very different. At the start you parachute onto the island (you being a duck-sprite with real webbed feet and a cute waddle) and set off in search of your back-pack. In this pack are a micro-lite aircraft, outboard motor (for crossing water) and ray-gun with which to zap your main enemy, The Dark Overlord . The island is full of menacing eyes in the bushes, mutant slime that can only be leaped, and stretches of water. There are also mole-hill like protrusions from which spring zombies that home in on you if left unchallenged. Fortunately you are a master of Quack-Fu (if you laughed at that you may find the film funny too . . .) and by jumping on the mole-hills or kicking your opponents repeatedly you can get rid of the problem. This having been done you find and cross the rope-bridge and you've completed the first level.

Level 2 is a disappointment. The idea is to pilot your micro-lite to the top of the volcano, and while the graphic is nice the gameplay is terrible. It's like those old racing games where you had to bend your joystick like mad to get the lightest turn out of the car. Anyway, that's it.

Level 3 is basically a run-and-dodge stage, with gaps in the path and falling stalegtites to avoid. Level 4 is the shoot out with the Overlord himself, who turns out to be surprisingly easy to hit. Then it's a question of getting out before the island blows.

As you may gather, my initial enthusiasm for the game waned after the first level. The gameplay was far too slow, and the action a bit monotonous. Like Ghostbusters it soon becomes obvious that the frills necessary to make the game a bit like the film use up most of the memory, and once you've got over that similarity you may not return to the game all that often. That having been said it's well packaged, obviously well designed and not a bad buy. I would especially recommend it to younger players who may not be so frustrated by the lack of addictive gameplay. All the same, it's nice to see Activision back

T.M.

Price: £9.95
Graphics: ★★★★
Sound: ★★★
Playability: ★★
Rating: Crisp.

COMMODORE TITLES

£1.95 EACH

HOVER BOVER, ADVANCE MEGA CAMELS, SHEEP IN SPACE, ANCIPITAL, ACTIVE COMP LEARNING, WEB DIMENSION, ROCK 'N' BOLT, PASTFINDER, MASTER OF LAMPS, TOY BIZZARRE, JUICE, SUICIDE STRIKE, DRELBS, FORT APOCALYPSE, DOUGHBOY, WORLD CUP II, MAMA LLAMA, 3D LUNAR ATTACK, SUICIDE EXPRESS, KOSMIC KANGA, HEROES OF KARN, EMPIRE OF KARN, T.K.V., AUTOMANIA, SPYS DEMISE/SPY STRIKES BACK, EUREKA, CAVELON, WHIRLNURD, CHINESE JUGGLER, SILICON WARRIOR, LUNAR OUTPOST, JUMPMAN

£2.95 EACH

WHO DARES WINS, ARC PANDORA, 'Z', BOMBO, MATCH FISHING, MONTY ON THE RUN, MONTY MOLE, POTTY PIDGEON, SHOOT THE RAPIDS, TONY HARTS ART MASTER, SPIRIT OF STONES, COMBAT LEADER, BEAMRIDER, DEATH STAR INTERCEPTOR, WIZARD OF WOR, QUO VADIS, ZORRO, BEACHEAH, ROCKY HORROR SHOW, DIG DUG, UP & DOWN, BOUNTY BOB STRIKES BACK, GHOST CHASER, KERMITS STORY MAKER, OUTLAWS, IMHOTEP, CONGO BONGO, JOURNEY, CAUSES OF CHAOS, BLADE RUNNER, WILLIAM WOBBLER, BASILDON BOND, EDDIE KIDS, FLAK, GRIBBLYS DAY OUT, KNOCKOUT, JET SET WILLY, MANIC MINER, EVERYONES A WALLY, DUMMY RUN, HIGH NOON, MR WIMPY, ANDROID 2, DARK TOWER, VIEW TO KILL, FIGHTING WARRIOR, FRAK, HARVEY SMITHS SHOWJUMPER, MOTOCROSS, MOEBIUS, GEOFF CAPES, PITSTOP, KONG STRIKES BACK, SPIDERMAN/HULK, GYROSCOPE, SPELLUNKER, DESIGNERS PENCIL, BLACKWYTCH, BC'S QUEST FOR TIRES, ZAXXON, QUAKE MINUS II, TAPPER BOUNCES, STARION

£3.95 EACH

DRAGONSKULLE, BRIDGE PLAYER II, PINBALL WIZARD, GROGS REVENGE, WIZARDRY, KNIGHTS OF THE DESERT, LAW OF THE WEST, FIGHT NIGHT, TIGERS IN THE SNOW, SKY FOX, BOUNDER, THING ON A SPRING, BATTLE NORMANDY, HENRYS HOUSE VOL. I, HENRYS HOUSE VOL. II, RED HAWK, SELECT I (12 GAMES), ADVENTURELAND/SECRET MISSION, PIRATE ADVENTURE/VOODOO CASTLE, QUESTPROBE, WORLD SERIES BASEBALL, ZOIDS, COMBAT LYNX, TERRORMELINOS, MUSIC STUDIO, CHUCKIE EGG, MUGSYS REVENGE, VIDCOM

REVENGE, VIDCOM, BALLBLAZER, JET SET WILLY II

£7.95 EACH

GHOSTBUSTERS, SANDIZZY, MERMAID MADNESS

£4.95 EACH

INTERNATIONAL SOCCER, SOUTHERN BELLE, NEVER ENDING STORY, LOGO (COMMODORE), NOW GAMES COMPILATION, ADVENTURE QUEST, LORDS OF TIME, SNOW BALL, COLLOSAL ADVENTURE

COLLOSAL ADVENTURE, LITTLE COMPUTER PEOPLE, FOREST OF DOOM

£5.95 EACH

SUMMER GAMES II, WINTER GAMES, WHITE LIGHTNING

£9.95 FOR 4

'O' LEVEL MATHS, 'O' LEVEL PHYSICS, 'O' LEVEL CHEMISTRY, 'O' LEVEL BIOLOGY

ALL DISCS £5.95 EACH

RED ARROWS (Disc)	£5.95
CROSS COUNTRY ROAD RACE (Disc)	£5.95
RIVER RAID (Disc)	£5.95
RESCUE ON FRACTALUS	£5.95
PITFALL II (Disc)	£5.95
MASTER OF THE LAMPS	£5.95
PARK PATROL	£5.95
PASTFINDER	£5.95
WILLIAM WOBBLER	£5.95
CRITICAL MASS/COMBAT LINKS (Disc)	£5.95
BEAM RIDER (Disc)	£5.95
WEB DIMENSION (Disc)	£5.95
THE TRACER SANCTION (Disc)	£5.95
PITFALL (Disc)	£5.95
DECATHLON (Disc)	£5.95
SPACE SHUTTLE (Disc)	£5.95
SUSPENDED	£3.99
SUPERMAN	£3.99

McGRAW HILL EDUCATIONAL SOFTWARE

Min Order 5 Pieces ALL £1.50 EACH

ALGEBRAIC RELATIONS, PROBLEM SOLVING I & II, SKILL TESTER, SHAPES, COUNTING, FRACTIONS I & II, WATER CYCLE, DECIMAL FRACTIONS, PLACE VALUE, MULTIPLICATION I & II, ADDITION & SUBTRACTION, MEMORY TRAINER, DICTIONARY USE, BALLOON GAME, ALPHABET KNOW HOW, WORD POWER, HANGMAN 3, 4, 5, 6, GRAPHS 1, 2, DIVISION 1, 2, SET THEORY

VIC 20 SOFTWARE

ALL £1.50 EACH Min Order 5 Pieces

SUPER WORM, ROBOT ATTACK, MANGROVE, BOSS, PIT, SLICKER PUZZLE, ABDUCTOR, ANNIHILATOR, THE CATCH, READING, MATHS JUNIOR, ENGLISH LANGUAGE, KNOW YOUR CHILDS I.Q., SPACE SNAKE, KNOW YOUR PERSONALITY, MARTIANS, CONNECT 4, FROG CHASE, SNAKE, ROAD USER, JIGSAW, TRAP, NURSERY SONGS, ROB CARRIERS MENU PLANNER, SUPER GAMES PACK 1, SUPER GAMES PACK 2, MATCHMAKER, MATHS 2, ARITHMETIC 1, GEOGRAPHY, MATHS 1, HOPPIT, SKI, INNOVATIVE 7 PROGRAMS, PIXIE PACK,

BARGAINS FROM 1st PUBLISHING

8 BOOKS FOR JUST £9.95 + £2.50 p&p
Normal RRP over £50.00

YOUR 64 CASSETTE BOOK, GRAPHICS BOOK FOR THE COMMODORE 64, PEAKS & POKES C64, TRICKS & TIPS FOR YOUR COMMODORE 64, ADVANCED MACHINE LANGUAGE BOOK FOR THE C64, IDEA BOOK C64, MACHINE LANGUAGE BOOK FOR THE C64

1st PUBLISHING PROGRAMS ON DISC – ALL JUST £10.95 EACH

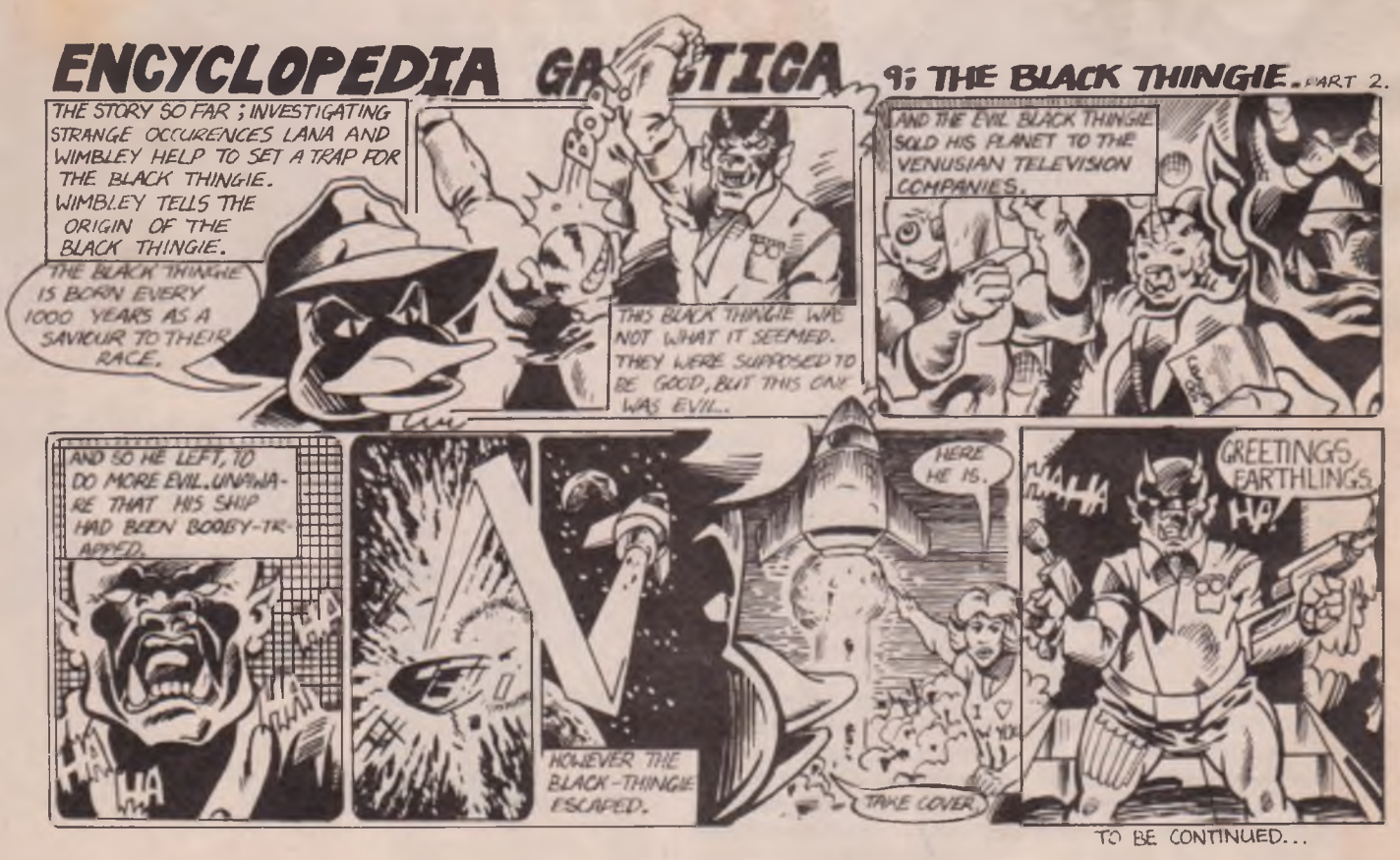
FIRSTWORD (WORD PROC.)
FIRSTBASE (DATABASE)
BASIC 64
PASCAL (LANGUAGE)
ADA TRAINING COURSE

UTILITIES & PERIPHERALS

SIMONS BASIC EXTENSION (DISC or CASS.)	£4.95
1551 DISC DRIVES FOR C16 and +4	£79.95
FASSEM M/C LANG. ASS.	£2.99
TOUCH TYPE (CASS.)	£2.95
MONEY MANAGER (DISC)	£2.95
INTRO TO BASIC PT. II (CASS.)	£4.95
EASY FILE (DISC)	£9.99
PROGRAMMERS REF GUIDES	£3.95
MACRO ASSEMBLER DEVELOPMENT (DISC)	£4.95
FUTURE FINANCE (DISC)	£9.99
EASY SCRIPT	£9.99
DR. WATSONS 64 ASSEMBLY LANGUAGE COURSE (DISC)	£9.95
COMMODORE 128 MUSIC MAKER	£9.95
MUSIC STUDIO BY ACTIVISION (CASS.)	£3.95
EASY SPELL (DISC)	£9.99
COMMODORE 64 M/MAKER	£7.50
BREDENS BASIC DISC & CASS.	£9.95
SCRIPT & WORD PROC. CART. FOR C16 & +4	£9.95
COMPANY PACK 123 ACCOUNTING CONTROL SYSTEM FOR +4 ON DISC	£9.95
ASSEMBLER TUTOR DISC	£4.95
PROGRAMMERS UTILITY DISC	£4.95
NEOS MOUSE & CHEESE +£1.00 p&p	£24.95
HANDIC VIC SWITCH MULTI USER SYSTEM	£9.95
EPSON P40 PRINTERS	£39.95
DISCS 10 FOR	£8.95

p&p 85p all orders overseas £1.20 per tape

LOGIC SALES LTD
17 Leofric Square, Peterborough, Cambs.
24 hour ordering on 0733 313870



TO BE CONTINUED...

Super Felix is "Fee-line". That means pay cash and he won't

Naming the Guilty!

Attempting to remain the anonymous powers behind all the software houses in the universe, various so-called PR organisations who shall be nameless have all changed names. David (White Shoes) Carlos has started to call himself Intermediates (which I'm sure must have a non-sexual meaning, too) and the sultry Marble Arched beauty Lesley Mansford has by deed poll become Lesley Headlines (or as President Mitterand calls her in their little tête a bêtes at the Elysée Palace in Parree 'Les Headlines'). And the only man ever to run a world empire from Brighton Pier — the illegible Michael Boxter — is now the sole provider of the real 'Solutions' to the world's most serious software problems.

This title changearound is a direct result of my revealing to you the significance of the Iceland Summit of their murky but all-powerful organisations. Of course, Gorbachov and Reagan were terrorised into fronting the affair. Why else would they have behaved so strangely?

It is reliably rumoured too that the Peter Wright Spy Book Trial in Australia is really just a cover up operation mounted by the UK Government to shield these PR organisations — who are known to have penetrated the FBI, CIA, KGB and MI5 — from public scrutiny.

The luscious Lesley Headlines recently visited CCI Tower in the company of a man who claimed to be Bill Delaney ex-BT now MD Nexus but who looked suspiciously like Colonel Oliver North, ex of President Reagan's staff. 'Delaney' demonstrated 'Super Sunday' which he pretended was an American Football game but which was obviously the plan for the Iran/Contre arms/money smuggling scam about which he had refused to tell the US Congress but was quite open with CCI. The stunning Lesley (she only has to walk to the Deep Pan Pizza in Edgware Road for Arab Sheiks by the tribe to throw gold bars at her feet — she wears Dr Martin boots for protection) reduced Our 20 Kilo Sacred Editor to a trembling shadow by a mere flash of her inscrutable peepers and and a sensual denial that she has already decided what will top the games charts for the whole of 1987.

I personally saw the US Ambassador's car following the ex-Ms Mansford's Limo at a discreet distance. Isn't Martech's latest game based on ex-Cabinet Minister Michael (Tarzan) Heseltine? And wasn't that Sir Robert Armstrong with whom (pretending to be Rod Cousins) the languorous Lesley was conferring in the shadows at In-Din Party?

Intermediates . . . Solutions . . . Les Headlines . . . the words are sinister to the extreme, nicht war?

THE RESULT OF DAVE CARLOS' LAST BINGE WITH A VIRGIN STURGEON!

Brewery Blues

David ('White Shoes') Carlos, who is known to employ at least five doubles so that he can be in six places at the same time (he orders the white shoes by the dozen), has through his majestic management of Domark's brilliantly successful National Trivial Pursuits Championship at the luxurious Whitbread Brewery Palace dispelled forever the charge that 'he couldn't organise 'a piss up in a brewery.' The tired and emotional representatives of other defeated magazines who piled their tables with empty beer bottles and noisily bawled and enviously guffawed while CCI's Champion Johnny Cooke mopped up the points have finally nailed that slander about David Carlos forever (and is he really a close relative of King Juan Carlos and 4th in line for the Spanish throne?) Drunken journalists? Peeced up in a brewery? Shome mishtake shurely . . . hic! (Don't call me Shirley! Ed).

Guess the Reviewer?

Our guest reviewer (Sloane Ranger Princess Krotoa of Mose):

Cobra — Ocean.

'Surely, this should have been an adventure in the jungle. I personally couldn't see the snake at all in this game. In fact, I couldn't tell who was Cobra at all. 'Crime is the disease and he's the cure'. Well that's so corny isn't it? I'm not a violent person but I think this is a game for the under 10's'.

Thank you, Princess, another penetrating comment from our aristocratic guest reviewer in the next Super Felix.

mention you... (unless somebody else pays me more!!)

BT Story (Part XIV) Plus

No Sorry, Printers Error. No Part XIV this month. And, thank you BT for the New Year envelope containing 5 million forints (what the hell is a florint anyway?) What about cancelling my phone bill too? So what's this I hear about Big Julie Rosenphone (he was great shooting craps in 'Guys and Dolls' wasn't he?) claiming a direct line via satellite to Activision and Electronic Arts bank accounts? If he has, sell British Gas and Guinness and buy BT shares. We hear the fabulously rich Bulldogs d'Oysterville already have.

Which must be why Mastertroniconeandnein has launched a new label called 'Bulldog'. Supremo Frank (Mastertronic of the Universe) Herman tells me that Winston Churchill always used to ask him for oratorical advice when the bulldog-faced PM was stuck for a phrase or two in a speech to the nation. 'We will fight on the bleachers' was first used by Mastertronic for a baseball game inlay before Winston S. appropriated and changed it. And Churchill's two fingers in the air salute was originally employed by Frank to wave to the staff at BT's Firebird Silver Range as he drove his solid gold Rolls Royce (number plate FH199) down New Oxford Street long before UK's wartime leader ever went around putting his pirated V sign on the newsreels.

About the Bulldog label, Frank told me "Never have so few caused so much aggravation to so many in so short a time and you can quote me". Such a pity dear Sir Winston is dead. I'm sure he could have done something a little less memorable with that particular phrase. Bulldog's first 64 title is 'Feud'. It's believed not to be about the relationship of two large software houses fighting over £1.99.

Billet Doux

The following mysterious message was carried by all the wire services and networks in the world. Supposedly signed by a correspondent called Glen Ellyn.

'One of the most significant results of the recent Comdex/86 Convention held in Las Vegas Nevada last week was the close ties that were established between representatives of Lattice, Inc and the UK's publication Commodore Computing International.

The parties involved developed a mutual accord on many ideas and were able to express and implement many of these to the satisfaction of both.

The representatives of both firms have decided that the dialog was so beneficial to both parties that they will continue to seek new ways to meet again in the near future'.

Sir Billion Donald B.F.N. CCI's official representative at the Convention denies he ever met a lady called Glen Ellyn and claims that the word 'Lattice' is a synonym for 'framework'. He asserts heatedly (Nevada is a hot place) that he is therefore being framed. President Reagan's ex-National Security Advisor, Admiral Poindexter, denies that money is being diverted from the Contras in Nicaragua to pay Sir Billion's expensive divorce lawyers.

TENTH FRAMED! US GOLD'S RICHARD TISDALL DEFENDS HIMSELF AGAINST AGGRESSIVE SKITTLES WHO OBJECT TO HIM TALKING A LOAD OF BOWLS!

Stop Press!

An overseas admirer (yes, I do have them, there's one björn every minute) recently sent me many tokens of appreciation, amongst them the Swedish top ten computer games chart. I hurriedly had it printed up just for you, as no cool cat can possibly afford to be without it...

1.	(*)	'43 — One Year After	Greve Graphics/Action
2.	(1)	Captured	Greve Graphics/Action
3.	(11)	Sky Runner	Cascade
4.	(3)	Konami's Coin-Op Hits	Imagine
5.	(*)	Sport Four	Arco
6.	(7)	World Games	US Gold
7.	(4)	Yie Ar Kung Fu II	Imagine M FL
8.	(*)	Labyrinth	Activision
9.	(5)	Bazooka Bill	Arcade Machine
10.	(*)	Legend of Kage	Imagine

WHO IS THIS MAN? THEY'RE TRYING TO MAKE ME BELIEVE HE'S JOHN COOKE, CCI'S WINNER OF DOMARK'S SOLID GOLD TRIVIAL PURSUIT SET! RUBBISH! HE'S SIR CLIVE SINCLAIR SPORTING A FALSE BEARD. WHO ARE THEY TRYING TO FOOL AND WHY?

Happy 1987 to you!

By the way, I failed to give you my New Year Resolution. I hope and trust it absolutely overjoys you. It is to go on being just as kind and nice to all the terrifically wonderful amazing people in the Commodore world (especially you, Princess Krotoa of Mose!) in the coming year as I have been in the past. There, doesn't that make every single one of you deliriously, rapturously happy? As T S Eliot (he owns Foster's Lager) said 'Love one another or die' (Actually it was W H Auden and he said 'Love one another *and* die.' But let it pass, let it pass. Ed).

DEAR MISS NICOLSON OF EASTBOURNE — HOT SOFTWARE COPPED OUT-NOT US! DO YOU SWIM IN A BIKINI?

FIGHTING WORDS

The Jeff Minter Page

There are not many real stars in the computer world, but among them undoubtably glitters Jeff Minter, creator of innumerable smash-hit games. We've given Jeff the freedom to say what he wants (libel laws permitting!), so look out for his hard-hitting pages in future issues of CCI. You may not always agree with what he says, but he's certainly worth listening to. CCI won't always agree with what he says either, but we promise to print it anyway!

Greetings, humanoids. I'm back again, scarcely recovered from the excesses of the Christmas/New Year period, getting my head back together again and back down to work on Revenge II.

I'm going to write about something a bit different this time; make a bit of a change from laying the boot in to Commodore over Amiga-pricing and going on about the ST all the time. No, I'm going to indulge in a bit of speculation about what's going to happen to computers in the future. I'm not talking about the next Amiga or what micro you should get for Christmas 1989; I'm thinking of things maybe fifty, one hundred years from now, and the effect that such things will have on humans...

I read the other day that researchers have developed the first-ever working molecular logic device, a NAND gate. The NAND gate is the basis for much more complex logic structures; given enough of them, it is possible to build a functioning computer. The molecular logic gate, however, instead of using tiny transistors made of silicon, uses molecules of certain chemicals. The 'inputs' are made by stimulating a sensitive area of the molecule with laser light; the 'output' area of the molecule changes state according to what is coming in from the 'input' side, and is read by another laser.

The thing about molecular systems is their size, and their speed. A molecular computer would be orders of magnitude smaller than silicon devices; after all, by using molecular memories, you should be able to store data almost as efficiently as a human brain. Unless you actually figure out how to store bits of data upon individual atoms, you can't get any better...

Molecular systems will be fast, too. The distance between components will be so small that hardly any time will be lost by data 'in transit' (this may seem to be splitting hairs, but when Cray made the Cray-2 supercomputer, they built it in its characteristic, weird cylindrical shape in order to minimize the electron-path lengths, and thus make it faster).

Anyway, the upshot of all this is that before very long we're going to be able to build a computer with processing-power and memory-storage capabilities approaching that of the human brain. This will give rise to some interesting possibilities and problems, some of them VERY weird indeed....

Firstly, consider the problems of programming such a device. There could be no question of programming it in the conventional sense, with normal programming languages. You'd never realise the system's true potential with that approach. No, what you'd need to do is provide the system with access to a vast database of information about whatever function you intend the computer to perform, and then start the system off with a small heuristic (learning) kernal-program. The system would then 'read' the database and 'learn' about the subject of choice, eventually becoming 'expert' enough to use. However, consider what might happen if you were to provide it with a 'world' database and various audio and video inputs...depending upon how well such a system is 'taught', you might well end up with something along the lines of HAL from 2001!

Whether such an 'electronic entity' could ever be created, and whether such an entity, once created, could be said to be 'conscious', is very difficult to say. Just trying to define 'consciousness' is difficult enough. And consider the ethical problems that would arise if an 'aware' computer entity were ever created: Would you be comitting murder if you erased the program? Does the computer have a soul?

The question of the soul is one which technology may eventually be able to help us answer. There are those who believe that a human being is the sum of his parts and no more: i.e., the way a person thinks and feels is governed entirely by the 'program' running in his brain; once that human dies and the program terminates, nothing more remains. Game Over Player One. No heaven, no hell. Conversely, there are those who believe that there exists a soul, which continues to exist with or without the brain to support it; the brain, rather than being the core of the entity, is more like an 'interface' through which the soul interacts with the physical world. Once the brain dies, the soul continues to exist, independent of the physical body, but it can no longer influence the physical world.

OK, so we have these two hypotheses, and a computer of equal complexity to the human brain. The nature of the experiment to determine the existence of a soul is as follows:

1) Take a brainscanner, and scan the brainstate of a living human being. (A brainscanner is a hypothetical device allowing the operator to read the current brainstate of any human — think of it as Freeze-Frame for the brain).
2) Dump the brainstate into the waiting computer.
3) See if the resulting brain-image starts to function.

If the brain-image starts to function, and behaves and responds in a sentient manner, and responds as a 'brain-clone' of its source, then we can conclude that 'soul' does not exist, and that a human is merely the result of the program running in his brain. (If this is the case, we need not despair of the fact that there's no Afterlife— for in performing the experiment, we should have made ourselves immortal; we could all transfer to machine-brains which would continue functioning long after flesh and blood were dust).

If, however, the brain-image does not function as a sentient being in its own right, we can assume that something was not transferred in the braindump process; that something being 'soul'.

Whichever result were to occur, there would be MAJOR freakout amongst theologicians and philosphers and suchlike.

Of course, if we could clone off brain-states and run them as viable entities within computers, there'd be more moral hassles; what if you made six copies of yourself? which one is you? Also, you'd have to take regular back-up copies of your machine/brainstate— or else you'd die if there was a system crash!

Naturally, it'll be a fair while before any of this becomes reality. For a start, nobody yet has any significant understanding of the way in which the brain works. For our computer to be able to run a brainstate, it must be able to process in the same manner as a human brain. And getting the brainstate will be difficult to achieve, too— at the most no-one knows exactly how human memory works, let alone how to read it. No doubt in 100 years' time Evesham Micros will bring out Freeze Brain Version 2.0...but until then we can only speculate.

ANCO

MAGIC MADNESS

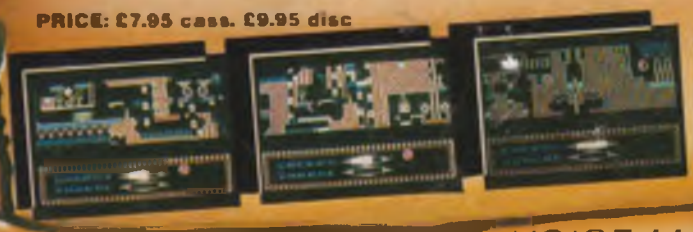
Acquisition of the four scrolls of magic is vital before COLO, the sorceror can be challenged. Lightning fast action, care in choice of weapons and strategy are vital in overpowering Goblins, Skeletons and other henchmen who will be guarding the scrolls.

PRICE: £7.95 cass. £9.95 disc

ESCAPE FROM PARADISE

Joe had created a paradise deep underground but finds his route has been blocked by strange creatures with strange powers and he must escape to survive. Joe has to move from room to room using any device that he can to help him reach the top and make his escape. The complex is huge and the obstacles are too many, but Joe knows that if he perseveres he will escape.

PRICE: £7.95 cass. £9.95 disc



VOICE MASTER

Three Unique Packages in One.
SPEECH DIGITISER – SPEECH RECOGNITION – MUSIC
Your computer can talk to you in your own voice – Recognise words and phrases – Hum or whistle to write and perform music.
CBM64/128 ATARI 800/800×1/130xe PRICE: £59.95:
Demo talking disc available; with talking calculator, clock and much more. PRICE: £3.50.

ANCO SOFTWARE, 4 WEST GATE HOUSE, SPITAL ST., DARTFORD, KENT. DA1 2EH.
Telephone: 0322 92513/92518.
Mail Order: Payment by Cheque, P.O., Visa or Access. 24 Hour Credit Card Service: 0322 522631

MEGA REVIEW

CCI Rating

C16

CRISP

MACSEN'S DOUBLE
Blockbusters Goldrun and Countdown

Macsen, a company whose name does not conjure up empires of international size has stolen a march on the Ocean's and U.S. Gold's by grabbing licence for star TV shows Blockbusters and Countdown. They are also bringing out other TV hits like T... sure Hunt and we hear they've ... signed the show that seems to ... notize half the adult population ... the United Kingdom — ... And that's not to mention all ... other countries that ... snap up the successful British ... Opera.

Macsen ... some ... ybe loads of cash — ... nered the ... area.

Th... gam... ... easier to ... mputer entertainment. They ... not intended to be arcade shoot 'em up and ... Macsen have chose to follow ... the original TV style ... the ... forget about all ... the game's ... ...

THE COMPANY THAT TOWERS ABOVE THE REST FOR C16 PRESENT

C16

GREMLIN

THE WAY OF THE TIGER
FUTURE KNIGHT
XCELLOR 8
BOUNDER/PLANET SEARCH
FOOTBALLER OF THE YEAR
TRAILBLAZER
C16 CLASSICs III
MAGICIANS CURSE

THE WAY OF THE TIGER **£9.95**

Enter the world of Avenger, a Ninja warrior of unparalleled skill and deadly powers, as he battles the forces of evil.

Experience the stunning effects of the outstanding graphics and triple scrolling action as you master the techniques of Hand to Hand combat, Pole Fighting and the skills of the Samurai Sword.

And when you believe you've succeeded in overcoming all the odds, the next in this thrilling series of adventures will beckon you forward to a further challenge of death.

FUTURE KNIGHT **£6.95**

Use your Strength, Magic, Skill and Luck to fight your way through hordes of alien creatures in pursuit of your beloved Princess Gwendolyn. Defend yourself against the Barbarian Security droids, Ninja Warriors and Evil Wizards as you battle your way through the Knight's castle to claim the title of Future Knight. Let the outcome of your mortal combat with the awesome Henchoroid.

FOOTBALLER OF THE YEAR **£6.95**

The game to answer every boyhood dream – the chance to make it to the very top of football stardom. Adopt the identity of a professional footballer and develop a career through the ups and downs of match days, transfer deals and injuries etc. Show off your talents in League and Cup games and then if you're good enough the ultimate accolade in your sport, the Footballer of the Year Award.

TRAILBLAZER **£6.9**

Through into the unknown at breakneck speed in this mind-blowing journey that's not for the faint-hearted the endless chasms of doom that lay in and around the squares of mystery, stay alert to the time as the quicker you complete your task the higher will be your bonus.

XCELLOR 8

As a bounty hunter in the future speed through the city of Zoxford 3 in your XR 120 Hover Car capturing the criminals. For each you will collect a payment with which to improve your craft with stronger shields, more fuel, better arms and a special device.

£6.95

C16 CLASSICS II

Experience a collection of arcade classics to combine great graphics, hand to hand combat and strategy as well as all the fast action you could want. Each game has been carefully selected to provide the ultimate challenge.

£9.95

BOUNDER **£6.95**

The most compulsive game you'll ever play – now available for the C16/+4

PLANET SEARCH

Lost in the outer reaches of a distant galaxy your only chance of survival is to battle through eight hostile planetary systems, eventually reaching your home base.

£5.95

Gremlin Graphics Software Ltd.,
Alpha House, 10 Carver Street,
Sheffield S1 4FS.
Tel: (0742) 753423
Telex No: 547274

CCI Rating

IFFY

DANGER ZONE

Dangerzone! Codemasters

Dangerzone is a space invaders turned upon its side. It is reasonably fast, and has good sound effects. As usual it also has a flashy storyline which seems to have had as much effort put into it as the game itself! The Galactic Patrol has been working on a new breed of Fighter/Reconnaisance ship — the XT/99. Now 112 later, a pre-production prototype has been built, and extensively tested in computer simulation methods. Now though a test pilot is needed to test the strip in a real-time combat environment.

' THAT was just the background info, impressive don't you think?

When you enter the DANGER ZONE you start by firing at aliens on the second level you fight moving aliens and a single rocket goes flying at you. Then as you get further into the game you meet the asteroids. The big ones split into two and fly at you and the small ones just deplete your shields when you are hit. You have a laser which overheats and when this happens you must wait a while until it cools. Your ship is a funny little thing that once it moves, it finds it hard to stop, bouncing from one side of the screen to the other. A pretty good game but has no lasting appeal and you could probably soon tire of it.

Price: £1.99
Graphics: ★★★
Sound: ★★★
Playability: ★★
Rating: Iffy

CCI Rating

CRISP

Plus/4 Strip Poker — Anco

"Well, at last" say all those impatient Plus/4 owners who have been waiting so long. The 64 version of Artworx Poker has been out for years! In fact it was the first "sexy" program ever published — publically. (I hope that word doesn't get misspelt!). Now, finally, the 64K capability of the Plus/4 gets its owner the chance to strip down for action. (I don't like the tone of this review. Clean it up at once! Ed) Anco have given this long time favourite a going over and anyone who has the poker skill can get Suzi and Melissa to reveal all — and I do mean all! (Sorry, Ed, won't happen again . . .) This game is adult-rated so in case any kids are reading this I'm not going to risk prosecution by describing it. Anyway, everyone knows what Strip Poker means don't they? (I'm not sure I do. Ed) By the way, although this Plus/4 version contains only girls, Artworx, the original U.S. creators of the game can't be accused of being male chauvenist pigs — in the U.S. you can buy a version with a male stripper. And in the not too distant future could be that Anco will bring lucky AMIGA owners a verson for that computer, too. Meanwhile, Plus/4 owners play your cards right and . . . (this review is banned! Ed).

Price: £7.95
Graphics: ★★★★
Sound: ★★★
Playability: ★★★
Rating: Crisp

C16 AND PLUS 4 OWNERS

ROM CARTRIDGES
INSTANT LOADING
Pirate Adventure — Strange Odyssey — Atomic Mission — Viduzzles

GAMES PACK C16/PLUS 4
SIX GAMES ON ONE TAPE
£5.99
Raider — Sea Strike — Zone Control
Magazap — Control Command — Mail

CURRENT TITLES

Ace	8.45
Ace (Plus 4 version)	9.45
Beach Head	4.99
Bongo	4.99
Corman	2.99
Defence 16	6.99
Football Manager	5.95
Grand Master Chess	7.99
Mercenary	8.99
Mercenary 2nd City	4.99
Reach for the Sky 5.99 Rescue from Zylon	5.99
Robin to the Rescue	5.99
Steve Davis Snooker	6.99
Sword of Destiny	5.99
Winter Olympics	5.99
World Cup Football	5.99
World Series Baseball	7.99
Mony on the Run	5.99
Dirty Den	6.99
Matrix & Laserzone	5.99
Winter Events	6.95
Major Blink	5.95
International Karate	5.99
Mount Vesuvius	5.99
European Games	5.99
Monty on the Run	5.99
Gunslinger	5.99
Leapin Louie	5.99
Tomb of Tarrabash	5.99

NEW RELEASES

Turbo Base (Database)	4.50
Turbo Text (World Pro)	4.50
Turbo Tape (Utilities)	4.50
Five Star (Five Game Compilation)	7.95
Split Personalities	9.50
Bounder	6.00
Classics III (Four Game Compilation)	9.50
Scooby Doo	7.00
Hit Pack (Four Game Compilation)	9.50
Space 2	2.99
Excellor 8	6.50
Magicians Curse	5.99
Who Dares Wins II	7.95
Strip Poker	6.25
Panic Penguin	2.99
Fury	1.99
Tod	1.99
Master Chess	1.99
Bridgehead C16	5.00
Bridgehead Plus 4	6.50
Hide & Seek 4-10 years	3.99

BUDGET RANGE

Atomic Mission	2.99
Bandits at Zero	1.99
Big Mac	1.99
BMX Racers	1.99
Climb It	1.99
Corman	2.99
Dorks Dilemma	2.99
Droid One	2.99
Exorcist	2.99
Fingers Malone	1.99
Formula 1 Simulator	1.99
Gnasher	2.99
Golf	2.99
Gremlins	2.99

PINNACLE JOYSTICK AND ADAPTER £9.50 PLUS 50p POSTAGE & PACKING

Harbour Attack	2.99
Hektik	1.99
Hustler	2.99
Jail Break	2.99
Lunar Docking	2.99
Mayhem	2.99
Meteorite	2.99
Mission Mars	2.99
Mr Puniverse	1.99
Oblido	1.99
One Man and his Droid	1.99
Return of Rockman	1.99
Robo Knight	2.99
Rockman	1.99
Runner	1.99
Shoot It	2.99
Slippery Sid	1.50
Solo	2.95
Spectipede	1.99
Street Olympics	1.99
Torpedo Run	1.50
Tutti Frutti	1.99
Viduzzles (cartridge)	3.99
Zap Em	2.99
Booty	1.99
Speed King	1.99

Rams Computer Centre

117 QUEENSWAY, BLETCHLEY, MILTON KEYNES MK2 2DH
☎ MILTON KEYNES (0908) 647744

ALL ORDERS ADD 35p PER ITEM FOR P & P.
SAME DAY DISPATCH.

ALL NEW TITLES STOCKED
PHONE FOR AVAILABILITY

C16 - PLUS 4 CENTRE

Books - Games - Budget Games
Text Aventures - Graphic Adv
Sport Simulators - Flight Simulators
Utilities - Music Makers - Paint Prog
Graphic Designers - Data Bases
Spread Sheets - Word Processors
Business Progs - Joysticks
Ram Packs - Dust Covers - Leads
Interfaces
In fact anything to do with
C16 or Plus 4.

Send S.A.E. for a detail leaflet.

C16/Plus 4 Centre, ANCO Marketing Ltd,
4, West Gate House, Spital Street,
Dartford, Kent. DA1 2EH. Tel: 0322 - 92513/92518

24 Hour hot line: 0322/522631

TROJAN CADMASTER LIGHT PENS

. . . and other goodies . . .

Superb graphics software plus a quality light pen combined to give you enormous scope for creativity. Full colour or simple line drawing — the choice is yours. Features include:
★ Freehand draw (C64/128/Plus 4) ★ Pixel accuracy ★ Draw box, circle, triangle etc ★ Copy ★ Banding ★ Fill ★ Quills ★ Paintbrush ★ Save/load screen ★ Printer dump and much more ★ Hot line phone number on every pen!

Trojan light pen C64/C128	£18.95
Trojan light pen Plus 4/C16	£19.95

NEW

Quickshot Turbo (microswitches)	£12.95
C16/Plus 4 adaptor	£3.50
C16 Ram expansion (extra 16K)	£27.95
C64 Centronics interface	£24.95
Neos Mouse + cheese (C64/C128)	£39.95
Artist (powerful graphics for C64/C128 please state cassette or disk)	£27.95

NEW

GEOS Compatible, quality, two button Mouse C64/C128	£32.95

SPECIAL CLEARANCE

CBM 1551 Disk Drive for Plus 4 only	£99.95
CBM MPS 803 printer	£139.95

(Add £7.00 carriage on 1551 & 803 or £10 if ordering both)

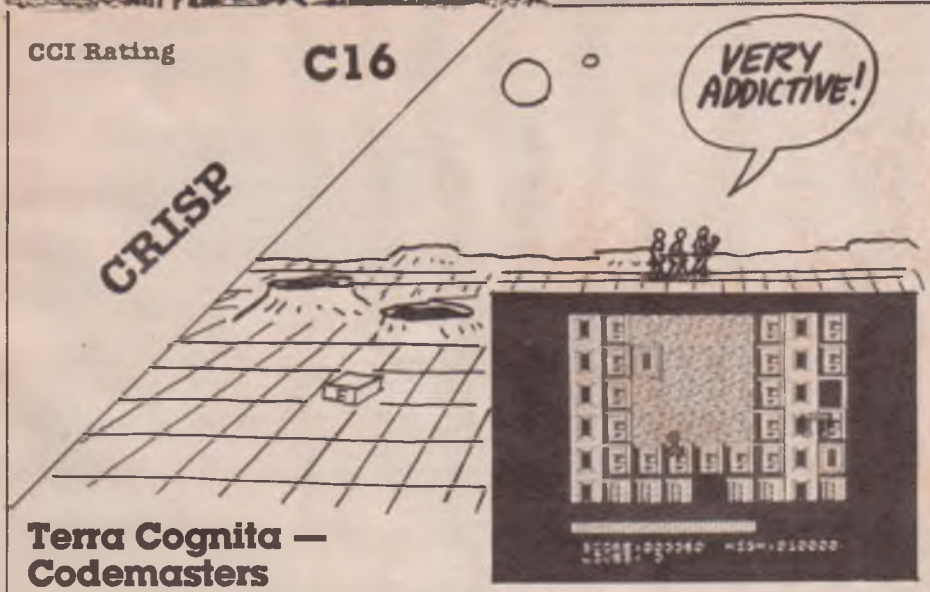
COMPUTER CUPBOARD
Freepost LONDON W5 1BR

Please supply .....
£ ..... (plus carriage)
Name .....
Address .....
.....
Post Code CCI387

MEGA REVIEW

CCI Rating

C16



Terra Cognita — Codemasters

A few issues back in the news section of CCI you may have, (better have!), read an article about a new budget label appearing. This company was called Codemasters and it's a very appropriate name indeed, for, in producing a game like this they must be masters of code — it's a super bit of programming.

The storyline goes thus; three mining engineers are walking along when they come across a robot head which starts blabbing about people destroying its planet. It suddenly gets very angry and decides to take it out on the engineers. Wouldn't it be more simple if you were one of these people who could go through life without meeting any revenge seeking robots, or talk your way out of things eh? But wouldn't be any fun would it?

Anyway the robot decides to kill you so you must make your way to a space ship, to get off the planet.

The screen scrolls upwards and at the top are two robots waiting patiently to crash into you, as if that wasn't enough, as you're desperately trying to shoot them, you fly over blocks which do funny things to your ship. Squares marked F are fuel dumps, others have a plus sign which speeds you up, and minuses, which slow you down. You can also pick up extra lives and bonuses, and indestructibility for ten seconds; then there are the worst of all — the time shifts which take you back to the beginning, frustrating I can tell you.

This game has excellent graphics and very addictive — even when you complete it. Codemasters are going to be a force to be reckoned with very soon, if they go on producing terrific value like Terra Cognita.

Price: £1.99
Graphics: ★★★★
Sound: ★★★
Playability: ★★★
Rating: Crisp

CCI Rating

CRISP

LEAGUE CHALLENGE

League Challenge by Atlantis

Ever thought you could make a good football manager — do better than the manager of your favourite team? Well now here's your chance to put yor money where your mouth is with League Challenge from Atlantis.

You start by choosing one of twenty teams in the fourth division — you can even make up your own teams name. Then you train your team — if you want to — at several levels of fitness. The higher the level the more expensive it is, decreasing your seasonal balance of money alarmingly.

After this you'll most probably want to try your team out in a match to see if they have any weaknesses. You can either play fair, fair but tough, dirty or really dirty! Either way you lose out; you either get sent off and injured or fouled and injured. Bad break that, get it? Bad break, funny eh? (Do you find broken legs funny? We can help you there. Ed.)

There are the options of buying and selling players as well — but you can never sell your players for what they're worth and have to buy others for way over their going rate.

The response time when you key in things is sometimes slow. The writing also starts to glare at you after a time.

I think my version had a bug because sometimes it didn't respond at all and I'd have to turn it off and load it again.

This isn't a bad game and is the cheapest football manager type on the market. Recommended.

Price: £2.99
Graphics: N.a.
Sound: N.a.
Playability: ★★
Rating: Crisp

MEGA REVIEW

CCI Rating **C16**

AWESOME

"I LOVE THIS GAME" SAYS COURTNEY KING

The Way of the Exploding Fist - Melbourne House

The Way of the Exploding Fist (E.F. from now on) was the first karate game and heralded a genre of computer games still emerging. It is also one of the best karate games ever. Now it's converted to the C16 it is THE best.

You have to become as high a dan as possible, and you do this by fighting an opponent and beating him twice. The dans get tougher as they get higher and very soon you'll be wrenching your joystick in all directions trying to beat your opponent.

The game is graphically excellent — for the C16 — with little squat karate men who look a trifle fat. They are though very well drawn and even have faces. The background picture is of a buddha and green hills and pagodas, etc and though it isn't of the same standard as International Karate background graphics, the overall playability and polish of the game is far superior.

As your disposal these moves: Jump — no impossible leaps here, but handy when faced with forwards sweeps, high punch-nice straight armed punch to the head, jab — a painful-looking stomach punch — very useful in close fighting, low punch — awkward this one, but very effective. This is just a sample of what you can do. Other moves are the roundhouse and high kicks

You can either play against a friend or the computer — both are fun but when you invite a friend, make sure they haven't played many karate games so you can thrash the living daylights out of them.

I love this game and will be playing for quite a while, this is THE karate game for the C16. Beg, borrow or sell your bike to buy this game. Get it... before it gets you!

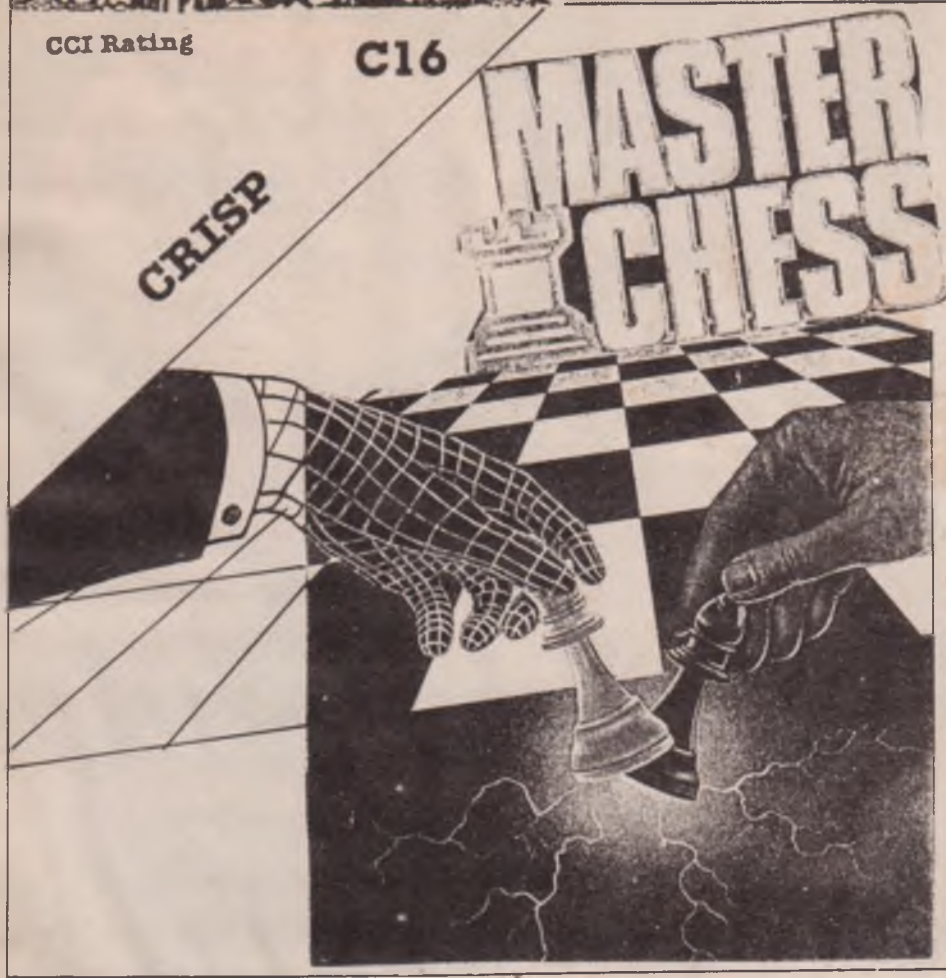
C.K.

Price: £7.99
Graphics: ★★★★
Sound: ★★★ (oriental music)
Playability: ★★★★★
Rating: Awesome

MEGA REVIEW

CCI Rating C16

CRISP



Masterchess — Mastertronic

I enjoy a game of chess occasionally but no one else in the house plays it, so for my own pleasure, a chess game is just what I need.

On starting, this game gives you a choice of playing either the black or white pieces. It then asks "How much time would you like to move in?" (something like that anyway). The more time you give, the better a chess player it becomes.

The game is well presented with a list of options, such as moving players around, but it's a shame that there isn't a play back option. You can load or save previous games, so if you're good enough a game can go on for ages.

This is quite a simple chess game but it is more than adequate for most chess-playing abilities and supplies everything you need to play a fair game of chess — which is just what I wanted.

C.K.

Price: £1.99
Graphics: ★★
Sound: Na
Playability: ★★★
Rating: Crisp

CCI Rating C16

MEGA

BOUNDER AND

PLANET SEARCH

Bounder/Planet Search — Gremlin

Bounder must be one of the most simple game concepts ever to hit the games world, it is also one of the most addictive. The idea is to bounce you way through a series of courses — you, naturally, are a tennis ball (Speak for yourself! Ed). Sounds familiar? I though so, Trailblazer, this time from above at a slower scrolling rate.

Your ball rises and falls rhythmically and can be moved just about all over the place. If you bounce on question marks you get a surprise. Maybe an extra life or jump bonuses, but usually you get... deaded! Fast! (If that's the proper term for it, which I doubt very much.) There are also arrows to bounce on which almost double your time in the sky, enabling you to get to blocks normally out of reach.

As with most things in life, there are obstacles out to stop you having a good time; like the yellow mountain ranges, which you can't ever jump over, or the arrows which make you go pop — not very healthily I warn you.

When you first start playing, you might find yourself getting killed often but with perseverence you'll get the hang of it, and its addictiveness will start imperceptibly to grip you. You'll start completing level, and completing the bonus screens and getting extra balls very handy... erm, I mean helpful. And then you're hooked!

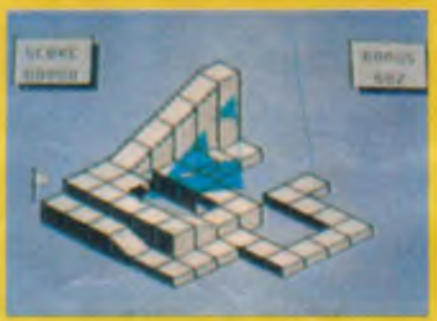
The other game, Planet Search, is a good complementary game to Bounder, providing a little violence and speed, when you get the urge. It is the old Defender type of game, and is quite good. It makes the tape excellent value for money and well worth seven quid. (Planet Serchs' music is good too!) These days Gremlin can't put a foot wrong. This is a must for any C16 gameplayer.

C.K.

Price: £6.95
Graphics: ★★★
Sound:★★★
Playability: ★★★★
Rating: Mega

MEGA REVIEW

CCI Rating **C16**



Pinpoint — Anco

Simple yet perhaps the most addictive game you have ever played, the way Anco describe this game. A little boastful maybe but this game isn't very wrong for a real Marble Madness turn on.

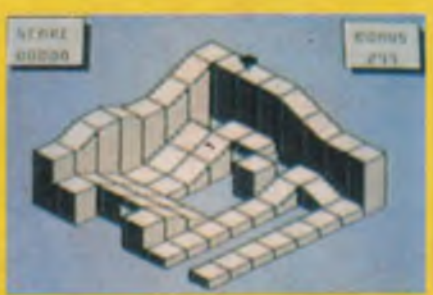
You are in control of a spinning top and you must guide it through a three dimensional course to its destination — a white flag. When you complete that, you get thrown into the next of ten courses. The game is very reminiscent of spindizzy which got a totally Awesome rating within these pages. I don't know about you, but I've always loved games like MM and Spindizzy and until now I thought this couldn't be achieved on the C16.

The game is brilliant, good graphics, almost totally addictive — I won't mention the sound because it lets down the rest of the game. I'm surprised Anco didn't ask Bridgette Gertz to do a little ditty for them, as her musical skill on the C16 is amazing.

Pinpoint is a game that should appeal to everyone. It's non-violent yet it grabs you in every way. If you've got a C16, this is one of your top games ever.

Excellent work Anco, please keep it up.

CK.



Price: £5.95
Graphics: ★★★★
Sound: ★★
Playability: ★★★★★
Rating: Mega

U.K. Soft Centre

C128		C128
Advanced Music System		27.50 d
C128 BASIC Compiler		47.00 d
DBASE II		110.00 d
Micro Clerk (Complete accounting package PLUS Spreadsheet, Database and Word Processor)		89.50 d
Oxford PASCAL		47.00 d
Superscript 128		69.95 d
Swift Spreadsheet 128		22.50 d

C64 BUSINESS		C64
Practicalc II (Spreadsheet)	£23 off	47.00 d
Swift Spreadsheet 64		22.50 d
Superbase 64		44.95 d
Superscript 64		44.95 d

C64 EDUCATIONAL		C64
French Mistress A and B (each)		7.95 t
German Master A and B (each)		7.95 t
Kermit's Story Maker (5-10yrs)		8.50 t 12.95 d
Number Tumblers (8-12yrs)		8.75 t
Up and Add 'em (3-7yrs)		8.75 t
Word Power (10yrs+)		8.50 t

C64 UTILITIES/GENERAL		C64
Art Studio		12.75 t 15.95 d
GEOS (Operating System)	NEW	48.00 d
Laser BASIC		14.50 t 17.50 d
Laser BASIC Compiler		19.00 t 24.00 d
Newsroom	NEW	37.00 d
Optical Mouse & Graphics Pack		47.50 d
Super PASCAL		47.00 d
Supertype (Typing tutor)		17.50 t 19.50 d
Quill + Illustrator		16.50 t 19.50 d

C64 FLIGHT SIMULATORS/WAR GAMES		
ACE (Air Combat Emulator)		8.50 t 11.50 d
Ace of Aces	NEW	8.50 t 12.95 d
Acro Jet	NEW	8.50 t 12.95 d
Battle Front by SSG	NEW	24.00 d
Carriers at War by SSG	NEW	24.00 d
Europe Ablaze by SSG	NEW	24.00 d
Heathrow Air Traffic Control		7.50 t
Knights of the Desert		8.50 t 12.95 d
Reach for the Stars by SSG	NEW	24.00 d
Sky Runner	NEW	8.50 t 11.50 d
Silent Service		8.50 t 12.95 d
Tigers in the Snow		8.50 t 12.95 d
Vietnam	NEW	8.50 t 12.95 d
747 Flight Simulator (Doc Soft)		10.75 t 13.50 d

SPECIAL — SUBLOGIC FLIGHT SIMULATORS AT LOW PRICES

C64 ADVENTURES		C64
221b Baker Street	NEW	12.95 d
Alternate Reality Pt 1 — The City		18.00 d
Bard's Tale	NEW	12.95 d
Hitch-Hiker's Guide to the Galaxy		24.50 d
Jewels of Darkness (3 Adv's)		12.75 t 12.95 d
Keyleth	NEW	8.50 t 12.95 d
Leather Goddesses (Adults only)		24.50 d
Moonmist by Infocom	NEW	23.00 d
Murder on the Mississippi		12.95 d
Silicon Dreams (3 Adv's)	NEW	12.75 t 18.00 d
Tass Time in Tone Town	NEW	18.00 d
The PAWN	NEW	18.00 c
Ultima III		Special 15.00 d
Ultima IV		18.00 d
Vera Cruz Affair		7.75 t 12.95 d
Wishbringer by Infocom		23.00 d

C64 ACTION/GAMES/SPORTS		C64
Colossus Chess 4.0		8.50 t 12.95 d
Footballer of the Year	NEW	8.50 t 12.95 d
Gauntlet	NEW	8.50 t 12.95 d
Infiltrator		8.50 t 12.95 d
Leader Board (Golf)		8.50 t 12.95 d
Masters of the Universe	NEW	8.50 t 12.95 d
Mercenary		8.50 t 11.50 c
Repton 3	NEW	8.50 t 10.50 d
Scrabble		11.50 t 13.50 d
Sentinel		8.50 t 11.50 d
Star Glider	NEW	12.75 t 18.00 d
Tracker	NEW	12.75 t 16.00 d
Trivial Pursuit		12.75 t 18.00 d
World Games	NEW	8.50 t 12.95 d

C16 — PLUS 4		C16 — PLUS 4
Blockbusters	NEW	7.00 t
Computer Hits (10 games)	NEW	8.50 t
Home Office (Database &WP)		9.75 t
King Size 50 (50 Games)		8.75 t
Paintbox (Drawing Utility)		8.50 t
Scooby Doo	NEW	7.00 t
Sports 4	NEW	7.00 t
Trailblazer	NEW	6.00 t

PLUS 4 only		PLUS 4
ACE (Flight Simulator)		8.75 t 12.95 d
Bridge Head	NEW	7.50 t
Mercenary		8.50 t
2nd City for Mercenary	NEW	5.50 t
Saboteur		7.50 t
Strip Poker	NEW	7.50 t 9.50 d

JET The brilliant new F16/F18 Fighter Simulator C64 Disc only £42

FLIGHT SIMULATOR II

Without doubt the best Flight Simulator on C64 Cass £35 Disc £44
Extra SCENERY DISCS that are compatible with both JET and FSII £19.50 each.

Please send for our complete list (state which computer).
Please include 50p for Post and Packing for all orders less than £20. Outside UK please include £1 plus 75p for each additional item on all orders. Send Cheque, Eurocheque, Sterling money order or UK Postal Order with order to:

PO BOX 36 **UK SOFT CENTRE LTD** TELEPHONE
DUNSTABLE BEDS LU6 2NP DUNSTABLE (0582) 607929

C16/PLUS 4
REFERENCE BOOK

£7.95

- High resolution, multicolour and extended colour mode in machine code and basic.
- Programming soft scrolling and the RASTER interrupt.
- Sound and music in basic and machine code including interrupt control of music.
- Introductory course in machine code.
- TED chip memory map.
- 7501 micro processor commands.
- Tricks and tips for beginners and utilities.
- KERNEL routines with full entry and exit details and KERNEL jump table.
- Detailed memory map with exact description of each peak and poke address.
- Large comparison chart of CBM64 and C16 for easy conversion of BASIC programmes.

ANCO

ANCO SOFTWARE, 4 West Gate House, Spital St., Dartford, Kent DA1 2EL. Tel: 0322-92513/18
Mail Order: payment by Cheque, P.O., Visa or Access. 24 Hour Credit Card Service: Tel: 0322-522631

Program

3D Sha e Creator

By Jona han l ng (A e 16 yrs) — C=64 and possibly a printer (803, 801, etc)

Explanation of (lines 120 onwards)

Let us consid r a Per s our hape we want to draw.

The first data item mber of circles which make up shape. So with a Pencil, there wil . One for the top of the Pencil begins to taper to a Point, a ich is the point (radius 0).

The second data item number o sides the shape has / (tical" has six.

f r our nc

ATA 3,0

A her dat Pairs, t er be many Pairs as our first dat em, so in this case there will be 3 Pairs, or 6 on line 120.

Data is organi numb being th and

circles radius. So, for our Pencil-:

130 DATA 20,5 ;start near to the top of the screen, with a thinish Pencil (radius 5)

140 DATA 150,5 ;carry the Pencil down, to centre 150 (near the bottom of the screen), and keep the same thickness (ie 5)

150 DATA 165,0 ;the Pencil tapers to a Point which is 15 Pixels ng (165-150) and us 0 (shape poin

S our com plete dat could look like

ATA 6
ATA 15
ATA 0
ATA 165,
el n x ne gl. ss.

Although small, this program will create three dimensional shapes on screen, which it can tilt and rotate.

What you have to type in, when the program is RUN are-:

1. Angle of tilt — How much it is tilted forward. 90 degrees, and you get a plan view. 0 degrees, and you get a side view. You may also have tilts between these limits (30 deg. is good)
2. Magnification — No. of times larger or smaller. Its best to start with something small to see if your shape will fit on the screen ay 0.8 or 0.9
3. Twist degrees — The shape is drawn in segments, (like a Terry's chocolate orang ch segment like a slice h e. Each segment can be m many arcs, and the arcs be made to twist, as rawn. Try 5; as a tar

```
 10 INPUT"                    1:      V=SIN      IN      ATION
    (TIMES)";X
 20 INPUT "TWIST DEGREES (PER SEGMENT      ):TW=VA  tES      READ",S
 30 DIM X(S+1,N+1),Y(S+1,N+1),RIN(,C      R L=1 TO      R(L):
    R(L)=R(L)*X
 40 C(L)=C(L)*K:C(L)=(C(L)*SI*180/      =C(L)+(M 1    K*5):NEXT L
 50 PRINT"PLEASE WAIT"S*N*.136*SECO
 60 A=1:FOR I=TW:SD TO 350+(360/S)+      TEP 360/S
 70 X(A,B)=      (( (B)*0)      I:
 80 A      N (  060
 90 F      )(  ,1):NEXTZ:      RAPHIC1,
    1,      ;
100      ,U)  (J+
110 DRA      X      NEX  J.
    J      L*B+B:GOTO80
120 D      ,
130 DATA 30,30,90,30,30,5,170,5,170,30,1      ,2
```

Sprite Tricks on the '64

by M. Baig

The first program is a sprite reverser and as its name suggests it reverses sprite patterns i.e. if a sprite showed a figure facing the right by using this routine you could make it face the left and its colour, size and position will not be affected. To make the figure face the right as before just use the routine again.

To use first of all type in program 1 (BASIC AND ASSEMBLY listing provided) then to reverse a sprite a sprite use the following statement.

sys 49152, ADD (Where ADD is the sprite data address from 0-65535)

To use from within a machine code program you must store the low byte of the sprite data address into memory location 253 and the high byte of it into emory location 254. Now just jsr to location 49165

The second program is a sprite inverter. It is slightly similar to the first, but instead it turns a sprite upside down and again its colour, size and position is not affected.

To use, type program 2 (BASIC AND ASSEMBLY listing provided) then to invert [illegible] use the following statement [illegible]

sys 4[illegible] (Where ADD is the sprite data [illegible] from 0-65535)

to use from within a machine code program st[illegible] & high bytes of the sprite d[illegible] memory loca[illegible] you do with the [illegible]

```
10 REM SPR[illegible]ERSER (CBM64)
100 FOR M[illegible]49231:READ A[illegible]
200 DATA [illegible],032,138[illegible]
215 DATA [illegible]03[illegible]0,192[illegible]
230 DATA [illegible]13[illegible],032[illegible]
245 D[illegible]2,096[illegible]
260 D[illegible]2,024[illegible]
270 DA[illegible]6[illegible],096

READY.
```

```
10 REM [illegible]INVERTER [illegible]CBM
100 FOR [illegible]T[illegible]9312:[illegible]DA[illegible]
200 DAT[illegible]53,174,0[illegible]1[illegible]029
215 DAT[illegible]251,1[illegible]0,0[illegible]3,072
230 DAT[illegible]52,[illegible]7,2[illegible]1,251
245 DAT[illegible]52,1[illegible]3,0[illegible]06
260 DAT[illegible]52[illegible]

READY.
```

Inside Info

ICPUG is a highly influential organisation and brings many benefits to its members across the whole range of Commodore activity. CCI considered that a regular column from ICPUG would be of interest to many readers. The views expressed by ICPUG may not be those of CCI

Since everybody else is doing it, I thought I would nominate my own Oskar award. And the winner of the ICPUG Oskar is . . . the CCI editorial team. Why? Well the fact that you are reading this column at all bears witness to the sheer skill displayed by the editors in deciphering my hastily scrawled handwriting.

Few things escape my attention here in my first floor basement on the south coast, except maybe for the occasional thermonuclear war and the odd episode of Star Trek, but this week I couldn't help noticing the new ultra slick Amiga demo that's floating around. For those of you who haven't seen it, there this Michelin Man, and he's juggling three balls. Ah, but these are not ordinary balls, they are GLASS balls (remember Labyrinth?) and the really clever thing is the reflections in the glass and the distorted view of the landscape through the glass. Which changes as the balls move around. Plus of course, the man moves around and the shadows move, and the shadows can be seen moving in the glass. Everything is expertly shaded just to add that extra touch of realism. Impressed? I bought the company.

Having recently gone into the realms of publishing as well as writing, I now find myself with the prospect of actually being able to afford to buy one of these much vaunted Amiga machines. The question is, do I buy one of the existing 1000s or hand on a bit for the new 2500? The baby 500 machine is probably out of the question since I am a little suspicious of what Commodore have taken out of it in order to 'cqst reduce' it. Also, past experience suggests that Commodore will price the 2500 nearer the £4000 mark than the £2000 mark. I contacted Bill Donald, since he ought to know about these things, and the opinion he related to me was that unless you are heavy power MD-DOS freak, the 2500 is over the top. True, half the slots can't be used without the 8088 card or the rumoured 80286 card, and anyway several manufacturers offer 100 pin (or 86 pin) expansion chassis, and there's always Sidecar for DOS applications if you really need them. More memory? It's easy enough to plug that onto the Amiga, and I heard a rumour that someone is offering 2Mb in kit form for around £200 (although I haven't been able to verify that). Dare I say it, the MS-DOS option is probably better catered for by buying a certain widget from Mr Sugar — it's certainly cheaper — provided you have enough space on your desk.

Come to think of it, I could do with that laser printer about now. Improve the quality of my output no end, and I could almost dispense with the services of a typesetter. Anyone want to buy an FX-80 and DPS 1101?

Still, maybe the launch of the 2500 will cause the price of the 1000 to drop even further, and lots of people will be able to buy one.

Don't forget, we'd love to hear from you so please write (c/o CCI) or Mailbox ICPUG on CNet, or 705750595 on Prestel.

T.W.A.

I.C.P.U.G.

the Independent Commodore Products Users Group

is the largest and most friendly Computer Club in the country.

* Over 70 local groups with regular meetings
* Superb Newsletter — 80 plus pages of reviews, news and information every two months
* Free Software Library
* Help and Advice
* 24 disks of public domain Amiga software (verified by ICPUG's Mike Todd) available to members on supply of disk and payment of p&p.
* Discount Scheme
* We support ail Commodore Machines old and new: PET, VIC20, 64, 16, +4, 128 and Amiga . . .
* Subscription only £10 per year (U.K.)
* Add joining fee of £1.00

If you are seriously interested in using or programming any Commodore computer, then joining ICPUG is a must!

For full details, send a stamped, addressed envelope to:-

ICPUG Membership Secretary,
Jack B. Cohen,
30, Brancaster Road,
Newbury Park,
ILFORD,
Essex. IG2 7EP

COMMODORE AMIGA
NEW PRODUCTS

Flight Simulator II £49.95 | **Defenders of the Crown £45.95** | **Graphics Tablet £359**

AMIGA SOFTWARE

Arcade Games		**Leisure Software**		Deluxe Video	£99
Marble Madness	£27	Defers of the Crown	£45.95	Deluxe Print	£80
Deep Space	£32			Deluxe Music	£85
One on One	£27	Archon	£27	Aegis Images	£64
Arctic Fox	£27	Archon II	£27	Graphicraft	£50
Sky Fox	£27	Shanghai	£27	Aegis Animator &	
Arena	£27	The Pawn	£23	Images	£110
Brattacus	£32	Hailey Project	£40		
Flight Simulator II	£49	Winter Games	Phone	**Business Software**	
		Chessmaster 2000	Phone	Scribble	£95
Languages & Other Software		Hitchhikers Guide	£27	Analyse	£95
K-SEKA	£65	Leather Goddesses	£27	Text Craft	£50
Pascal	£83	Trinity	£31	Talker	£65
Cambridge Lisp	£137	Other Infocom Adven	£27	Mi-Amiga File	£95
Toolkit	£37	Transylvania	£29.95	Mi-Amiga Ledger	£95
Shell	£45	Little Computer People	£31	Dynamic CAD	£450
Make	£45	Tass Times in Tonetown	£23	Aegis Impact	£160
Macro Assembler	£65	Leaderboard	£23	Superbase Personal	£135
Modula 2	£95	Strip Poker	£18	Logic Works	£95
Lattice C	£125			Gizmoz	£45
True Basic	£160	**Graphics & Music**		Logistix	£155
The Mirror	£45	Instant Music	£27	Nancy (Spell Checker)	£47
		Music Studio	£31	Omega Base	£95
		Deluxe Paint	£120		

Buy 3 or more pieces of software and get an extra 10% off!

Phone for the best possible deal on Amiga Computers

HARDWARE

Amiga Computers	Phone	Midi Interface	£55
256K-512K Memory Upgrade	£120	Digiview	£200
1MB Memory Upgrade	Phone	Sound Digitisers	Phone
2MB Upgrade	£800	Mouse Mat	£9
3.5 inch External Disc Drive	£260	Elite Joystick	£13
5.25 inch External Disc Drive	£330	Quickshot IX Joyball	£10
Hard Discs	Phone	Technical Reference Manuals	Phone
Graphic Tablet	£359	10 3.5 inch DSDD Discettes	£30

All prices include VAT & postage to UK & Europe

This is a small selection of our software & hardware available for the Amiga. Phone or write for more details

Send to:

M.P.C. SOFTWARE

Dept C1, 71 Julian Road, West Bridgford, Nottingham NG2 5AN
Telephone: (0602) 820106

All prices correct at time of going to press. E&OE

TPUG and the 64

Toronto, Canada was the first city of Commodore back in the calculating machine days. It was the natural habitat of some of the earliest Commodore owners and is still today the home of probably the largest user group in the world, TPUG (Toronto Pet Users Group). Like ICPUG in the UK, TPUG maintains an excellent library of programs for all CBM computers. It is especially strong in 64 material. We thought it would be of interest to many 64 owners around the world to have a list of some of the utilities available from TPUG. They are supplied on disks for a nominal cost of between $5—$12 on disk, also for the list below on cassette.

The following list is of their first disk/cassette, and is reproduced courtesy of TPUG directly from their Commodore 64 library magazine.

If you are interested, please do not contact CCI, but TPUG direct.

Toronto Pet Users Group Inc. 1912A Avenue Rd, Suite 1, Toronto, Ontario, Canada M5M 4A1. Tel: (416) 782-9252.

Utilities

The 3 utility disks listed here contain programs that will make life with your Commodore 64 more enjoyable. Basically, there are programs here to ease the pain of everything that you don't like about the Commodore 64. What more is there to say except, get these disks!

Enjoy!

- TPUG Commodore 64 Librarian

(C)U1 - UTILITIES (1 disk/tape)

LIST-ME (C)U1.L	This file contains information about the programs on (C)U1. To access it, LOAD and LIST it.
1541 BACKUP.C	Copy the entire contents of one disk to another using your 1541 disk drive. Instructions available from the TPUG office.
64 MEM CHART.C	A chart of the Commodore 64's memory layout.
64 RENUMBER.C	A simple renumbering routine. It doesn't change a GO TO or GOSUB so you'll have to change them manually. To set ranges use REM statements at the beginning of each routine using this format: 10 REM*10*.
BASE.C	Converts numbers from one base to another. For example: FF base 16 is 255 base 10.
C-64 WEDGE.C	Loader programs for "DOS 5.1".
C64 PET SCREEN.C	This routine will reconfigure the video chip so the screen starts at $8000 (like the PET), so PET programs that don't normally work, due to POKEs and/or PEEKs to the screen, should work.
CHECK DISK.C	Checks a disk that you have just formatted to ensure that all the blocks on the disk are good. If bad blocks are found, the program tells the BAM not to use them.
COLOUR BAR 2.C	Displays square of each colour available on the 64 on the screen and then cycles through the background and border colours.
COLOUR COMBO.C	Displays every possible combination of screen and character colours so you can see which ones are readable.
COPY FILE.C	Copy any one file from 1 disk to another using your 1541 disk drive
COPY FILES.C	Copy as much or as little of the contents of one disk to another using your 1541 disk drive.
COPY-ALL.C	Copy programs from one 1541 to another 1541. Needs 2 1541 disk drives--i should be changed to device #9 using "DISK ADD CHNGE.C"
DEC DUMP.C	Performs a decimal dump on any program that you specify from disk
DEMO JOYSTICK.C	Test the mechanism of your joystick to be sure that it is in working order.
DIALER.C	Hold the phone in front of your VDT speaker, choose a number and the 64 will dial the number for you. Note: If your exchange does not support touch tone dialing, this program will not work.
DIR.C	Allows you to look at the directory, send disk commands and examine the disk status.
DISK ADD CHNGE.C	Change the device number of your disk drive. For more detailed information see "HOW TO USE.C".
DISK LOG.C	Displays the file name. If the file is a program it tells the start and finish address. If it is a sequential file it tells you how many bytes long it is. Output can be directed to the screen or a printer.
DISKVIEW 2.C	A very useful program that lets you do things such as trace blocks, unscratch a file, look at the Block Availability Map and much more.
DISPLAY T&S.C	Allows a programmer to examine the contents of a block by specifying the particular track number and sector number which identifies that block.
DISSAMBLER.C	Disassembles any section of the Commodore 64's memory to your printer or your VDT.
DOS 5.1	Loaded by "C-64 WEDGE.C". Don't load it yourself, it won't work.
DUMP .C	Performs a decimal dump on any program you specify from disk.
EMULATOR	Reconfigures your 64 to run most BASIC PET programs. Loaded by "PET EMU BOOT.C".
FORMAT.C	A useful little program that rounds numbers to 3 decimal places and lines up the decimal point.
HOW PART TWO	Gives instructions for: "PERFORM TEST.C", "SEQ FILE.C" and "RANDOM FILE.C".
HOW TO USE.C	Gives instructions for: "C-64 WEDGE.C", "COPY-ALL.C", "DISK ADD CHNGE.C", "PRINTER TEST.C", "VIEW BAM.C", "DISPLAY T&S.C", and "CHECK DISK.C",
INTERMOD.C	Calculates intermodulation products for all combinations of frequencies you input.
J/2D MORSE R/T.C	Transmit morse code using your Commodore 64.
JOY 2.C	Test your joystick to be sure that everything inside is OK.
LISTER.C	LIST a program from your disk to your printer or your VDT.
LISTER 2.C	LIST a program from your disk to your printer or your VDT.
LOCKDISK 64	Protects your programs. Autoruns programs and won't let you break out.
MENU.C	Loads the directory of a disk then lets you pick the program you want by number. After you choose the

→

Evesham Micros

ALWAYS A STEP AHEAD

YOU WON'T BELIEVE YOUR EYES

The EVESHAM Enhancer 2000

The Evesham Micros version of this reliable and compact disc drive has a **new ROM** to ensure a **very high** degree of compatibility with disc turbos and protection schemes.

FEATURES

- ☆ HANDLES DISC TURBOS
- ☆ DIRECT DRIVE MOTOR
- ☆ NO OVERHEATING
- ☆ VERY RELIABLE
- ☆ 1 YEAR GUARANTEE
- ☆ COMPACT SIZE
- ☆ HIGHLY COMPATIBLE
- ☆ VERY QUIET

IMPORTANT:
ONLY THE EVESHAM MICROS VERSION OF THIS DRIVE HAS THE NEW ROM THAT WILL HANDLE DISC TURBOS AND LOAD OVER 98% OF PROTECTION SCHEMES.

THREE PURCHASE OPTIONS

OPTION 1	OPTION 2	OPTION 3
Evesham Enhancer with free s/ware.	Evesham Enhancer with free s/ware and Quickdisc + cartridge	Evesham Enhancer with free s/ware Freeze Frame cartridge and 10 discs.
ONLY £149.95	**ONLY £159.95**	**ONLY £179.95**

DOLPHIN DOS
THE EFFECT IS STAGGERING.

Now established as **THE parallel operating system** for the 1541 disc drive. Hundreds of satisfied users include business, hobby and full-time programmers **including the Gremlin Graphics team.** The speed and efficiency is truly unbelievable, it is compatible with **the vast majority of commercial software,** speeding up both the loading of the program **and of SEQ/REL files.** (It is brilliant with Superbase, Easyscript, etc.) For non-compatible programs it can be **completely switched out.** It DOES NOT use a special disc format and your existing discs will be compatible.

FITTING

Fitting involves the insertion of two sub assembly circuit boards, one in the 1541 and one in the '64/128. These normally just plug in but on some '64s a small amount of soldering is necessary.

SOME OF THE FEATURES

- ★ **25x FASTER LOADING (PRG FILES)**
- ★ **12x FASTER SAVING (PRG FILES)**
- ★ **10x FASTER LOADING (SEQ FILES)**
- ★ **8x FASTER SAVING (SEQ FILES)**
- ★ **3x FASTER LOAD/SAVE (REL FILES)**
- ★ **E.G. LOAD 202 BLOCKS IN 5 SECS**
- ★ **EASY AND FAST DOS COMMANDS**
- ★ **USE 40 TRACKS FOR 749 BLOCKS**
- ★ **MONITOR BUILT IN**
- ★ **DRIVES CENTRONICS PRINTER**
- ★ **ENHANCED SCREEN EDITOR**
- ★ **EXTRA BASIC COMMANDS**

(These figures do not allow for searching)

ONLY £69.95

Available for CBM 64 or '128 in '64 mode, please specify

EXTRAS AVAILABLE

Kernal for '128 in '128 mode	**£9.95**
User port expansion card (3 slot)	**£14.95**
Dolphin Copy (Whole disc in 18 secs and lightning fast file copier)	**£7.95**
Dolphin main board for second drive (no lead)	**£44.95**

If you require further information please send SAE for fact sheet

STOP PRESS

Dolphin DOS wins C.C.I. Oscar for best utility of 1986. First ever 100% hardware rating in Compunet review. Many more software houses now using D. DOS include: Superior, Alligata, Adventure International, Thalamus, and Domark.

LOOK!

your new look '64 will only cost you **£19.95**

THE LO-LINE '64

This new stylish case with it's modern sleek style will transform your '64. The high quality injection moulding is beautifully finished and very sleek. The lower key height also makes operating the computer much more comfortable.

It is very easy to transfer your '64 into this new case creating the feel of a new computer.

Quickdisc+

FAST LOAD PLUS UTILITY CARTRIDGE

After enjoying considerable success since its release we have now made some improvements to "QUICKDISC+" to maintain its position as the best value in the disc "speed up/utility" cartridges.

Fast LOAD (now 5-7 times normal speed). Works with majority of protected software. Can be switched in and out from the keyboard.

Fast SAVE at 7 times normal speed.

Fast Format takes just 20 seconds.

Fast Backup copies an entire disc in four minutes (not protected software).

Very Fast File Copier for selective file copying at HIGH speed. Now handles files up to **248 blocks** long.

Improved DOS commands (DOS 5.1) makes for easy use of the disc drive. eg. $(RETURN) will LOAD and display a directory without overwriting BASIC. SHIFT RUN/STOP will LOAD "0:*",8,1 etc. **Very, very useful.**

Incorporates Centronics printer software (user port) **with CBM graphics** capability (requires user port centronics cable).

A RESET switch is fitted. (We have found this to be "unstoppable", it even preserves the tape buffer).

NO MEMORY IS USED by this cartridge, it is totally "transparent" and uses special switching techniques.

"128" and 1570 compatible in '64 mode.

PLUS MANY MORE USEFUL FEATURES TO MAKE YOUR 1541 FAR MORE FRIENDLY TO OPERATE.

ONLY £19.95

NOW EVEN FASTER

In Australia contact: **MICRO ACCESSORIES of S.A.,** Unit 8 Hewittson Rd, Elizabeth West, S. Australia 5113. Tel: (08) 287-0191

FREEZE FRAME UTILITIES DISC V2.0

Now with **many more** routines to allow the complete transfer from tape to disc of programs that load parts as the program progresses. Used **in conjunction with Freeze Frame** for the awkward ones that cannot be handled by the standard cartridge. Included are routines for most popular games like **Supercycle, World Games, Gauntlet, Trivial Pursuit, Ace of Aces, Dragons Lair I & II (includes training mode), etc., etc.**

ONLY £7.95

Update fees for owners of V1.0 is £2.00

NUMBER ONE FOR POWER . . .
NUMBER ONE FOR EASE OF USE

NEW MK. IIIB VERSION

FREEZE FRAME

NOW HANDLES PROGRAMS THAT LOAD SUBSEQUENT PARTS

The world's most powerful backup product? We are sure that "Freeze Frame" is the most powerful and the easiest to use product of it's kind. The originator and still the best. Now the **"MK. IIIB" version** has moved "Freeze Frame" well ahead of the "opposition". As well as it's unfailing skill at handling **every memory resident program** available for testing up to 1st December 1986 it will now transfer from tape to disc the majority of **programs that load subsequent parts** (e.g. Winter Games, Silent Service, etc.).

FEATURES

- TAPE TO DISC
- DISC TO DISC
- COMPLETE SELF-CONTAINED, NO EXTRA SOFTWARE NEEDED
- FILES COMPRESSED FOR ECONOMY OF STORAGE SPACE
- 128/128D COMPATIBLE IN 64 MODE
- TAPE TO TAPE
- DISC TO TAPE
- RELOAD INDEPENDENT OF THE CARTRIDGE
- NOW HANDLES PROGRAMS THAT LOAD EXTRA PARTS
- PROGRAMS RESTART FROM THE POINT BUTTON IS PRESSED

SUPERB SELECTIVE FILE COPIER BUILT IN. WILL LOAD AND SAVE FILES UP TO 248 BLOCKS LONG AT HIGH SPEED

OPERATING "FREEZE FRAME"

"Freeze Frame" is **simplicity itself** to use. Just plug it in the cartridge port, switch on and select required option from the menu. You can then load and run software totally as normal. The latest version of "Freeze Frame" will, to the best of our knowledge, allow **ANY software** to load and run normally (unlike some competitive products).

"Freeze Frame" can be brought into operation at any convenient point by **pressing the button** on it. You can then do one of three things –

1. **Pressing "D" will save a working version of the program in memory to a formatted disc. This version will include an auto booting very high speed reload (many programs reload in less than 30 secs).**
2. **Pressing "S" will save a completely standard version to disc. Ideal for use with your fast load cartridge or system. Use with "Dolphin DOS" to load any program in 10–15 seconds. Also compatible with non CBM drives and U.S. spec. computers.**
3. **Pressing "T" will save a working version of the program in memory to tape. This incorporates a high speed reload at approx. 2400 baud.**

IT'S AS SIMPLE AS THAT

ALL PROGRAMS SAVED WITH "FREEZE FRAME" CAN BE RELOADED INDEPENDENTLY OF THE CARTRIDGE

ONLY £39.95

Owners of earlier versions can return them and upgrade for £16.95

SERIOUS WARNING: THIS IS AN EXTREMELY POWERFUL PRODUCT AND IS STRICTLY FOR PERSONAL USE. DON'T COMPARE IT WITH ANY OTHER PRODUCT. NOTHING ELSE OFFERS THE POWER OF "FREEZE FRAME".

SELECTED PRODUCTS

SELECTED PRODUCTS

STAR NL10C. The best Commodore ready printer, full range of print styles, friction/tractor feed and interchangeable interface cartridges. If you change your computer just get a new interface.
ONLY £259.00

1541C DRIVE. The latest version of the 1541, better drive mechanism and new colour.
ONLY £189.95

DISC NOTCHER. Double the capacity of your discs with this handy gadget. Cut second 'write protect' notch accurately and easily.
ONLY £6.95

AZIMATE 3000. Handy package allows you to easily check and realign the tape head of your CBM data recorder. Includes screwdriver.
ONLY £6.95

MOTHERBOARD. 4 slot with either all upright sockets or 3 upright and 1 through socket to suit modem, please specify.
ONLY £28.00

POWER PACK. High quality replacement power pack for CBM 64.
ONLY £24.95

XETEC SUPERGRAPHIX. The best Centronics printer interface for your 64/128. Large buffer, downloadable fonts, etc.
ONLY £69.00

NEOS MOUSE. The best mouse for the 64/128 with "CHEESE" graphics software on tape and disc.
ONLY £42.95

DATA RECORDER. CBM compatible, same performance as the C2N/1531 but cheaper and includes a pause button.
ONLY £29.95

QUALITY DISKETTES

Pack of 25 high quality DS/DD diskettes with labels and w/p tabs. **Only £13.95**
25 disks as above with 50 capacity lockable storage box. **Only £22.95**
25 disks as above with 100 capacity lockable storage box. **Only £24.95**

Disc-Disector

DISC DISECTOR V5.0

Now the **FIFTH generation** of the countries **leading** disc back-up/utility package is available. This latest version includes **many more "PARAMETERS"** to handle the latest highly protected discs. This includes the latest **American and English software.** Be warned if you want to back up software by Ocean, Gremlin, Hewson, Domark and even U.S. Gold, whose protection schemes are NOT always the same as the American versions, then you **MUST have "D.D.".** At press date, **we are sure NO other advertised product will handle all these, be it American or German.**

INCLUDES THE FOLLOWING

"EVESHAM 3 MINUTE NIBBLER" is the **latest version** of the infamous "Evesham Nibbler" now boasting **even more power and speed. Copies highly protected discs in 3–4 minutes.** Handles **the latest types of disc protection completely automatically.** This often involves the use of the **"PARAMETERS"**, these add the vital secret code that the highly protected programs check for. (This is the important difference that makes this the best.) At the time of going to press this program copied **virtually all the English and American programs available for testing,** including the latest in games and business software.

"DUAL DRIVE NIBBLER" allows the use of two drives to make **even faster back ups.** Incorporates device number change software so no hardware mods necessary.

"EVESHAM 8 MINUTE NIBBLER" still very powerful and has been improved. Copies a few that the three minute version won't.

Many, many other useful utilities are included on the disc, including **SELECTIVE MENU MAKER, FAST FORMAT, FAST FILE COPY, NOVATRANS, DISK ORDERLY, DISCMON+, UNSCRATCH, ETC., ETC.**

The whole package is menu driven and has its own fast boot system built in for your convenience. Pays for itself the first day you receive it.

ONLY £29.95

Customers with earlier versions may return them along with a payment of £9.95 to receive V5.0.

Most routines are CBM 128 and 1570/71 compatible in '64 mode.

STOP PRESS!!

Many software houses are now using "Anti-Freeze" in their software. This renders ordinary back-up cartridges useless. We are now shipping "Freeze Frame Mk. 3B" which will deal with these programs. As far as we know other competitive devices will NOT. Most new software will be using this so don't forget if you want results you must buy "Freeze Frame".

Owners of Mk. 3 wanting Mk. 3B can upgrade for £5.00.

DOUBLER

The tape back up "device"

Doubler has been an **enormous success** and continues to sell very well. Why? Because it is the **best product of its type** on the market. Doubler uses a unique method that copies **all types of software** regardless of speed. It consists of **hardware and software**. The software is the key part as unlike other products of its type Doubler creates a **brand new machine copy**. It is very easy to use and very successful. In fact our tests **have proved** that the "device" can achieve **100% success**.

Requires access to two data recorders.

ONLY £12.95

Why settle for less—this is the best.

ALIGNMENT PROBLEMS?

1541 PHYSICAL EXAM

£39.95

The program includes a digital alignment disc and software which allows you to **accurately check and correct** disc drive alignment. The instruction booklet is **very detailed**. Also includes quiet drive stops to **stop** that "hammering" that preventing further problems.

ONLY £39.95

QUIET DRIVE STOPS

This package incorporates new drive stops for **two 1541s** that will **end for good** the dreaded "woodpecker". The fitting process is very easy and a test program is provided to check the fitment. Helps prevent future alignment problems and makes your drive purr with satisfaction.

ONLY £4.95

ORDERING INFORMATION

ALL GOODS SUBJECT TO AVAILABILITY E&OE
ALL PRICES ARE INCLUSIVE OF VAT AND DELIVERY WITHIN U.K. OR EUROPE. ORDERS OUTSIDE EUROPE ADD £2.00 FOR AIRMAIL
PAYMENT IN STERLING ONLY PLEASE. PLEASE SEND CHEQUE, POSTAL ORDER, OR CREDIT CARD DETAILS. ACCESS/VISA ORDERS ACCEPTED BY TELEPHONE WHENEVER POSSIBLE
GOODS SENT WORKING DAY AFTER RECEIPT. CALLERS WELCOME.

EVESHAM MICROS, BRIDGE STREET, EVESHAM, WORCS. WR11 4SF
TELEPHONE (0386) 41989
or call at:
MICRO CENTRE, 1756 PERSHORE ROAD, COTTERIDGE, BIRMINGHAM B30 3BH
TEL: 021 458 4564
TELEX 333294 EMICRO G

	program it is automatically loaded and run.
MOVING SIGN.C	Input a message and then watch it displayed in big characters across your VDT.
PCB PRINTER.C	Prints programmable character grids so you can design your own character sets on paper.
PERFORM TEST.C	Allows anyone to test the electronic and mechanical capabilities of the 1541 disk drive.
PET EM.C	A limited PET emulator program. Moves the screen sq that PET programs with screen POKEs will work.
PET EMU BOOT.C	Boots "EMULATOR" which reconfigures your 64 to run most BASIC PET programs.
PET EMULATOR.C	Reconfigures your 64 to run most BASIC PET programs.
PETLOAD PRGM.P	Load programs saved on a Commodore 64 into a PET/CBM with BASIC 4.0.
PRINTER TEST.C	Prints a listing of the characters in a format that allows easy checking of the mechanical and electronic capabilities of the printer.
PROG CONVERT.C	Converts a Commodore 64 or VIC 20 program so it will LOAD into a PET. Useful for people with a 64 at home and PETs at school.
PRG FUNCTION.C	Allows you to assign words and/or values to each function key. They will remain until you power down or press RUN/STOP RESTORE.
RANDOM FILE.C	To find out how to manipulate random files list and explore this program.
RND COLR BARS.C	Produces random colour bars on your VDT.
SCREEN.C	Test your joystick to be sure that everything inside is OK.
SEQ FILE.C	To find out how to manipulate sequential files, LIST and explore this program.
SPARKLE.C	If you are bothered by screen "noise" during GET and INPUT statements, this program should eliminate it.
SUPERMON INST.C	Instructions for "SUPERMON V2.C". LOAD and RUN this before you attempt to use "SUPERMON V2.C".
SUPERMON V2.C	A Machine Language monitor, lets you assemble Machine Language by hand.
TIMER.C	Measure the amount of time spent by a radio or television station on news, sports, ads or whatever.
VICLIST.C	LIST a program from disk to printer.
VIEW BAM.C	Allows a programmer to examine the contents of the sectors which make up the block availability map or BAM. For more information see "HOW TO USE.C".
WEDGE-64-$9000.C WEDGE-64-$C000.C WEDGE-64.$7000.C WEDGE-64.$8000.C	An enhanced wedge program for the Commodore 64. Commands supported: ">ADJUST", ">AUTO", ">COLD", ">COLOUR", ">DEL", ">DS", ">HELP" ">HEX", ">HUNT", ">LOOK", ">MEM", ">MERGE", ">N", ">OFF", ">RENUM", ">SAVE", ">START", ">SEND", ">$", AND ">/". The 1st one loads at $9000 providing you LOAD it as follows: **"WEDGE-64-$9000.C",8,1** To activate it enter: SYS 9*4096 The 2nd one loads at $C000 providing you LOAD it as follows: **"WEDGE-64-$C000.C",8,1** To activate it enter: SYS 12*4096 The 3rd one loads at $7000 providing you LOAD it as follows: **"WEDGE-64-$7000.C,8,1** To activate it enter: SYS 7*4096 The 4th one loads at $8000 providing you LOAD it as follows: **"WEDGE-64-$8000.C",8,1** To activate it enter: SYS 8*4096

AB COMPUTERS & ELECTRONICS
AUTHORISED DEALERS OF COMMODORE

★ SPECIAL AMIGA PROMOTIONAL PRICES ★

Amiga System 1 Only £995.00
Amiga System 2 Only £1195.00

We can supply the complete range of Hardware & Software for Commodore Products.

HARDWARE
C128 £234.77; C128D £499.64; 64C + Cassette Unit + Mouse + Graphics Software + 6 Games £217.38; 64C £173.04; 1901 Monitor £299; Amiga 3½" External Disk Drive £249; Amiga 5¼" External Disk Drive £299; 1571 Disk Drive £249; 1541C £173.90; 10Mbytes Hard Disk Drive £995.00; Amiga Memory Expansion Cartridge £99; Modem for 64C and 128 £69.52; Modem for 64C & 128 £69.52; Miracle WS4000 V2123 £149.95; Miracle WS3000 V2121 £295.

PRINTERS
Laser Special QMS k8 £1,985; MP201 (P) Dot Matrix £389; MP200 (P) Dot Matrix £328; MP165 Dot Matrix £228; Juki 5510 £234; Citizen 120D £157; Panasonic KX.P1080 Dot Matrix £138.26; Commodore MPS100 £249; Commodore MPS803 £147.82; Star NL-10 £199.13; Teco VP1814 £199.13; DXY-880A Roland Plotter £695.65.

SATELLITE TV SYSTEM
SX1000 Receiver & Northat Dis + Polorator & LNB only £694.78.

SOFTWARE
Aegis Draw £147.78; De Luxe Paint II £129; K-Seka 6800 Assembler £69.52; Lattice C Compiler £113; On-line Communications £69.95; Dynamic CAD £433.91; Superbasic 128 £86.91; Superscript 128 £69.52; Micro Clerk £86.08; Super Disk Doc £17.34.

★ On-site Maintenance: 1st Year Parts/Labour; FOC with every Amiga.
★ Fast, reliable low cost repair service for all Commodore ranges.
★ Mail Order Welcome — Access/American Express/Barclaycard.
★ Export Enquiries Welcome.
★ All Prices Exclude VAT and P&P
★ Call us on 01-568 7149 or 01-568 8357.

**GREAT WEST ROAD,
173 THORNBURY ROAD, OSTERLEY, ISLEWORTH,
MIDDLESEX TW7 4QG
Telex: 946240 CWEASY G. Ref: 19008215**

YER

York Electronic Research
23a Bootham
York
YO3 7BW

Tel. (0904) 39486

64 Software

1541 DISK TURBO £13.99
* Speeds up all types of disk reading by up to 8 times. Supplied in ROM.

6502 ASSEMBLER + EDITOR £12.99
* Full symbolic assembler with manual. Supplied on disk

RUN Z80 CODE ON YOUR 64 £8.99
* Compiles Z80 source into optimized 6502. Disk, editor and instructions.

Send cheque/PO to York Electronic Research. Overseas add £2.00

FOOTBALL MANAGEMENT

NOW! 2 Classic Football games for all Football enthusiasts available on C64/128 — Packed with GENUINE FEATURES.

PREMIER LEAGUE — AN EXICITING AND COMPREHENSIVE GAME with these features: Full Home & Away Programme, Transfer Market, Full Team Selection, Named/Recorded Goal Scorers, Substitutes, Injuries, 5 Skill Levels, Half/Full Time scores all matches, Financial Problems, Save Game, Printer Option, Training, Team Styles, Change Names, Bank Loans plus MUCH MORE!
Price: £6.50 inc. p&p

WORLD CHAMPIONS — A COMPLETE AND EXCITING WORLD CUP SIMULATION: Takes you from the first warm-up friendlies through to the qualifying group and onto the finals. Select from squad of 25 players. Pre-match team news. 2 in-Match substitutes allowed, select own Friendly Tour opponents. 7 Skill Levels. Results List plus MUCH MORE. WORLD CHAMPIONS includes a full text match simulation including — Goal Times, Injury Time, Extra Time, Penalties, Injuries, Sending Off, Match Clock, Corners, Free Kicks, Named/Recorded Goal Scorers & MORE!
Price: £7.95 incl. p&p.

SKILL . . . TACTICS . . . DECISIONS . . . STRATEGY

These SUPERB games are available by MAIL ORDER only via our 1st CLASS service. All games are ready for IMMEDIATE DESPATCH by first class post, from

**E. & J. SOFTWARE
Room C1, 37 Westmoor Road, Enfield, Middx EN3 7LE**

A HEAP OF HINTS

A few more ideas for your routine collection.

Some less routine routines!

---

1) An aid to loading programmes from disk:

C-64, C-128 & Plus 4

One way to load a programme from disk is to list the directory and then to type LOAD over the beginning and add ",8:" or ",8,1" to the end.

E.g.

```
56     "ZAPPEM"          PPG
9      "SPELL"           SEQ
LOAD   "MONITOR",8,1     PRG        <<<<<<<<<<
```

Well here is a way to add the ",8:" or ",8,1" to the programme name when you save the programme.

To add ",8:" type SAVE "PROG NAME<SP>[D]8<@>",8
To add ",8,1" type SAVE "PROG NAME<SP>[D]8[D]1",8

<SP> = SHIFT + SPACE
[D] = Commodore key + D
<@> = SHIFT + @

The only restriction is that filenames with ",8:" added can only be 12 characters long and those with ",8,1" added must not exceed 11 in length.

---

2) Speed up your 128 in 64 mode:

C-128

The 128 in 64 mode differs from 'genuine' 64s in a number of ways. For example, memory location 53296 in the 128 makes use of a bit previously unused in the 64. Flipping this bit toggles the 128 from

running at 1Mhz to 2Mhz. This bit is also accessable when the 128 is in 64 mode. When the 128 runs at the higher speed it is unable to access the 40 column screen. The same will apply if you access it in 64 mode. However, number crunching and other routines not requiring a display could benefit from the increase in speed.

```
POKE 53296,3      - To run 64 at 2Mhz and blank screen.
POKE 53296,0      - To restore 64 to normal speed.
```

---

3) A couple of pokes to help protect your programmes:

C-128

To disable the Run/Stop, Run/Stop + Restore combination and built in reset button usethe following pokes:

```
POKE 808,112
POKE 792,98
```

---

4) Save wearing out your power switch with these cold start calls:

C-128, C-64c & Vic20

When you have finished running your latest 6502-thrashing routine and decide to run some other mega exciting programme, you may well feel it is best to turn the computer off before you load it. This is quite a sensible idea as important memory locations are often corrupted and can cause all manner of curious effects when running subsequent programmes. The following system calls will perform a cold start and have much the same effect as turning the computer off but with the added bonus of leaving non system memory intact and saving wear on the power switch.

C-128 use SYS 65341

C-64 use SYS 64738

Vic20 use SYS 64802

If your computer is not listed above but is based on the 6502 Microprocessor, the small routine below will work out the address of your machine's cold start routine.

```
PRINT PEEK(65532)+PEEK(65533)*256
```

The 64 Software Centre

1 PRINCETON STREET, LONDON WC1R 4AL TEL 01 430 0954

The specialist centre for Commodore 64, 128 and Amiga

Selected items from stock

Software for CBM64/128 d=disk r=cartridge t=tape

ACCOUNTS

Anagram	Sales Ledger (64 or 128) (d)	£35.00
	Purchase/Nominal Ledger with Journal (d)	£35.00
	Cashbook (d)	£35.00
B.I.	Checkbook (d)	£15.00
Sage	Popular Accounts (128) (d)	£90.00
	Payroll (128) (d)	£69.00
	Invoicing (128) (d)	£69.00
	Supercombo (Account, Invoicing, Payroll) (d)	£190.00
Studio	Payroll 64 (d)	£44.00
	Payroll 128 (d)	£44.00
Dell	Invoice Generator (d)	£20.00
Fieldmaster	Home Accounts (d)	£10.00

STOCK CONTROL SYSTEMS

Anagram	Stock Control (d)	£35.00
Practicorp	Inventory (d)	£12.00

DATABASE FILING SYSTEMS

Cardco	Mail Now (d)	£30.00
	File Now (d)	£39.00
Fieldmaster	Record Card (d)	£10.00
	Mail Label (d)	£10.00
Precision	Superbase (64) (d)	£40.00
	Superbase (128) (d)	£60.00
	Superbase Starter (d)	£20.00
Supersoft	Instant Recall (d)	£10.00
	Instant Recall (t)	£10.00
Digital	Pocket Filer (64)	£39.00
	Pocket Filer (128)	£49.00

WORD PROCESSORS

Broderbund	Bank Street Writer (d)	£49.00
Cardco	Write Now (d)	£59.00
	Spell Now (d)	£49.00
Hesware	Heswriter (r)	£29.00
Precision	Superscript (64) (d)	£45.00
	Superscript (128) (d)	£60.00
Supersoft	Word Perfect (d)	£12.00
	Word Perfect (t)	£12.00
Tasman	Tasword 64 (d)	£19.00
	Tasword 64 (t)	£17.00
Xetec	Fontmaster Ii (d)	£60.00
Digital	Pocket Writer 64	£39.00
	Pocket Writer 128	£49.00

SPREADSHEETS

Cardco	Calc Now (d)	£30.00
Fieldmaster	Worksheet (d)	£10.00
F.P.	Powerplan (d)	£40.00
Practicorp	Practicalc II (d)	£30.00
	PR Spreadsheet (d)	£15.00
Spinnaker	Better Spreadsheet (d)	£30.00
Digital	Pocket Planner 64	£39.00
Digital	Pocket Planner128	£49.00

AIDS & UTILITIES

Access	Mach 5 Fastload (r)	£20.00
Abacus	Chartpak 64 (d)	£20.00
	Chartpak 128 (d)	£39.00
	Cadpak 128 (d)	£48.00
	Graphic Designer (d)	£14.00
	Cobol 64 or 128 (d)	£49.00
	SuperC 128 (d)	£49.00
Baudville	Blazing Paddles Graphic Designer (d)	£50.00
Berkeley	Geos (d)	£48.00
B.I.	BGraph (incl. Statistics) (d)	£29.00
Broderbund	The Printshop (d)	£38.00
	Graphics Library (1, 2 or 3) (d)	£25.00
	The Printshop Companion (d)	£35.00
Cardco	S'More (22K extra Ram, Toolkit) (r)	£49.00
	Freezeframe (Transparent Screen Dump) (r)	£49.00
CSM	1541 Disk Drive Alignment Program (d)	£49.00
	Snapshot 64 (r)	£50.00
	Snapshot Enhancer (d)	£15.00
Crystal	Zeus Assembler (d)	£14.00
	Zeus Assembler (t)	£10.00
Evesham	DolphinsDos (r)	£69.00
	Freeze Frame III (r)	£39.00
F.P.	Pascal 64 (d)	£30.00
Hesware	Forth (r)	£49.00
Incentive	Graphic Adventure Creator (d)	£27.00
Oasis	Laser Basic (d)	£19.00
	Laser Basic (t)	£15.00
	Laser Compiler (d)	£25.00
	Laser Compiler (t)	£19.00
	Laser Genius (d) £25.00	
	Laser Genius (t)	£19.00
Practicorp	64 Doctor (d)	£12.00
Precision	Supertype (d)	£15.00
	Supertype (t)	£15.00
Progressive	Picasso's Revenge (d)	£30.00
Rainbird	Art Studio (d)	£17.00
	Art Studio (t)	£14.00
E.A.	Moviemaker (d)	£35.00
Springboard	The Newsroom (d)	£59.00
	Clip Art 2 (d)	£30.00
	Clip Art 3 (d)	£25.00
	The Printshop Graphic Expander (d)	£33.00
Skyles	Victree (r)	£50.00
Supersoft	Mikro Assembler (r)	£50.00
Timeworks	Partner 128 (t)	£57.50
Xetec	Supergraphix Senior interface	£90.00
	Supergraphix Junior interface	£59.00

WAR, SPORTS AND BUSINESS SIMULATIONS — FLIGHT SIMULATIONS
ADVENTURES (PHANTASY, GRAPHIC, TEXT) — ARCADE GAMES
a wide range stocked.

United Kingdom - Prices include VAT. Add £1.00 for P&P
Europe - Prices as above. Prices exclude VAT but no charge for P&P
Other countries - Prices exclude VAT but add 2% to above prices (air)
Software is not sold in a trial basis

5) Lose that inevitable 'READY' from your printer listings:

C-64 & Vic 20

It's quite likely that any Commodore owner with a printer will be familiar with the command "OPEN 4,4:CMD 4:LIST". It is with this command that a listing of a programme in memory can be obtained. Unfortunately, when the computer finishes sending the listing to the

printer it then goes on to send the 'READY' message which is also printed. One way to clean up your listings is by suppressing all error messages of which 'READY' is one. The routine below will show you how:

```
POKE 768,131:POKE 769,164      :REM  -   Turn error messages off
OPEN 4,4:CMD 4:LIST            :REM  -   Send listing to printer
```

When listing has finished printing type:

```
PRINT#4:CLOSE 4                :REM  -   Purge buffer and close channel
POKE 768,139:POKE 769,227      :REM  -   Restore error messages
```

---

6) A fast and simple way to position the cursor

C-128

The 128 does not have a BASIC command to easily position the cursor. However, there is a way from within BASIC to do just that:

```
BANK 15:SYS 52332,,line,col
```

Where line is the number of character positions from the top of the screen and col is the number of characters from the left.

---

7) Selective directories:

1541 Disk Drive

The 1541 has an undocumented facility that permits the directory routine to select what file types to display. It is invoked as follows:

```
LOAD"$*=x",8
```

Where x is the initial letter of the file type to be displayed.

P = PRG / S = SEQ / P = REL / U = USR

---

8) Rid your diskettes of those nasty single character files:

All CBM Machines

Have you ever found that a bout of finger dyslexia has left you with a curious single character file ("," or "@") on your diskette that seems impossible to scratch? Yes! Then here is the answer you have been waiting for:

```
OPEN 15,8,15,"S0:?":CLOSE 15
```

If you have any ideas or routines which you think would be suitable for inclusion in the HEAP OF HINTS routine file then why not pop them in the post to us?

The 64 Software Centre

1 PRINCETON STREET LONDON WC1R 4AL TEL 01 430 0954

The specialist centre for Commodore 64, 128 and Amiga

Selected items from stock

Amiga Software

BUSINESS

Grafox	Logistix	£170.00
Haba	MiAmiga File Database	£90.00
Maxisoft	Maxidesk	£69.00
	Maxiplan Spreadsheet	£139.00
	Maxicomm	£54.00
Mycrosystems	Scribble Wordprocessor v.2	£99.00
	Analyse Spreadsheet	£110.00
Precision	Superbase	£150.00
VIP	Professional Spreadsheet	£200.00
Gold	Pagesetter Desk Top	£150.00

HOUSEHOLD

EA	Financial Cookbook	£39.00

UTILITIES

Activision	Music Studio	£34.00
Aegis	Images	£69.00
	Images Artpak	£46.00
	Animator	£129.00
	Draw	£165.00
EA	De Luxe Paint II	£149.00
	De Luxe Paint Art & Utility	£34.00
	De Luxe Print	£90.00
	De Luxe Print Data Disk 2	£30.00
	De Luxe Video Constr.Set	£90.00
	Instant Music	£39.00
	Music Construction Set	£99.00
Kuma	K-Seka 68000 Assembler	£75.00
Lattice	C Compiler	£125.00
	Make Utility	£99.00
Metacomco	MCC Pascal	£85.00
	Amiga Toolkit	£39.00
Mindscape	Keyboard Cadet Typing Tutor	£39.00
Unison	Printmaster Plus	£49.00
	Printmaster Art Gallery (1 or 2), each	£29.00
Zuma	Fonts 1,2,3 / each	£29.00

EDUCATIONAL

FB	Math Talk	£49.00
	First Shapes	£39.00
Sierra	Winnie the Pooh	£24.00
Unicorn	Fraction Action	£49.00
	Decimal Dungeon	£49.00

SIMULATIONS

Sublogic	Flight Simulator	£50.00
Alert	Balance of Power	£49.00
Bethesda	Gridiron Football	£69.00
Infinite	Grand Slam Tennis	£59.00

GAMES

EA	Archon	£29.00
	Bards Tale	£59.00
	Golden Oldies	£29.00
	Seven Cities of gold	£29.00
	Skyfox	£29.00
	Marble Madness	£29.00
	Arctic Fox	£29.00
	Chessmaster 2000	£49.00
	Adventure Construction set	£29.00
Accolade	Mean 18 Golf	£49.00
	Mean 18 Data (3 courses)	£20.00
Cosmi	Superhuey	£39.00
Cygnus	Starfleet	£49.00
Access	Leaderboard Golf	£29.00
Epyx	Rogue	£39.00
	Temple Trilogy	£24.00
	World Games	£39.00
Mindscape	Halley Project	£39.00
	Racter	£44.00
	Brataccus	£34.00
	Defender of the Crown	£49.00
	Deja Vu	£59.00
Activision	Borrowed Time	£24.00
	Hacker II	£29.00
	Mindshadow	£24.00
	Little Computer People	£49.00
	Tass Times	£24.00
	Shanghai (Mahjjong)	£24.00
Classic Image	Hex	£39.00
Unicon	Diablo	£29.00
Rainbird	Pawn	£24.00
	Jewels of darkness	£19.95
Insight	Financial Time Machine	£39.00
Other Valley	Monkey Business	£29.00
	Delta Patrol	£29.00
Polarvision	Crimson Crown	£29.00
	Transylvania	£29.00
SSI	Baseball	£39.00
Origin	Ultima III	£59.00
	The Ogre	£39.00
Gamestar	Championship Basketball	£44.00
Artworx	Bridge 4	£29.00
Sierra	Space Quest	£59.00
Infocom	Trinity	£39.00
	Leather Goddesses of Phobos	£29.00
	Hitchhikers Guide to the Galaxy	£29.00

All prices include VAT —
Add £1.00 for P&P (UK and Europe). Add 20% for other countries.

Software is not sold on a trial basis

Program

Say So by Stephen Chance

On New Years Day 1986, I was persuaded to attend a party being given by a close friend. It was mainly a family affair, with uncles, aunts and a grandparent. After several hours spent pursuing trivia, and having already missed the late-night horror film on TV, I felt sure that the sociable time to leave had arrived. However another game, evidently of some traditional significance to this particular family, was suggested. Despite the lateness of the hour, even Grandma responded enthusiastically. There was no way out: to succumb to the desire of my own bed would cause serious questions to be asked about my manhood. Little did I know that, in deciding to stay, I was sentencing myself to witnessing one of the most savage and violent rituals ever performed in Tooting.

C-64 game
This is a simple game which, should prove to be entertaining. Stephen's text describes a table of the graphic symbols and the key you need to press to obtain them.

What was this pagan rite, this 'game' capable of sustaining an octagenarian until three o'clock in the morning? I determined to write a program simulating what I had observed. What follows is the final result of my investigations.

The program is well REMed and, once running, is reasonably self-explanatory. For me the most interesting part of writing it was defining a large format alphabet. I was all set to start designing large sprite definitions for each letter when I realised just how much effort this would involve. The solution to all this hard work was pleasingly simple: get the program to define a series of strings imitating the character set as stored in ROM, but with a whole character space of each BIT, giving a magnification of ×8. All this takes a little time in BASIC, but a lot less than typing it in by hand.

The questions can easily be adjusted to suit the sense of decency of your own social circles, and their number can be changed, as long as the variable NQ (Number of Questions) and the DIM (Q$) statement in line 11440 are altered accordingly. **S.C.**

```
THE TABLE BELOW SHOWS HOW TO
OBTAIN THE CONTROL CHARACTERS
USED IN THIS PROGRAMME.

  "■" = "CONTROL + 2"
  "■" = "CONTROL + 3"
  "■" = "CONTROL + 6"
  "■" = "CONTROL + 7"
  "■" = "CONTROL + 8"
  "■" = "CONTROL + 9"
  "■" = "CONTROL + 0"
  "■" = "CBM KEY + 3"
  "■" = "SHIFT + CLR/HOME"
  "■" = "CLR/HOME"
  "■" = "CRSR UP"
  "■" = "CRSR DOWN"
  "■" = "CRSR RIGHT"
  "■" = "CRSR LEFT"
```

```
10000 REM*******************************
10010 REM          'SAY SO'
10020 REM  PROGRAMMED BY S. J. CHANCE
10030 REM*******************************
10040 REM
```

```
10050 REM
10060 REM********* SET-UP **************
10070 GOSUB11430:REM DECLARE STRINGS
10080 GOSUB10470:REM INSTRUCTIONS
10090 GOSUB10770:REM CHARACTER SET
10100 PRINTPR$"  PRESS SPACE-BAR TO CONTINUE   ":GOSUB11220:GOSUB11260
10110 GETZ$:IFZ$=""GOTO10110
10120 GOSUB10940:REM TITLE SCREEN
10130 GOSUB10640:REM INPUT PLAYERS
10140 GOSUB10720:REM INPUT WINNING SCORE
10150 GOSUB11020:REM SHUFFLE QUESTIONS
10160 FORZ=1TONP:S(Z)=0:NEXT
10170 REM****** GAME LOOP **************
10180 GOSUB11100 REM READ QUESTION
10190 GOSUB11170 REM READ LETTER
10200 PRINTPR$;"PRESS SPACE-BAR TO SPIN LETTERS"
10210 GETZ$:IFZ$=""GOTO10210
10220 PRINTPR$;"                                "
10230 GOSUB11350 REM COUNTDOWN
10240 FORZ=0TO2500:NEXT
10250 PRINT""TAB(31)"SCORE":FORZ=1TONP
10260 PRINT"   "Z"."N$(Z):PRINTTAB(30)"...."S(Z)
10270 NEXT
10280 PRINT"NUMBER OF WINNER, OR 'R' FOR RE-SPIN";:INPUTZ$
10290 IFZ$="R"THENGOSUB11150:GOSUB11170:GOTO10230
10300 Z=VAL(Z$):IFZ<1 OR Z>NP GOTO10250
10310 S(Z)=S(Z)+1
10320 IFS(Z)=WSGOTO10340:REM END OF GAME
10330 GOTO10170
10340 REM******* END OF GAME ***********
10350 PRINT""TAB(14)"END OF GAME"
10360 FORZ=WS TO 0 STEP-1
10370 FORY=1TONP
10380 IFS(Y)=Z THEN PRINT"   "N$(Y):PRINTTAB(30)"...."S(Y)
10390 NEXT Y
10400 NEXT Z
10410 PRINT"     PRESS SPACE-BAR FOR ANOTHER GAME"
10420 GETZ$:IFZ$=""GOTO10420
10430 PRINT""PR$"      SAME PLAYERS? (Y/N)"
10440 GETZ$:IFZ$<>"Y"ANDZ$<>"N"GOTO10440
10450 IFZ$="Y"GOTO10150
10460 GOTO10130
10470 REM******* INSTRUCTIONS **********
10480 PRINT""THIS IS AN EXCITING AND ADDICTIVE PARTY-"
10490 PRINT"GAME, AND IS VERY EASY TO LEARN..."
10500 PRINT"THE COMPUTER WILL DISPLAY A DESCRIPTION"
10510 PRINT"FOLLOWED BY A RANDOMLY SELECTED LETTER."
10520 PRINT"THE FIRST PERSON TO SHOUT-OUT A WORD"
10530 PRINT"BEGINNING WITH THE LETTER AND SATISFYING"
10540 PRINT"THE DESCRIPTION WINS THAT POINT."
10550 PRINT"E.G. AN INSECT BEGINNING WITH B..."
10560 PRINTTAB(15)"POSSIBLE ANSWER - BEETLE"
10570 PRINT"IF THERE IS DISAGREEMENT AS TO WHO"
10580 PRINT"ANSWERED FIRST, THEN ANOTHER LETTER CAN"
10590 PRINT"BE REQUESTED, OR AN UMPIRE APPOINTED."
10600 PRINT"THE WINNER IS THE FIRST PERSON TO REACH"
10610 PRINT"THE PREVIOUSLY SELECTED SCORE."
```

Program

```
10620 PRINTPR$"PLEASE WAIT - PROGRAM IS WORKING"
10630 RETURN
10640 REM****** INPUT PLAYERS **********
10650 PRINT"■■■INPUT PLAYER'S NAMES. (MAXIMUM OF 20)":NP=0
10660 NP=NP+1:N$(NP)="":PRINTTAB(5)"■PLAYER"NP"■";:INPUTN$(NP)
10670 IFN$(NP)=""GOTO10700
10680 IFNP=20GOTO10710
10690 GOTO10660
10700 NP=NP-1
10710 RETURN
10720 REM***** INPUT WINNING SCORE *****
10730 PRINT"■■■INPUT WINNING SCORE (2-65000)■";:INPUTWS:IFWS<1GOTO10730
10740 RETURN
10750 REM**** DEFINE LETTER STRINGS ****
10760 PRINTCHR$(142):REM UPPER-CASE
10770 POKE56334,PEEK(56334)AND254:REM INTERRUPTS OFF
10780 POKE1,PEEK(1)AND251:REM ROM IN
10790 FORI=0TO207:POKEI +49152,PEEK(I+53248):NEXT:REM COPY CHARACTERS
      TO $C000
10800 POKE1,PEEK(1)OR4:REM ROM OUT
10810 POKE56334,PEEK(56334)OR1:REM INTERRUPTS ON
10820 POKE56295,1:REM WHITE TO CORNER OFCOLOUR-MEMORY
10830 FOR LN=1TO26:REM COPY CHAR.SET INTO STRING FORM
10840 L$(LN)=""
10850 FORZ=0TO7
10860 BYTE=PEEK(49152+(LN*8)+Z)
10870 FOR BIT=7TO0 STEP-1
10880 IF(BYTE AND 2↑BIT)=0THENL$(LN)=L$(LN)+" ":GOTO10900
10890 L$(LN)=L$(LN)+"■ ■"
10900 NEXT BIT
10910 L$(LN)=L$(LN)+"■■■■■■■■"
10920 NEXT Z
10930 POKE2023,LN:NEXTLN:POKE2023, 32:RETURN:REM 2023=BOTTOM R.H.
      CORNER SCREEN
10940 REM******* TITLE SCREEN **********
10950 M$="■■■■■■■■■■■■■■■■"
10960 PRINT"■■■■■■■■■■■■■■"L$(19)M$L$(1)M$L$(25)
10970 PRINT"■■"TAB(12)L$(19)M$L$(15)
10980 PRINTTAB(25)"BY S. CHANCE"
10990 PRINTTAB(9)"■PRESS ANY KEY TO START"
11000 GETZ$:IFZ$=""GOTO11000
11010 RETURN
11020 REM****** SHUFFLE QUESTIONS ******
11030 FORZ=0TONQ
11040 Y=INT(RND(0)*(NQ+1))
11050 IFY+Z>NQTHENY=Y-NQ
11060 QQ$=Q$(Y+Z):Q$(Y+Z)=Q$(Z)
11070 Q$(Z)=QQ$
11080 NEXTZ:Q=0
11090 RETURN
11100 REM******* READ QUESTION *********
11110 QU$=Q$(Q)
11120 GOSUB11150
11130 Q=Q+1:IFQ>NQTHENGOSUB11020
11140 RETURN
11150 PRINT"■■■■":IFLEN(QU$)<38THENPRINTTAB(
      (37-LEN(QU$))/2)QU$"...":RETURN
```

```
11160 PRINTQU$:RETURN
11170 REM******* READ LETTER ***********
11180 LL$="AABBBCCCDDDEEFFGGHIJKKLLMMNNOPPQRRSSTTUVVWYZ"
11190 Z=INT(RND(1)*44)+1:L$=MID$(LL$,Z,1)
11200 L=ASC(L$):L=L-64
11210 RETURN
11220 REM******** SET-UP SID ***********
11230 RESTORE:S=54272:FORZ=STOS+24:POKEZ,0:NEXT
11240 POKES+5,9:POKES+24,15
11250 RETURN
11260 REM******** SOUND GONG ***********
11270 S=54272:READHF:READLF
11280 POKES+1,HF:POKES,LF
11290 HF=HF*2:LF=LF*2:IFLF>255THENLF=LF-255:HF=HF+1
11300 POKES+15,HF:POKES+14,LF
11310 POKES+4,21:RETURN
11320 POKES+4,20
11330 RETURN
11340 DATA16,195,14,239,14,24,12,143,11,48,89,131
11350 REM******* COUNTDOWN *************
11360 GOSUB11220:FORY=0TO6:GOSUB11320:IFY<5THENGOSUB11260
11370 FORX=1TO4:Z=INT(RND(1)*25)+1:PRINT"■"TAB(15)"■■■■■■■■■■■■"L$(Z):NEXT
11380 NEXT
11390 GOSUB11320
11400 PRINT"■"TAB(15)"■■■■■■■■■■■■"L$(L)
11410 GOSUB11260
11420 RETURN
11430 REM******* QUESTIONS *************
11440 DIM Q$(50):PR$="■■■■■■■■■■■■
```

```
11720 Q$(26)="A LANGUAGE"
11730 Q$(27)="A FLOWER"
11740 Q$(28)="A BIRD (DOMESTIC OR WILD)
11750 Q$(29)="A COLOUR"
11760 Q$(30)="AN OUTSTANDING SPORTSMAN"
11770 Q$(31)="A COMPOSER OR MUSICAL CONDUCTOR"
11780 Q$(32)="A RIVER"
11790 Q$(33)="A VIRTUE"
11800 Q$(34)="A COUNTRY"
11810 Q$(35)="A FILM STAR"
11820 Q$(36)="A WORD ENDING IN 'LING'"
11830 Q$(37)="A WELL-KNOWN TRADE OR PROFESSION"
11840 Q$(38)="AN INFAMOUS PARTY GAME"
11850 Q$(39)="A POET OR AUTHOR"
11860 Q$(40)="AN ADVERTISING SLOGAN"
11870 Q$(41)="WHAT YOU DESIRE MOST"
11880 Q$(42)="A FISH"
11890 Q$(43)="A FILM STAR"
11900 Q$(44)="NAME OF A MEMBER OF PARLIAMENT"
            ■THE LAST LETTER IS TAKEN"
11910 Q$(45)="A WORD WHICH MAKES A SEPARATE WORD WHEN
11920 Q$(45)=Q$(45)+" AWAY E.G.'BANG'"
11930 Q$(46)="WHAT FRIGHTENS YOU"
11940 Q$(47)="A TITLE FOR A VIDEO-NASTY"
11950 Q$(48)="A DANCE-STEP"
11960 Q$(49)="A MUCH-LOVED DESSERT"
11970 Q$(50)="A USE FOR A DEAD HEDGEHOG"
11980 NQ=50:RETURN

READY.
```

ATTENTION ALL PROGRAMMERS!!

You may be an experienced programmer – you may be a beginner. Either way, you may have come across some useful tips which could make life easier for other CCI readers.

Or maybe you have written a program, either in Basic or assembly language, that you feel is worthy of publication.

CCI always welcomes contributions from readers. We will publish any suitable listings or programming advice...and we'll pay you for it!

If you wish to contribute something for publication, we require programs on cassette or disk, together with any additional explanatory information and a CLEAR printout of any listings. (The better the original printout, the better the reproduction in the magazine.)

Please enclose a SAE if you wish to have your program returned to you. Please package disks or cassettes carefully!

The address to send contributions to is:

The Editor,
Commodore Computing International,
Finsbury Business Centre,
40 Bowling Green Lane,
London EC1R ONE

Don't forget...CCI welcomes programs for all Commodore computers – 64, Plus/4, C16, 128 plus the VIC and PET.

Program

The Perfect Protection

by Dennis Zweytzer

C-64

Is there such a thing as the perfect protection? I have come to the surprising conclusion that there is! My programme, when run, asks for the name of the programme you wish to protect and loads it. Next you enter a password which can be upto 32 characters long. A protected version of your programme is then automatically saved to disk. You must ensure there is sufficient space on the disk for the protected copy before you start. To save confusion '.c' is added to the new version's filename. To run this programme you simply load and run it as usual. However, instead of going straight into your programme, a message will appear on the screen asking you to enter the password. Unless you enter the same code you used when you protected the programme it will not run. 'Hacking' the programme will not reveal the password as it is not contained in the code and I estimate that if you start trying to crack it now, you will finish at just about the same time as the sun expires. The secret behind the protection lies in the use of the World War II Enigma encryption (still an official secret) on which it is based. The time taken to encrypt your programme depends on its length. A programme of 10 blocks will typically take about 10 seconds. Its length is only fractionally increased. Good luck!

```
0 REM ************************************
1 REM *                                  *
2 REM *    THE PERFECT PROTECTION        *
3 REM *      BY DENNIS ZWEYTZER          *
4 REM *                                  *
5 REM ************************************
10 L=49152
20 FOR X=0 TO 110:T=0:FOR Y=0 TO 14
30 READ A:IF A <0 OR A >255 THEN 60
40 POKE L,A:L=L+1:T=T+A:NEXT
50 READ A:T=T-(INT(T/256)*256)
60 IF T<>A THEN PRINT"DATA ERROR IN LINE"1000+(X*10)"CHECKSUM <>"A:STOP
70 PRINT1000+(X*10)"OK":NEXT
80 PRINT CHR$(147)" TO START : SYS 49494  "
1000 DATA 001,009,117,018,000,032,000,207,113,061,004,004,006,002,004,  066
1010 DATA 002,078,078,173,002,192,056,233,063,133,045,173,003,192,233,  120
1020 DATA 000,133,046,076,160,192,000,000,000,000,000,000,000,000,000,  095
1030 DATA 000,000,000,004,004,004,004,004,004,004,004,004,004,004,004,  048
1040 DATA 004,004,004,004,004,004,004,004,004,004,004,004,004,004,004,  060
1050 DATA 004,004,004,004,004,173,002,192,105,064,141,002,192,144,003,  014
1060 DATA 238,003,192,076,018,192,069,078,084,069,082,032,080,082,079,  094
1070 DATA 071,082,065,077,032,078,065,077,069,032,080,076,069,065,083,  253
1080 DATA 069,032,141,000,000,000,000,000,165,253,041,007,240,001,096,  021
1090 DATA 162,000,189,000,207,077,016,192,024,109,017,192,157,000,207,  013
1100 DATA 232,224,000,208,238,096,234,234,234,234,173,003,192,141,037,  176
1110 DATA 206,173,002,192,024,105,210,141,036,206,144,003,238,037,206,  131
1120 DATA 169,000,160,193,032,030,171,173,037,206,174,036,206,032,205,  032
1130 DATA 189,169,013,141,119,002,141,120,002,076,032,193,234,096,162,  153
1140 DATA 000,189,118,061,157,000,192,189,118,062,157,000,193,189,118,  207
1150 DATA 063,157,000,194,189,118,064,157,000,195,232,224,000,208,227,  236
1160 DATA 032,152,195,169,196,076,181,195,000,000,000,096,255,000,255,  010
1170 DATA 000,147,031,017,017,048,083,089,083,141,032,032,032,083,089,  156
1180 DATA 083,032,052,057,052,053,054,019,017,017,029,029,029,029,029,  069
1190 DATA 000,000,000,169,002,133,198,169,019,032,210,255,096,234,234,  215
1200 DATA 234,234,234,234,032,170,197,169,232,141,201,195,169,195,141,  218
1210 DATA 202,195,032,120,193,169,004,141,010,192,141,012,192,162,000,  229
1220 DATA 157,048,192,232,224,032,208,248,076,056,198,234,169,203,141,  114
1230 DATA 201,195,076,000,196,234,234,159,069,078,084,069,082,032,067,  240
1240 DATA 079,068,069,032,058,000,000,000,031,048,013,082,085,078,013,  144
```

```
1250 DATA 159,173,001,008,133,251,173,002,008,133,252,160,000,177,251, 089
1260 DATA 133,253,200,177,251,133,254,160,000,177,253,141,244,192,169, 177
1270 DATA 000,145,253,200,177,253,141,185,195,169,000,145,253,200,177, 189
1280 DATA 253,141,190,195,169,000,145,253,165,254,141,183,195,141,188, 053
1290 DATA 195,076,054,194,234,234,234,234,032,080,194,032,040,194,133, 112
1300 DATA 253,173,001,192,133,254,160,000,162,000,177,253,170,189,000, 069
1310 DATA 207,145,253,174,014,192,189,048,192,141,016,192,232,236,012, 195
1320 DATA 192,208,002,162,000,189,048,192,141,017,192,232,236,012,192, 223
1330 DATA 208,002,162,000,142,014,192,032,128,192,076,000,194,255,000, 061
1340 DATA 255,000,230,253,165,253,201,000,208,002,230,254,165,253,205, 114
1350 DATA 002,192,208,015,165,254,205,003,192,208,008,234,234,234,096, 202
1360 DATA 000,255,000,255,076,204,193,234,234,234,234,234,169,002,141, 161
1370 DATA 015,192,169,000,141,014,192,173,000,192,096,141,193,195,166, 087
1380 DATA 253,142,182,195,232,142,187,195,232,142,192,195,096,255,000, 080
1390 DATA 255,000,255,000,255,000,255,162,000,138,157,000,207,232,224, 092
1400 DATA 000,208,247,234,234,234,096,234,234,234,234,032,080,194,032, 223
1410 DATA 040,194,133,253,173,001,192,133,254,160,000,162,000,177,253, 077
1420 DATA 221,000,207,240,005,232,076,118,194,234,138,145,253,174,014, 203
1430 DATA 192,189,048,192,141,016,192,232,236,012,192,208,002,162,000, 222
1440 DATA 189,048,192,141,017,192,232,236,012,192,208,002,162,000,142, 173
1450 DATA 014,192,032,128,192,230,253,165,253,201,000,208,002,230,254, 050
1460 DATA 165,253,205,002,192,208,183,165,254,205,003,192,208,176,032, 139
1470 DATA 128,193,096,255,000,255,000,255,000,255,000,255,000,255,000, 155
1480 DATA 173,000,192,133,251,173,001,192,133,252,162,000,160,000,173, 203
1490 DATA 010,192,141,013,192,206,013,192,169,000,141,014,192,172,014, 125
1500 DATA 192,177,251,170,172,013,192,177,251,172,014,192,145,251,138, 203
1510 DATA 172,013,192,145,251,238,014,192,173,014,192,205,013,192,240, 198
1520 DATA 011,206,013,192,173,013,192,205,014,192,208,212,165,251,024, 023
1530 DATA 109,010,192,133,251,144,002,230,252,165,251,205,008,192,208, 048
1540 DATA 175,165,252,205,009,192,208,168,096,169,255,141,016,192,238, 177
1550 DATA 016,192,174,016,192,189,048,192,141,010,192,032,080,195,173, 050
1560 DATA 016,192,205,012,192,208,233,096,173,000,192,133,251,173,001, 029
1570 DATA 192,133,252,165,251,024,109,010,192,133,251,144,002,230,252, 036
1580 DATA 165,252,205,003,192,240,007,144,235,076,128,195,234,234,165, 171
1590 DATA 251,205,002,192,144,223,076,111,195,234,234,165,251,056,237, 016
1600 DATA 010,192,141,008,192,176,002,198,252,165,252,141,009,192,076, 214
1610 DATA 208,194,223,255,096,169,096,160,193,032,030,171,162,000,032, 229
1620 DATA 207,255,201,013,240,008,157,048,192,232,224,032,208,241,142, 096
1630 DATA 012,192,096,234,141,074,074,169,169,141,075,074,169,046,141, 015
1640 DATA 076,074,032,051,195,032,184,193,076,203,195,169,082,141,119, 030
1650 DATA 002,169,085,141,120,002,169,078,141,121,002,169,013,141,122, 195
1660 DATA 002,169,004,133,198,108,002,160,051,051,162,000,189,112,193, 254
1670 DATA 157,119,002,232,224,008,208,245,169,008,133,198,108,002,160, 181
1680 DATA 051,051,051,051,169,080,160,197,032,030,171,162,000,032,207, 164
1690 DATA 255,201,013,240,008,157,000,206,232,224,032,208,241,142,033, 144
1700 DATA 206,169,114,160,197,032,030,171,032,207,255,201,013,240,006, 241
1710 DATA 141,032,206,076,034,196,173,032,206,056,233,048,170,169,001, 237
1720 DATA 160,255,032,186,255,173,033,206,162,000,160,206,032,189,255, 000
1730 DATA 169,000,162,255,160,255,032,213,255,142,002,192,140,003,192, 124
1740 DATA 162,000,189,000,008,201,158,240,008,232,224,240,208,244,076, 142
1750 DATA 080,192,142,013,192,202,189,000,008,201,058,240,014,032,112, 139
1760 DATA 198,201,000,240,007,174,013,192,232,076,088,196,174,013,192, 204
1770 DATA 232,189,000,008,201,000,208,248,202,160,000,189,000,008,056, 165
1780 DATA 233,048,144,010,201,009,176,006,076,164,196,076,017,017,202, 039
1790 DATA 076,142,196,169,000,133,251,133,252,189,000,008,056,233,048, 094
1800 DATA 144,041,201,010,176,037,133,253,169,000,133,254,165,254,197, 119
1810 DATA 253,240,020,185,160,197,024,101,251,133,251,185,165,197,101, 159
1820 DATA 252,133,252,230,254,076,188,196,200,202,076,170,196,165,251, 025
1830 DATA 141,034,206,165,252,141,035,206,032,170,197,173,034,206,133, 077
```

Program

```
1840 DATA 251,173,035,206,133,252,160,000,177,251,141,244,192,200,177, 032
1850 DATA 251,141,185,195,200,177,251,141,190,195,160,000,169,076,145, 172
1860 DATA 251,200,173,002,192,024,105,210,145,251,200,173,003,192,105, 178
1870 DATA 000,145,251,076,038,197,234,234,234,234,234,234,234,165,252, 202
1880 DATA 141,183,195,141,188,195,141,193,195,166,251,142,182,195,232, 180
1890 DATA 142,187,195,224,000,208,003,238,188,195,232,142,192,195,224, 005
1900 DATA 000,208,003,238,193,195,076,064,193,255,069,078,084,069,082, 015
1910 DATA 032,080,082,079,071,082,065,077,032,078,065,077,069,032,080, 233
1920 DATA 076,069,065,083,069,032,141,000,000,000,000,000,096,000,141, 004
1930 DATA 069,078,084,069,082,032,068,069,086,073,067,069,032,078,085, 017
1940 DATA 077,066,069,082,032,040,049,061,084,065,080,069,032,056,061, 155
1950 DATA 068,073,083,075,041,032,000,000,000,000,096,255,000,255,000, 210
1960 DATA 001,010,100,232,016,000,000,000,003,039,032,152,195,032,096, 140
1970 DATA 194,174,012,192,142,036,206,174,036,206,189,048,192,141,010, 160
1980 DATA 192,032,080,195,206,036,206,173,036,206,201,255,208,234,096, 052
1990 DATA 088,167,088,173,003,192,133,252,173,002,192,133,251,230,251, 024
2000 DATA 165,251,201,000,208,002,230,252,169,000,133,253,169,192,133, 054
2010 DATA 254,160,000,177,253,145,251,200,192,000,208,247,230,252,230, 239
2020 DATA 254,165,254,201,196,208,235,174,033,206,169,046,157,000,206, 200
2030 DATA 232,169,067,157,000,206,232,138,162,000,160,206,032,189,255, 157
2040 DATA 173,032,206,056,233,048,170,169,001,160,000,032,186,255,174, 103
2050 DATA 002,192,172,003,192,200,200,200,200,169,043,032,216,255,076, 104
2060 DATA 226,252,174,003,192,142,213,192,232,142,219,192,232,142,225, 218
2070 DATA 192,232,142,231,192,172,002,192,200,140,212,192,140,218,192, 089
2080 DATA 140,224,192,140,230,192,192,000,208,012,238,213,192,238,219, 070
2090 DATA 192,238,225,192,238,231,192,076,208,197,255,000,255,202,202, 087
2100 DATA 202,202,189,000,008,096,000,000,000,000,000,000,000,000,000, 185

READY.
```


Don't miss out!

A subscription means you get the magazine delivered to your door. It saves you time and makes sure you don't lose out on what's happening in the Commodore world.

Send in the subscription coupon below and get the best Commodore magazine the easy way – through your letterbox. Don't miss out on the best, mail the coupon **now**.

(If you don't want to cut up the magazine, we're happy to have a photocopy of the coupon or a request on plain paper.)

Commodore – Subscription Order Form

To Subscriptions Manager, Commodore Computing International, 40 Bowling Green Lane, London EC1R 0NE. Tel: 01-278 0333 Telex: 267247 FINSEC

Please send me 12 issues of *Commodore Computing International*

☐ Cheque enclosed ☐ Please debit my Access

Card No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

☐ Subscription rate U.K. £15.00
☐ Europe £25
☐ Outside Europe £38

Expiry date: _____

Cheques should be made payable to: CROFTWARD LIMITED

Name _____

Address _____

_____

County _____ Post Code _____

Telephone (home) _____ (business) _____

Signed _____ Date (Subscription to commence) _____

Program

COMMANDER

BY R. MARK DENBY (13)

Commander is a utility to enable you to add extra commands to your 64's BASIC. This it does by allowing you to give a machine code routine a name by which you can access it from BASIC. One command has already been included (ERR). Type in and save Commander. To run type SYS 49152 and RETURN. Then enter the command ERR. If all is well the contents of the disk error cha-nnel should be displayed. So what do you need to do to add a command of your own to BASIC?

Load in a machine code routine suitable for use as a BASIC command. Commander uses memory locations C000 to C0FF and CE00 to CFFF. The area C100 to CDFF is available for your commands as is the remainder of free memory. An example of a suitable programme is DIR. A BASIC loader for which is also listed here. I will use DIR for the purpose of this example.

When loaded in DIR occupies memory C100 to C278. Its entry address is C260 (49760). At CE00 is the start of a table containing the names and entry points of all the commands added to BASIC. it looks like this:

CE00 01 45 52 52 00 00 00 00 .ERR....
CE08 00 00 AC C0 00 00 00 00 ....

Each command occupies 12 bytes. The first byte is always 01. The next 9 bytes comprise the command name ending with either 00 or FF. An 00 after a command means that the command is complete in itself and will not be followed by parameters. An FF is used where a command requires additional information. I.e. DRAW 1,10,10,100,100. The remaining 2 bytes contain the entry address. All that need be done to add DIR would therefore be to add it to the table.

CE00 01 54 52 52 00 00 00 00 .ERR....
CE08 00 00 AC C0 **01 44 49 52** .....DIR
CE10 **00 00 00 00 00 00 60 c2** ....

In order to keep track of how many commands have been added Commander uses a pointer. This points to the first free byte after the last entry in the table. and is stored at CFFD & CFFE.

CFF8 00 00 00 00 00 0C CE 00 ....

As each entry is 12 bytes long it follows that we need to add 12 (0C) to this pointer for each new command we add. In the case of DIR the new pointer value would become 18 CE.

To simplify the adding of commands and to eliminate having to remember what and where to add etc a BASIC programme programme has been included which will do all of the above bar loading the MC routine in. It is menu driven and can VIEW, ADD or CHANGE commands.

When choosing names for your new commands be sure not to include BASIC commands within them. IE MONITOR contains ON and BORDER includes OR. Alternatives could be MO or BDR etc.

```
 1 REM ************************************************************
 2 REM *                                                          *
 3 REM *                  COMMANDER BY R MARK DENBY               *
 4 REM *                                                          *
 5 REM ************************************************************
 10 L=49152
 20 FOR X=0 TO 16:T=0:FOR Y=0 TO 14
 30 READ A:IF A <0 OR A >255 THEN 60
 40 POKE L,A:L=L+1:T=T+A:NEXT
 50 READ A:T=T-(INT(T/256)*256)
 60 IF T<>A THEN PRINT"DATA ERROR IN LINE"1000+(X*10)"CHECKSUM <>"A:STOP
 70 PRINT1000+(X*10)"OK":NEXT
 80 POKE 53245,12:POKE 53246,206:C=598: FOR E=52736 TO 52747
 90 READ A:Z=Z+A:POKE E,A:NEXT:IF Z<>C THEN A=C:GOTO 60
1000 DATA 162,000,189,017,192,149,130,232,224,008,208,246,169,240,133, 251
1010 DATA 126,096,240,239,032,036,192,032,025,192,201,058,176,006,056, 171
1020 DATA 233,048,056,233,208,096,008,072,138,072,152,072,169,000,133, 154
1030 DATA 175,169,206,133,176,162,000,161,175,168,161,122,209,175,240, 128
1040 DATA 107,169,001,129,175,161,122,160,001,209,175,240,095,169,012, 133
1050 DATA 024,101,175,144,002,230,176,133,175,205,253,207,208,217,173, 119
1060 DATA 254,207,197,176,208,210,104,168,104,170,104,040,096,169,001, 160
1070 DATA 097,175,129,175,168,177,175,201,000,240,027,201,255,208,209, 133
1080 DATA 169,001,129,175,160,010,177,175,141,138,192,200,177,175,141, 112
1090 DATA 139,192,032,000,096,076,228,167,160,001,177,122,201,000,240, 039
1100 DATA 225,201,058,240,221,076,096,192,024,101,123,133,123,144,002, 167
1110 DATA 230,122,096,024,076,103,192,169,000,170,168,032,189,255,169, 203
1120 DATA 015,162,008,168,032,186,255,032,192,255,162,015,032,198,255, 175
1130 DATA 169,000,133,176,032,207,255,201,044,208,002,230,176,032,210, 027
1140 DATA 255,165,176,201,003,208,238,032,207,255,032,210,255,032,207, 172
1150 DATA 255,032,210,255,032,207,255,032,210,255,169,015,032,195,255, 105
1160 DATA 032,204,255,169,000,096,000,000,000,000,000,000,000,000,000, 244
1170 DATA 001,069,082,082,000,000,000,000,000,000,172,192
```

```
1 REM ****************************************
2 REM *                                      *
3 REM *   BASIC DRIVER PROGRAMME BY C.C.I.   *
4 REM *                                      *
5 REM ****************************************
10 S=53245:T=PEEK(S)+PEEK(S+1)*256:R$=CHR$(147)
20 FOR X=1 TO 12:P$=P$+CHR$(0):NEXT
30 PRINT R$:PRINT"            1) VIEW COMMANDS"
40 PRINT"            2) ADD COMMAND"
50 PRINT"            3) CHANGE COMMAND"
60 PRINT"            4) QUIT "
70 GET A$:IF A$< "1" OR A$> "4" THEN 70
80 A = VAL(A$): ON A GOTO 90,130,160,300
90 Z=52736:NU=1:PRINTR$
100 IF Z>=T THEN PRINT "FINISHED":GOTO 270
110 PRINT "COMMAND NUMBER"NU:GOSUB 190
120 Z=Z+12:NU=NU+1:GOTO 100
130 PRINTR$:GOSUB 250:Z=T:GOSUB 230:Z=Z+12
140 H=INT(Z/256):L=Z-(H*256)
150 POKES,L:POKES+1,H:Z=T:GOSUB 190:GOTO 270
160 PRINTR$:INPUT"ENTER COMMAND NUMBER";OL
170 Z=52736+((OL-1)*12):IF Z=> T THEN 160
180 GOSUB 190:GOSUB250:GOSUB 230:GOSUB 190:GOTO 270
190 PRINT:PRINT"COMMAND NAME IS: ";
200 FOR X=1 TO 9:PRINT CHR$(PEEK(Z+X));:NEXT:PRINT
210 C=PEEK(Z+10)+PEEK(Z+11)*256
220 PRINT "COMMANDS ADDRESS IS"C:PRINT:RETURN
230 POKE Z,1:FOR X = 1 TO 9:POKE Z+X,ASC(MID$(N$,X,1)):NEXT
240 H=INT(A/256):L=A-(H*256):POKE(Z+10),L:POKE(Z+11),H:RETURN
250 INPUT"ENTER COMMAND NAME";N$:N$=N$+P$
260 INPUT"ENTER ADDRESS";A:RETURN
270 PRINT:PRINT" PRESS ANY KEY TO CONTINUE"
280 GET K$:IF K$=""THEN 280
290 RUN
300 PRINTR$:END
```

```
1 REM ************************************************************
2 REM *                                                          *
3 REM *                  DIRECTORY BY R MARK DENBY               *
4 REM *                                                          *
5 REM *            TO RUN WITHOUT COMMANDER TYPE SYS 49760       *
6 REM *                                                          *
7 REM ************************************************************
10 L=49408
20 FOR X=0 TO 28:T=0:FOR Y=0 TO 14
30 READ A:IF A <0 OR A >255 THEN 60
40 POKE L,A:L=L+1:T=T+A:NEXT
50 READ A:T=T-(INT(T/256)*256)
60 IF T<>A THEN PRINT"DATA ERROR IN LINE"1000+(X*10)"CHECKSUM <>"A:STOP
70 PRINT1000+(X*10)"OK":NEXT
1000 DATA 142,194,003,140,195,003,248,024,101,179,133,179,144,015,024, 188
1010 DATA 169,001,101,178,133,178,144,006,169,001,101,177,133,177,173, 049
1020 DATA 194,003,240,014,024,101,178,133,178,144,007,169,001,024,101, 231
1030 DATA 177,133,177,173,195,003,240,005,024,101,177,133,177,216,096, 235
1040 DATA 169,000,170,149,177,232,224,003,208,249,096,142,192,003,140, 106
1050 DATA 193,003,032,060,193,169,000,170,168,169,001,133,004,185,192, 136
1060 DATA 003,133,175,165,004,036,175,240,031,134,175,132,176,189,121, 097
1070 DATA 194,168,232,189,121,194,141,196,003,232,189,121,194,174,196, 240
1080 DATA 003,032,000,193,165,004,166,175,164,176,232,232,232,010,201, 193
1090 DATA 000,208,204,200,192,002,208,197,096,133,004,041,015,133,176, 017
```

(CONTINUED)

```
1100 DATA 165,004,041,240,074,074,074,074,133,175,162,000,181,175,024,060
1110 DATA 105,048,201,048,240,014,160,000,140,192,003,032,210,255,232,088
1120 DATA 224,002,208,234,096,172,192,003,192,000,240,240,169,000,076,000
1130 DATA 176,193,160,001,140,192,003,165,178,166,179,141,193,003,142,240
1140 DATA 194,003,165,177,032,144,193,173,193,003,032,144,193,173,194,221
1150 DATA 003,032,144,193,172,192,003,192,001,208,005,169,048,032,210,068
1160 DATA 255,096,032,071,193,032,197,193,096,032,103,194,133,155,032,022
1170 DATA 103,194,168,166,155,096,169,001,160,193,162,095,032,189,255,090
1180 DATA 176,062,169,001,162,008,160,000,032,186,255,032,192,255,176,074
1190 DATA 048,162,001,032,198,255,032,249,193,032,249,193,176,035,192,255
1200 DATA 000,240,031,032,249,193,176,026,032,087,194,032,103,194,176,229
1210 DATA 018,201,000,240,006,032,210,255,076,055,194,169,013,032,210,175
1220 DATA 255,076,038,194,169,001,032,195,255,032,204,255,096,032,242,028
1230 DATA 193,169,032,032,210,255,096,169,000,024,032,005,194,096,032,003
1240 DATA 207,255,133,176,165,144,208,003,165,176,096,169,000,234,234,061
1250 DATA 234,096,000,000,001,000,000,002,000,000,004,000,000,008,000,089
1260 DATA 000,022,000,000,050,000,000,100,000,001,040,000,002,086,000,045
1270 DATA 005,018,000,016,036,000,032,072,000,064,150,000,129,146,001,157
1280 DATA 099,132,003,039,104,000,000,000,000,000,000,000,000,000,000,121
```

Grabber

by P. Armitage

Grabber is a simple game many people have probably played at sometime using matchsticks. The objective is to force the computer to take the last square. Instructions are included in the game.

The game can be frustrating as the computer is very good.

```
10 REM************************************
20 REM****          GRABBER           ****
30 REM************************************
40 POKE 53281,0:POKE 53280,2
50 CS$=CHR$(147):CR$=CHR$(29):CL$=CHR$(157):CD$=CHR$(17):CU$=CHR$(145)
60 RN$=CHR$(18):RF$=CHR$(146):DD$=CD$+CD$:DR$=CR$+CR$
70 FOR X=1 TO 7:LN$=LN$+CHR$(192):NEXT:FOR X=1 TO 5:TD$=TD$+DD$:NEXT
80 H=INT(RND(1)*4)+INT(RND(1)*4)+3
90 PRINT CS$;CHR$(158);CD$;CD$;CR$;CR$"GRABBER"
100 PRINT CHR$(159)DR$;LN$
110 PRINT DD$"  THE OBJECTIVE IS TO FORCE THE"
120 PRINT "  COMPUTER TO GRAB THE LAST SYMBOL.":PRINT
130 PRINT "  THE MAXIMUM NUMBER WHICH MAY BE"
140 PRINT "  GRABBED AT ONE GO IS "RN$;H:PRINT
```

```
150 PRINT RF$;DD$"  PRESS SPACE BAR TO START"
160 GET K$:IF K$<>" "THEN 160
170 REM***** NIMGRAB DISPLAY *****
180 PRINT CS$:NU=23:GOSUB 220
190 PRINT:PRINT
200 PRINT DD$;DR$"HOW MANY DO YOU WANT TO GRAB?"
210 GOTO 290
220 REM***** PRINT DISPLAY ***********
230 PRINT CS$;DR$;CD$"MAXIMUM IS ";H:PRINT CHR$(159);DR$;LN$;LN$;CHR$(5)
240 PRINT:FOR X=1 TO NU:PRINT DR$;CHR$(207)CHR$(208);
250 PRINT CD$;CL$;CL$;CHR$(204)CHR$(186)CU$;
260 IF X=8 OR X=16 THEN PRINT DD$;DD$
270 NEXT X
280 PRINT CHR$(158):RETURN
290 PRINT CD$;DR$
300 GET A$:A=VAL(A$)
310 IF A<1 OR A>H THEN GOTO 300
320 IF A>NU THEN 300
330 IF NU-A<1 THEN 300
340 NU=NU-A
350 IF NU=1 THEN 550
360 GOSUB 430
370 IF NU=1 THEN 550
380 PRINT CHR$(19);TD$;DD$;DD$;DD$
390 PRINT DD$"  OK  I'VE GRABBED";CM:PRINT
400 PRINT"  HOW MANY DO YOU WANT TO GRAB?"
410 FOR X=1 TO 1000:NEXTX
420 GOTO 290
430 REM***** COMPUTER TURN ***********
440 IF NU>H*3+4 THEN CM=H:GOTO 510
450 IF NU=H*3+4 THEN CM=INT(RND(0)*(H/2)+1):GOTO 510
460 IF NU>H*2+3 THEN CM=NU-(H*2+3):GOTO 510
470 IF NU=H*2+3 THEN CM=INT(RND(0)*H+1):GOTO 510
480 IF NU>H+2 THEN CM=NU-(H+2):GOTO 510
490 IF NU=H+2 THEN CM=INT(RND(0)*H+1):GOTO 510
500 IF NU<H+2 THEN CM=NU-1:GOTO 510
510 NU=NU-CM
520 IF NU=1 THEN 590
530 GOSUB 220
540 RETURN
550 GOSUB 220
560 FOR Z=1 TO 1500:NEXT Z
570 PRINT CS$;CHR$(5);RN$;TD$;DD$"      DAMN!! YOU WON"RF$;CHR$(159)
580 GOTO 630
590 GOSUB 220
600 PRINT CHR$(19)TD$;DD$;DD$;DD$"       I'VE TAKEN";CM
610 FOR Z=1 TO 1500:NEXT Z
620 PRINT CS$;CHR$(5);TD$;CD$"          "RN$"I WON"RF$;CHR$(159)
630 PRINT DD$;DD$;DD$"     DO YOU WISH TO PLAY AGAIN Y/N"
640 GET A$:IF A$=""THEN 640
650 IF A$="Y" THEN 80
660 IF A$="N" THEN END
670 IF A$<>"Y" THEN 640
```

CLASSIFIED

Reduced Priced Games: Jungle Trouble £6.00, Pakacuda £5.50, Frogrun £5.00, Kong £6.00, Centropods £4.00, Congo Bongo £5.50, Super Dog Fight £6.00. William Greenleaf, Pipers Cottage, Grove Heath, Ripley, Surrey.

C16/Plus 4 Tapes, Beachhead, TA1 Boxing, Harbour Attack, Mayhem, Crazy Golf — £2.50 each or £10 the lot. Tel: 0302 61606.

TEX exiting new 20 page Compu-Magazine for only £100 for the Plus 4. Send cheque P/O made payable to C. Wellbelove, 31 Coronation St., Swalincote, Burton-on-Trent, Staffs. £1.50 overseas.

32K VIC20 Recorder. Joystick. Assembler 43 games. 9 cartridges. Books, magazines, VGC. £75. Phone Stoke-on-Trent 638531.

Almost £70 worth of C16 games for sale including Ace Beach Head, Big Mac and World Cup. Everything for £30 or sell separately. Phone after 4pm and ask for Courtney (0256) 466974.

Upgraded CBM 3032 with 4040 dual disk drive and 4022 printer all perfect £250. Phone 01-640 1721.

Plus 4 Group producing a new computerised magazine for Plus 4. Also software available. Send S.A.E. for details to: G. Smith, 14 Beech Hill, Wellington, Somerset.

Freeze frame for sale £30 ono. Any offers welcome. Tel: Hoddesdon 469958 for details.

C64 Disk Drive col. monitor, tape recorder, freeze frame, cartridge. £220. Col. monitor R.G.B. £100. Tel: 01-736 6884.

Want a programme printed, but haven't got a printer. Send program for C16/C64 (Tape/Disc) + S.A.E. + £1 per program to C. Cooke, 49 Spring Field Drive, Thornton, Near Blackpool, Lancs FY5 4LL.

Wanted C64 Penpals. We want to swop all over the world. Answer 100%. Write to: Flemming Andreassen, Elmevej 2 harridslev, 8900 Randers, Denmark.

C64, C128, CP/M user want Pen Pals all over the world. Exchange information, programs, tips and ideas. Write to: Kare Pettersson, Halvmanen 23, S-245 00 Staffanstorp, Sweden. All letters answered.

1541 disc drive £100 or good offer. Have upgraded to 1551 with my Plus 4. Tel (0442) 42493.

Laser Basic Compiler user group. Having problems or like to share your tips Devon user group. Write 4, Tower Gardens, Crediton, Devon EX17 2BQ.

Norwegian CBM64 owner wants to swap programs and info with people all over the world! Tape only. Many new titles. Don't miss this chance, contact Kurt Lekanger, Jorud, N-1860 TRO6STAD, Norway.

CBM4040 dual disk drive with 1EEE cable, perfect condition, £325 ono Phone Bowmans Green 22491 evenings, Radlett 4090 business hours.

Wanted, C2N, final cartridge, light pen. MS2000 mouse, any peripherals or useful cartridge (not games), must be cheap, all letters reply. Write to: Zoe Downes, 24 Juniper Road, Leigh-on-Sea, Essex.

Commodore 128 compendium or sale. Includes 128 computer, tape recorder, 4 games, joystick and manuals. Only £250. Unwanted prize. Phone 0293 516483 any time.

CBM Plus 4. Boxed. Offers invited. Tel: 0524 733801.

Siel CMK 49 Musical Keyboard (4 octaves) for CBM64 and cassette or disk software £60. Tel: Newcastle 2664166 after 7pm. T. F. Fleck, 5 Cannock Drive High Heaton, Newcastle NE7 7QD.

Plus 4 outfit tape P/Plotter disk joystick games, all new with disks and many PET converted programs on disks £250 ono Wanted BBCB and C64. Withiey, 118 Heritage Park, St. Mellons, Cardiff.

C64, C128, CP/M user want penpals all over the world. Exchange information, programs, tips and ideas. Write to: Kare Pettersson, Halvmanen 23, S-245, 00 Staffanstorp, Sweden. All letters answered.

C128 for sale. Complete with many books, games and speech synthesiser Guaranteed until December 1990. Only £230. Also fast 1526 printer. Half new price £175. Please call Medway 812833

Commodore MPS801 Matrix Printer £100 — brand new, untouched, still boxed. Phone Derek on Formby (in Merseyside) (07048) 76529.

For sale CBN 64, 1541 Disk Drive 1525 Printer, joystick, easyscript, superbase, stepping stones, games. Brainstorm Disks manuals books. New £900 will sell for £500 ono. Tel. 0932 781906. (D.T. Richards, 2 Ilex close, Sunbury on Thames, Middx.

"ERE'S MY CLASSIFIED AD...

(Private Readers – Free-Max 32 words)
Trade Advertisements – 40p per word

I make it ____words at ____p per word, so I enclose £_____

Please continue on a separate sheet of paper for trade advertisements

Name _____

Address _____

Tel: _____

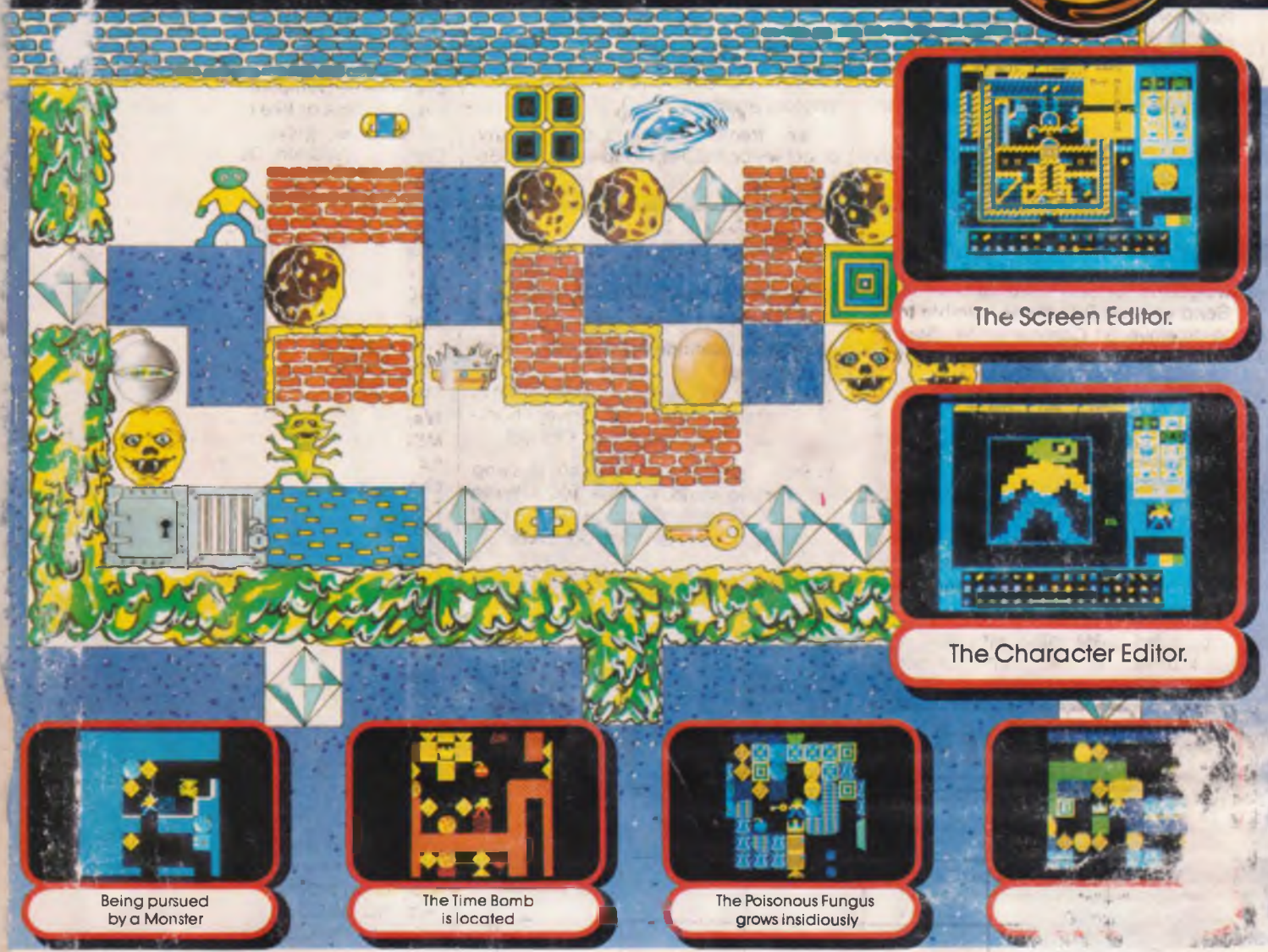
Send your classified entries to:

Classified Department,
Commodore Computing International Magazine,
40 Bowling Green Lane, London EC1R ONE
Tel: 01-278 0333 Ext.280

For the COMMODORE, AMSTRAD, BBC MICRO, ELECTRON

REPTON 3

THE ULTIMATE CHALLENGE



The Screen Editor.

The Character Editor.

Being pursued by a Monster

The Time Bomb is located

The Poisonous Fungus grows insidiously

Are you ready for the ultimate challenge?

Our original Repton game was immediately acclaimed as a refreshingly new concept: a game requiring dexterity to compl[illegible]ade-style elements, and clear logical thinking to solve its strategic puzzles. Repton involves retrieving treasure from cleverly-constructed [illegible]ps of falling rocks whilst avoiding the fearsome monsters and haunting spirits. "This is an astounding game reaching new heights in BBC arcade adventures enthused the Micro User magazine.

Last Christmas saw the release of Repton 2, larger and much more challenging than before. Acorn User's Technical Editor Bruce S[illegible] wrote: "Repton 2 is better than anything I've played on the BBC Micro or Electron. Brilliant!"

Now, completely rewritten and improved for the Commodore, Amstrad, BBC Micro and Electron, we proudly present Repton [illegible]. [illegible] a screen-designer is included: try to devise screens that will perplex your friends, then see if you can solve their newly-designed [illegible]. Another innovation is the character-designer which enables you to design your own monsters, rocks, eggs, spirits, diamonds . . . any or all [illegible]he game's characters can be redefined as you wish.

Repton 3 is much larger than its predecessors — it has 24 fascinating screens, and players who are skilful enough to complete [illegible] all can enter our prize competition described below. All the favourite Repton characters have been retained, together with several new features: a creeping poisonous fungus which grows at an alarming rate; time bombs and time capsules (for puzzles in the 4th dimension); and golden crowns as well-deserved rewards for your endeavours. **Can YOU complete Repton 3?**

PRIZE COMPETITION

If you complete Repton 3, you can enter our competition. Prizes include over £200 in cash, with T-shirts, mugs, badges and pens for runners-up.

COMMODORE 64/128 • AMSTRAD CPC 464/664/6128
BBC MICROS: B, B+, MASTER, MASTER COMPACT • ELECTRON

Commodore Cassette	£9.95	BBC Micro Cassette	£9.95
Commodore Disc	£11.95	BBC Micro Disc	£11.95
Amstrad Cassette	£9.95	Master Compact Disc	£14.95
Amstrad Disc	£14.95	Electron Cassette	£9.95

SUPERIOR SOFTWARE Limited

ACORNSOFT

Dept. R7, Regent House, Skinner Lane, Leeds LS7 1AX.

The screen pictures above show the BBC Micro version of Repton 3.

Telephone: 0532 459453.

24 HOUR TELEPHONE ANSWERING SERVICE FOR ORDERS

OUR GUARANTEE

- All mail orders are despatched within 24 hours by first-class post.
- Postage and packing is free
- Faulty cassettes and discs will be replaced immediately

- *8 digitally recorded drum sounds in each kit
- *2 kits supplied, additional kits available
- *Songs and patterns can be saved and reloaded
- *Keyboard or joystick operation
- *Polyphonic
- *Simple to use, no musical knowledge required
- *Up to 64 patterns and 16 songs in memory
- *Real-time or step-time recording
- *Powerful pattern editor
- *RHYTHM KING software is easy to learn, easy to use

AVAILABLE NOW !

£39.95

CBM 64/128 - disk or tape

SUPERSOFT

Winchester House Canning Road
Wealdstone Harrow HA3 7SJ
01 861 1166