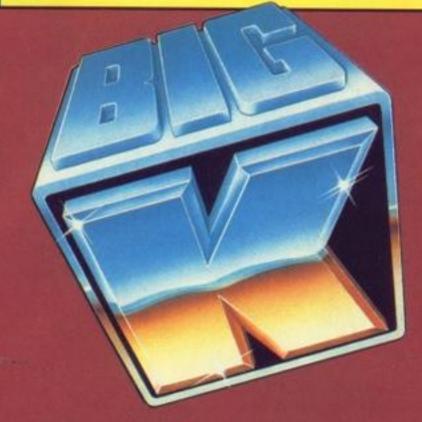


Three more challenges from ROMIK



Romik Limited, 272 Argyll Avenue, Slough SL1 4HE

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BAM AND POW - MEET ZAP

LOVE THEM or loathe them, comics have been part of British society for well over 100 years. At worst they are mildly entertaining, at best a creative art form that is acquiring an international reputation, bringing fame to the writers and artists of the medium. Much like the computer game biz — only things seem to be happening a lot faster there.

There is a more common link between the two worlds — imagination. Without it comics couldn't exist and computer games would still be at the level of Nolan Bushnell's 'Pong'. It was only a matter of time before the two media formed a more physical bond. That time has come and this issue BIG K take an exclusive look at the making of two games based on the 2000 AD character, Strontium Dog. Continuing the theme, Steve Keaton examines the latest manifestation of some American comics characters in the computer game world.

Meanwhile, our popular and oft-quoted review section continues its renovation and our ratings system completes its revamp. Now the important overall K-rating can be clearly seen on the top line of each review with the individual category ratings in their usual place below the review.

Our Charts page also undergoes a significant facelift reflecting the domination computer games now hold over the whole recreational software market.

As always we welcome your comments (and H. Polipp-Hughes of Grantham is welcome to collect his brick at any time) on BIG K or computer life in general.

RICHARD BURTON

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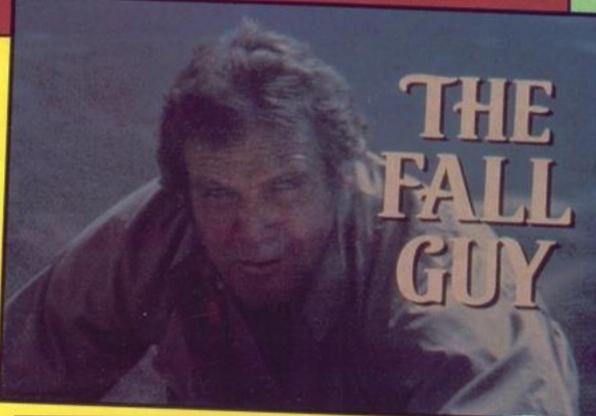
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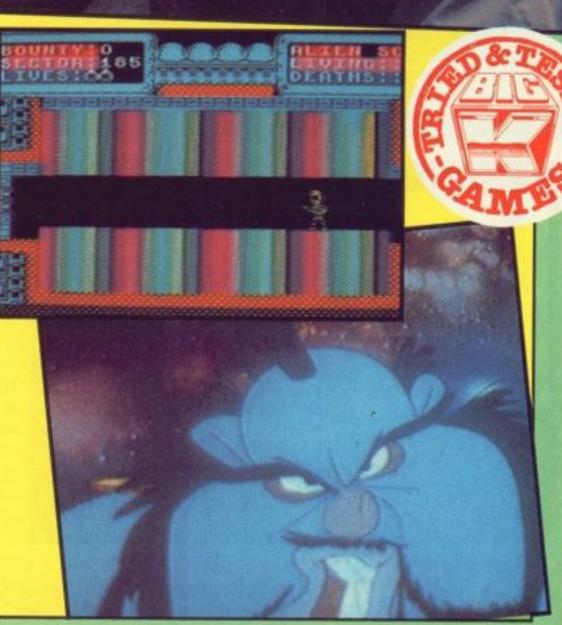
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Win An Enterprise Computer.....





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待ソフトーウェアー SAMURAI SOFTWARE

Castle of the Skull Lord

Packaged in a Special Presentation Box which includes a "Free Dust Cover" for your computer.

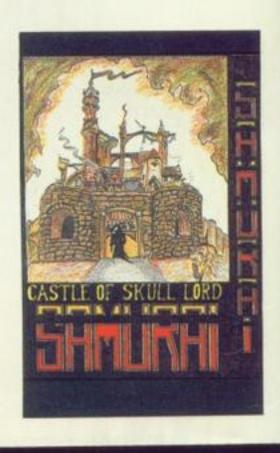
In a battle lost in the mists of time, the necromantic Skull Lord attacked and defeated a race of noble Dwarves. The Dwarves lost many treasures, the most valuable of these being the "Crown of Dwarves Kings". For many ages did they attempt to regain this artifact, and for many ages did they fail.

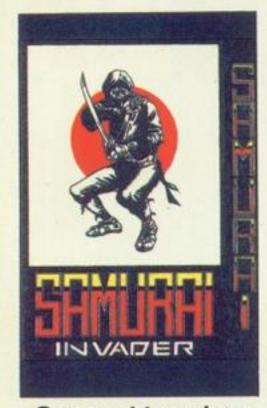
Now in desperation they call upon you, noble warrior, to attempt that which is beyond their power.

Your quest:- To regain the fabled crown and defeat the all powerful skull lord.

The adventure is of the classic format. Simple verbnoun combinations are expected, and will usually be understood.

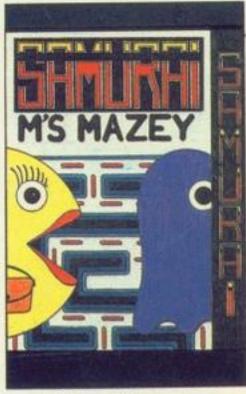






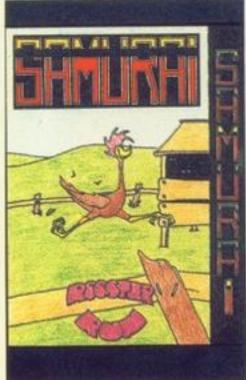
Samurai Invaders

You control a fearsome Samurai warrior whose aim is to prevent the Alien invaders from gaining control of the earth. To help you in this task, you are armed with shuriken, fearsome oriental throwing stars.



Ms. Mazey

Can you guide the intrepid Ms. Mazey around her garden maze and collect the daisies? Or will you fall victim to the evil skull riders? (In a garden?) Can you make it to the magical "flow-er pills". Will you get the "flower power" to zap the skulls? Will Ms. Mazey ever get to see the flower of her heart, Percy Chucka?



Rooster Run

Why DID the chicken cross th road? You don't know? Neith do we, but with the help of th game you may just find ou Your aim is to guide the hapless rooster across the road, then, get in the boat and avoid the aquamarine hazards. What could be simpler?!

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"Y'SEE, TERRY, it's like this.

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TER RUN

d only

RS TO

with

"There I was, having a quiet vodka slimline in the Winchester, with Dave giving me GBH of the ear'ole about me slate, when in walks this geezer - lovely suit said did I want to come in on a nice little earner?

"Well, you know me Terry, never miss a trick, so naturally I asked im what he was on about. It only turned out he was into this computer business. Now you know me, Terry, always one for high technology - remember them calculators? So the geezer says he's from . . . got the card 'ere somewhere . . . DKTronics strange name — and would I sign on the dotted on account of he and some other geezers 'ave made this video game based on, wait for it, you and me, Terry!

"So we did a deal there and then and the result is, you're in, my son, to the tune of ... er ... half a monkey. Well, twenty quid. No, don't thank me, Terry.

"Anyway, after 'e'd gone I got onto Cutglass Tomkinson, the one 'ose brother is doin' four years in Brixton for video piracy. 'E' ad this load of computers, so I bought the

lot. Cutglass reckons I can shift 'em for an easy two hundred a time. Jupiter Aces, they're called. What do you think of that?

"Now what I want you to do for me Terry is this . . . "

MINDER, from DK Tronics, by agreement with Thames TV, is on the CBM64, Spectrum, Amstrad and all MSX machines. It sells for six sovs less five pee.

ON-LINE Lefters

COMPUTER ART — **NICE WORK IF YOU** CAN GET IT . . .

... AND UNEMPLOYED graduate, Hugh Riley, certainly intends to do just that! He recently beat off all-comers in the Commodore International Computer Art Challenge to carry away as first prize ... a £1,500 goodie-bag of computer equipment, plus the BIG ONE . . .

To wit, a £5,000 educational endowment from Commodore to study computer art anywhere in the world (anywhere? How about, oh, Bali?). Inspiration for the screen scene that earned its creator his jump-jet dream ticket away from the dol'drums' of life in Crumpsall, Manchester was provided by 31-year old Hugh's baby son.

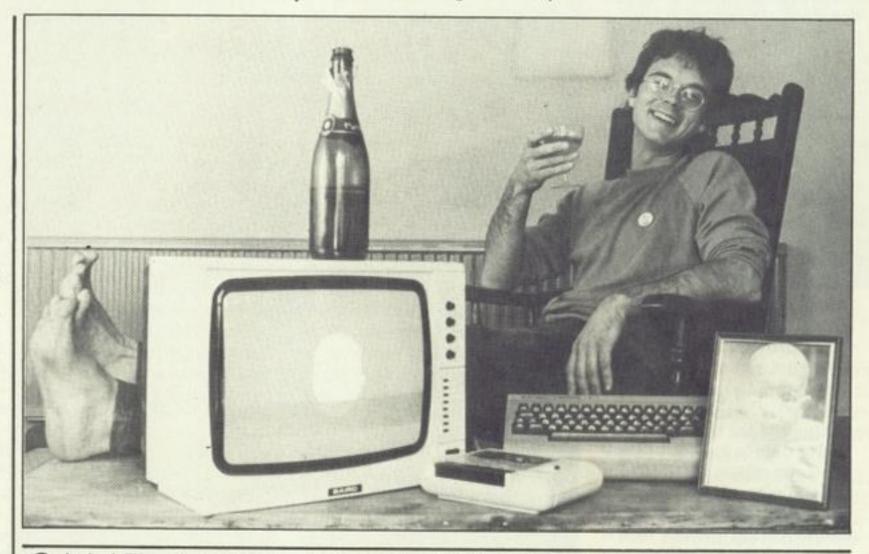
However, though his entry -

entitled cryptically enough Louis (Meditation Failure 126) And Obsessiveness - may have been triggered by kid Louis, this art belongs to daddy! (You're fired -Ed.)

With the academic world now his graphic oyster, Hugh is in no great hurry to make a final choice of temporary residence, but hot favourite for the honour is (con) currently Ohio State (University), USA.

Hugh comments: "The £5,000 endowment will enable me to learn from some of the world's most renowned experts and at the same time develop techniques which will stand me in good stead when I return to Britain."

He has now sent back his UB40.



IN SHOCK NUMBER CRUNCHING ORGY

This, we hasten to add, is Features are one hundred not exactly the income of separate screens, with a Jeff Minter, ace program- single mer, bearded supremo of facility for each screen. Llamasoft Ltd. No, it's Minter himself claims to actually his personal beast have solved only 89%. score on his own new pital.

being to mean that it's a very de- wildlife still unexploited.

The number? 3.5 million, tailed arcade adventure. key-press HELP

Next big question is, Commodore game, Anci- does it mean a break with the tradition of furry ungu-The game is billed as lents - camels, sheep, lla-'Progressive mas etc. Surely it can't all Arcade Game'. This seems end here, with the world's

AND SAVE THE WORLD

250 K OF PURE MYSTERY

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■ 5 complete Adventures, each with its own Arcade in one multi-load mega-program. "Eureka!" is the ultimate computer Epic

■ Epic in scale "Eurekal" spans five eras of history! You battle against the dinosaurs, outwit Nero and his gladiators, join the Knights of the Round Table. escape from Colditz and finally into 1984 defeat the evil master of the Caribbean who is holding the world

■ Epic in sheer size — there's more than 250K for you to get yourself killed in

Full-colour booklet, packed with cryptic clues to help you unravel the mystery and win the £25,000 reward

All 5 Adventures are linked — but you can choose to play them separately. And they all have REAL TIME built in. So if you don't think fast, you wind up as a pterodactyl's lunch, die of over-exertion in a Roman orgy, or just lose your mind...

"Eurekal" is not just an Epic — not just an Adventure. At the start of each historical era, you face an Arcade Action test, to decide your strength level for the Adventure to come.

The better your score, the stronger and faster you'll be.

And it'll keep you on your toes, with constantly-changing, static and moving graphics. Brilliant music and sound effects add to the excitement.

As part of the "Eureka!" pack, you receive a full-colour illustrated booklet, containing cryptic riddles and mysterious illustrations. Using booklet and screen together, you steadily unravel the clues and build up a secret phone number piece by piece.

■ If you're first to ring it, you save the world and collect the £25,000!

■ Quite a package! And to give everyone a fair chance, "Eureka!" will be released simultaneously worldwide on October 31st, 1984. No packs will be available until that date. All orders received by mail or phone by 26th OCTOBER will be despatched by post on the 31st right across the world. So order now, and be one of the first off the mark.







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(Turboload)

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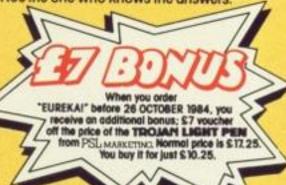
The race for the £25,000 starts on 31 Oct 1984 and closes on 31 Dec 1985.

THEN THE RACE IS ON!!!

DEVISED BY IAN LIVINGSTONE

The storylines for "Eureka!" are by Ian Livingstone. whose "Fighting Fantasy" books have sold over 2,000,000 copies. He's dreamed up some rather nasty tricks and twists for you in this Epic, because he has also devised the cryptic clues and conundrums in the booklet that goes with the program. He's the one who knows the answers.

"Eureka!" was programmed by Andromeda teams led by Hungarians Donat Kiss and András Császár. It took the equivalent of 5 YEARS to create, and the skills of 4 graphic artists, 2 musicians and a professor of logic too. We told them to stretch the hardware's capabilities, and make sure you were kept awake for hours!! They've done it...



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and the rebel ingredier	its to ma	ike your delic	vamiw suoic	Burgers
the best in town.		No.	DOM: NAME	William Control
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Take off, roll, loop-the-li				

complete accuracy or your flight will end in disaster — this will have

07480 Alligata It's workers against bosses because the Union suspects that Uncle Claude (the electronics magnate) is about to ley off the workers. They elect you, Micro Micky to foil this destardly plan.

ZXBI Cassette 50	Rec. Retall Price 9.95	You Cho at Half Price 4.97	ftem Code 07700	Software House Cascade
The title says it all be cassette. We don't ha arcade, missile, taction	ve space t	st them		

Football Manager 5.95 2.97 01470 otures the real life drama and excitement of the game... transfe ague tables, injuries, promotion and relegation, FA Cup, seven skill and a photo-finish feature! For 1-4 players

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		Price		House
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Can you survive it	deep space	against the	deadly pha	sers of Pi
Battlecruisers and	Robot Scout	Ships, south	ter bombs, a	nd the all

variable skill, care, sub and speed levels ... stuck? the comput suggest a move — just one of the many features of this superb pro-Fast and challenging — deposit sacks of gold in your bank while atte ng to kill all the monsters on the screen before time runs out.

corners of the maze and you'll become temporarily invincible. Nine is For eons Earth's Battle Fleet has held back the alien Zugs. As Capts

the Lone Raider you must breach their defences wreaking havocon

You have to put the balls in the pockets by lining up the cue and hittings cue ball with just the right strength — It's highly realistic and each ball a pocket combination scores differently.

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ire	Game description a	s for Electri	OFF.		
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de i	A great double bill .	Towers	of Death	and The Ice King	dom are a
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Project Volcano A top secret missile command centre has been discovered in an exvolcano on the Yugoslavian border, it's the heart of a network covers whole of the Soviet Block — your job is to neutralise it. S.A.S. 6.95 3.47 09350 Peak

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You've pollshed your skills on Blagger, now put them to the test with his
son — Slippery Sid's not after money — espionage is his game.

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Rescue Eumerelda from her castle stronghold. Featuring the Ramparts, Knights, Arrows, Fireballs, The Pit and of course those Bells! Loco 7.95 3.97 06180 Allegate brough terrifying hazards and under constant aerial bombardment, this

the nightmare train journey of all time — can you make it before you run 07080 Micro-User

we track events plus long jump, high jump, pole vault, javelin, discus and otty Pigeon 7.95 3.97 09210 Gremlin arcy the Potty Pigeon makes suicidal attempts to build his nest by

icking twigs from the path of onrushing traffic — he has one weapon

ocurate table layout, variable shot strength, spin on the ball in any firection, foul feature. It's like having your own full size table but guard tor you'll never get a chance to play yourself.

AAF

revious form

Rotall at Half Price Price Hilarious game for the whole family - Bongo the Super Mouse sets out to find the atolen diamonds so he can win the hand of the King's daughter in

5.00 2.50 07630 Novasoft Your Space Ship is low on Novalite fuel crystals forcing you to land on a planet whose inhabitants worship them. Brave the many dangers in the itti-level tomb before your ship is destroyed.

Mini Kong 5.95 2.97 01780 Anirog Kong has abducted a young maiden and trapped her in his lair — you have to climb the ladders to rescue her as the angry Kong rains down a stream of barrels to crush you.

Flight Path 747 As the pilot of this high performance jet liner you must take off from an airfield surrounded by high mountains and having climbed safely over them prepare yoursaif for a landing in the valleys below.

Game description as for Commodore 64

Game description as for Commodore 64. A&F 02190 Who'd think a farmyard could be so stressful? You must collect the eggs

before the nasties get out and eat all your corn. And if the crazy duck gets out of the cage, you're in real trouble! 737 Flight Simulator 7.95 3.97

Start approach well out, starting down from 3000ft at 10nm range, don't forget flap and gear, aim for a 3 degree slope down to the runway, follow up with power to control speed" ... just one of the manoeuvres in this superb flight simulation — a real test of skill. Guardian 7.95 3.97 05910 Alligata

Stop the Landers trying to capture Humanolds from your planet surface while tackling flying pods, swarmers, alien bombers, deadly baiters and a carnivorous overblown jellyfish.

Game description as for Commodore 64.

Guarantee

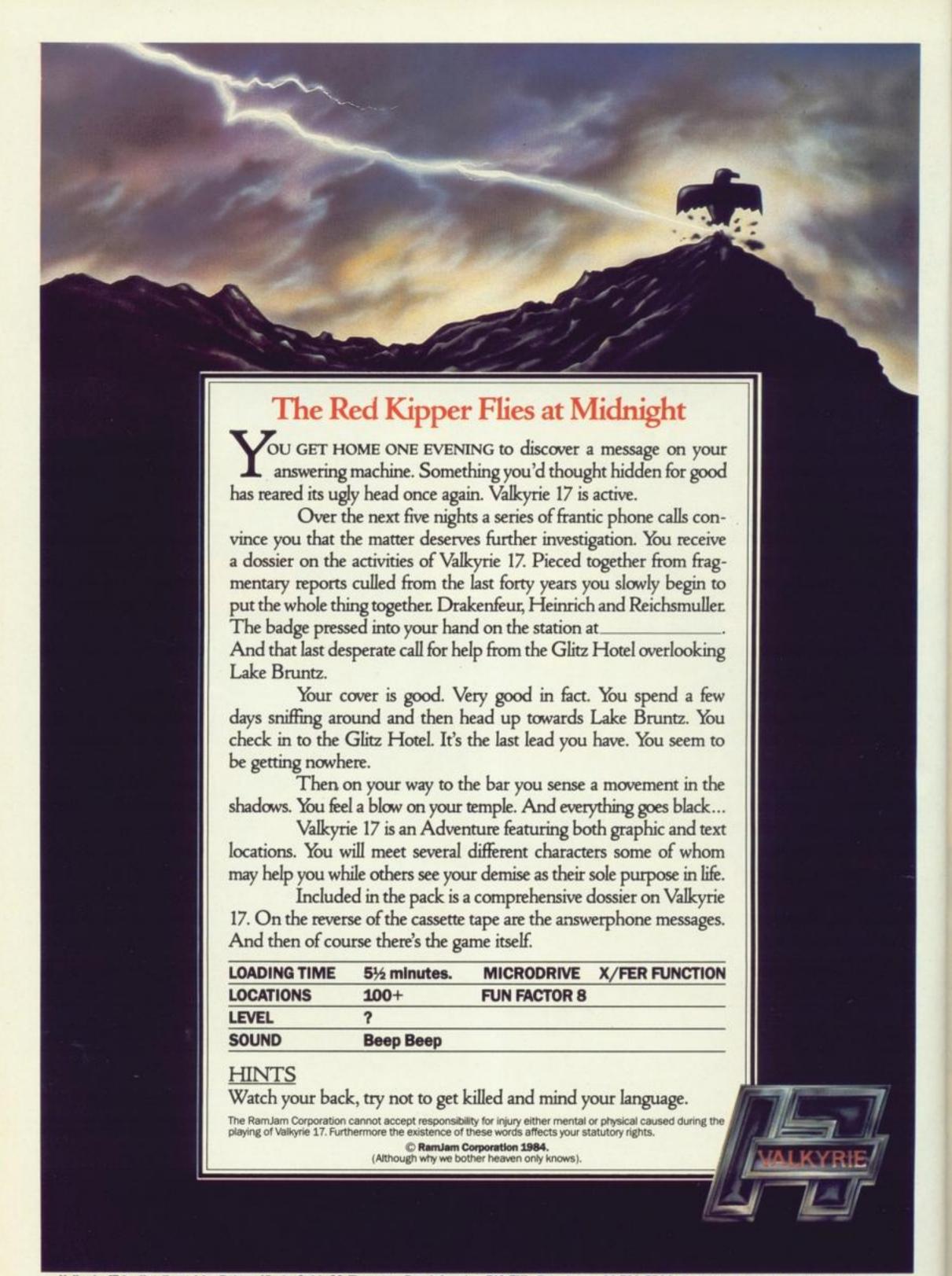
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My 3 colections are (item code)

Machine	Memory size
	Wellioly Size
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HEN Aviator burst

forth from the dar-

Acornsoft a few

months ago it shed a radiant

glow on a somewhat unin-

teresting software market and

created a stunned aura of

admiration of the kind you see around a man who kicks bulls

around the area that makes a

bull a bull. So when I burst into

the Big K offices the other day

screaming TT'S BETTER, IT'S

BETTER' I thought it might

provoke some kind of reaction.

It did. 'Don't be stupid', some-

one muttered and a large box of

last month's issues hit me

squarely between the eyes.

This was not the kind of recep-

tion I expected so I grabbed a

nearby head firmly by the ears,

dragged it over to the nearest

BBC and loaded the game. As I

started showing him how to play, the glazed, overworked

look gradually faded from his eyes turning to that of the har-

dened games freak who knows paradise when he sees it. He gave a hoarse scream, forced me out of the seat and took the controls. By this time a few of

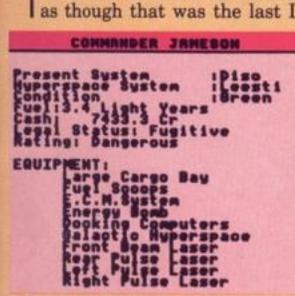
the others had started to show interest and were drifting slowly in our direction. Before long a full scale fight had de-

veloped for a crack at this most

wondrous of beasts. It looked

depths

ng the ast me. ugh. ulary can't D.R.



was going to see of Elite for some time.

And it really is that good. Vast and highly complicated, it's a sort of space arcade/action/adventure/strategy

game where you roam the galaxies earning a dangerous living trading between the planets, avoiding pirates and hostile aliens and behaving yourself — or not — when the local law come sniffing at your

As the game, or should I say epic, begins you find yourself safely docked in an orbiting docking station above the planet Disco. Inspecting your ship you find it to be a Cobra Mk III trading/combat craft, equipped with a front-firing pulse laser and a twenty-tonne cargo hold. You check the mar-

YOU BET YOUR ASTERDIDS

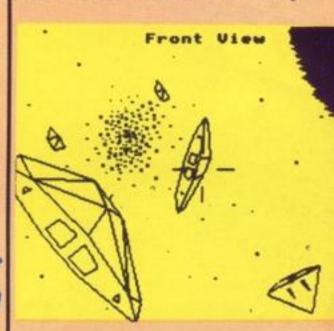
And lose, most probably, but boy! is it ever engrossing. Acornsoft's Elite has everything, swears a goggle-eyed KIM ALDIS.

hold with low priced food. There's no way of knowing for sure but there's a pretty good chance of selling it for a profit on Leesti. With a quick glance to make sure everything is OK you launch the Cobra and set hyperdrive co-ordinates for Leesti, a small, light industrial settlement a few light years away. Within minutes the hyp- a homing missile but the rest erdrive cuts in and before long your viewscreens show Leesti not far away. You open up to full power, life is hard enough scratching a living on the spaceways without losing half your cargo to pirates, and the I that you are within the defen- I where classic means Forever.

ket prices and decide to fill your | planet looms closer. Just as you're approaching the safety of local space a blip appears on the long range scanner, followed by another, then another until there are five. They close in fast and suddenly all hell breaks loose. You swerve to meet them, firing rapidly and manage to pick one off. Another soon goes down to are too much. Your only chance is to run for it. You swing round to face Leesti and after what seems like hours of endless dodging and weaving, your control panel indicates

sive screen of Leesti's space station. Your energy banks may be heavily drained but at least you've made it and maybe your cargo will fetch enough for that beam laser you've always been promising yourself. If that last episode was anything to go by you were going to

So goes a typical session at the controls of Elite. The action scenes take place in real time very real — line graphics, similar to those which made Aviator so popular, and believe me it's hectic. Pirates are only one of many hazards facing you in this universe. If you think you can make a fast buck by



running contraband, slaves or narcotics, then watch out for the local law. They take none too kindly to lippy traders trying to make fools of them and they show it. Once they're on your tail you'll never shut them off. On top of this there are the Thargoids, virtually indestructible, invariably nasty.

It really is unlikely that you've ever seen a game of this kind of scope, probably as close to a genuine simulation as there is ever likely to be. A few days ago if anyone had asked me if anything like this was possible he probably would have received a sharp clout to the base of the neck for asking inane questions, but now? Who knows, anything is possible. Whatever happens, this is a classic — in the genuine sense

Reviewer Impressed By Unexpected **Humility of Software Genius**

FEW phone calls put Big | K in touch with David Baden, co-author of Elite. David and his partner, Ian Bell, had spent the past year coding before the epic was ready and were now sitting back, basking in the warm glow of praise being showered on the game.

David Baden, it turns out, is a social sciences student and Ian Bell studies maths, so Elite was

written largely in spare time. | 'It's just a hobby really', we were told. Some hobby. And what made him write it? 'It started off as a combat game'.

Neither of them have got any further than a 'competent' status, which still leaves 'dangerous' and 'deadly' to go before they reach 'Elite', the ultimate accolade. If the creators can only get that for what chance I

do us ordinary mortals stand? 'There's a rumour floating around that someone's reached 'deadly' but I'm not sure who'.

Baden was very careful to point out that Elite has nothing to do with Aviator, in spite of the obvious visual similarities which is understandable considering the amount of work they've put into it. Let's hope the keep it up.







Learn is threatened by an Empire Deathstar, can you penetrate its detailes and destroy it be ore it destroys you?

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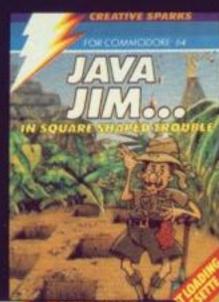
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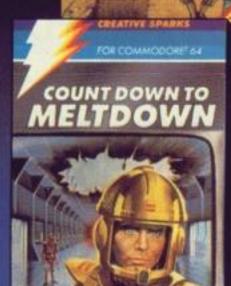
Guide Java Jim around the screen digging near square holes as he searches for ancient relics. You will have to avoid the lumps of sizziling lava being continually showered down on Jim from the still active volcano in this highly priginal fun game. 4 full graphic all action screens. 20 levels of play. High score feature.



COUNTDOWN TO MELTDOWN

Fast loading cassette.

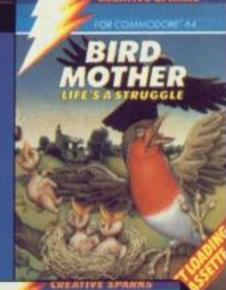
An amazing graphic action adventure game which puts you in charge of a team of androids trying to reach the core of a nuclear reactor before it explodes. This game has over 2000 rooms to be negotiated and every single one of them is in 3D!! Probably the most exciting game yet developed for the C-64. Fast loading cassette.



BIRD MOTHER

This is a delightfully original game which uses nature as the setting for a highly compelling and challenging game. Guide the Bird Mother as she builds her nest and raises her young, finally protecting them from a predator hawk.

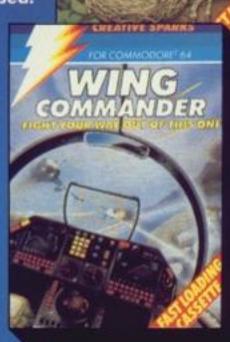
Fast loading cassette. The stunning graphics and music in Bird Mother are not to be missed.



WING COMMANDER

This is a highly sophisticated flight combat simulator which puts you in the pilots seat. Highly advanced machine code programming has ensured you feel every stomach lurching dive and roll.

With 17 separate controls to be monitored and several ground targets to be defended from the attacking enemy bombers. This game will stretch your skills to their limits. Fast loading cassette.



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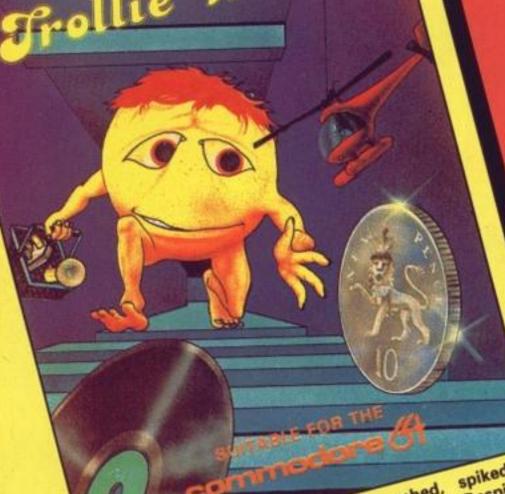
he needs no allies, his strength and agility will prove him worthy of the name 'Storm Warrior'

Storm Warrior is a 12 screen, all machine code, fast moving graphics adventure using 58K of RAM. It features 5 levels of play, full playing demo mode and a fast loading system.

Available on TAPE at £7.95 and DISK at £9.95 COMMODORE 64



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KKK

TROLLIE WALLIE The heroic saga of Wallie continues. In this third game featur-CBM64 ing the small unlovable blob, Wallie must set round a supermarket picking up the shopping that he has been sent for. The supermarket in this game does not have the usual shelves of dogfood and Domestos: disappearing floors, slides and moving beams are all present to trap unwary Wallies. The other shoppers are as weird a bunch as in any Tesco's on a Saturday morning. Anyone who has played Son of Blagger by Alligata, will find the scenario familiar. For those at this point saying 'Son of Who?', the object is to make your way around the screen, which scrolls screen, which scrons, getting across the disappearing floors without falling through, avoiding the nasties and not

setting squashed, spiked or otherwise mutilated. Despite its somewhat derivative nature Trollie Wallie is an enjoyable and addictive game with graphics of the standard we have come to expect from inter-

The background tunes are mostly by Jean Michel Jarre, the person given credit on the cover for the music has merely rearranged them for the '64. There is the usual Interceptor humour in the game; on parts of walls scroll messages containing snippets of totally meaningless disinformation about the authors. The game requires a joys. tick, but then what self-respecting 64 gamer hasn't got one? — D.G.

From: INTERCEPTOR

Format: cassetteldisc Price: £7.00 cassettel £9.00 SOFTWARE

Graphics: KKK Playability: KKK lictiveness: KKK

LES FLICS Spectrum 48K

Dressed up as an "arcade adventure" in the style of the Pink Panther ("'Allo, ahm Un-specteur Cleuseau") films, but actually just living proof that a whole can be less than the

With joystick or cursor keys, sum of its parts. you buzz a car a round a maze and enter different buildings. Within each, you avoid les vieux bill and ascend a structure while collecting various objets. Thus it is to varying degrees derivative of Manic Miner, Donkey Kong, Atic Atac and one of those ancient arcade car-in-a-maze things, without coming within a mile

Tres ennuyant, mes enfants. of any of them. _D.R.

From: PSS Format: cassette Price: \$6.95 Graphics: Primitif Playability: gauche Addictiveness: rien

From: VOYAGER

Price: &

Format: cassette

Graphics: KK Playability: KK

Addictiveness: K

50

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11

GRAB-IT CBM64

Grab-lt ... Ouch! Someone around here took that literally Ouch! Someone Someone around here is going to have their teeth extracted

What we have is a nice little with a pickaxe. game based around a nice simple idea. At the top of the screen is a small spaceship from which comes a grabber — geddit — controlled by a sharp-witted and highly skilled person who places himself at the keyboard. At the bottom are a selection of objects that have to be transferred to the spaceship by means of the grabber. In the meantime various flying objects bounce around the screen which cause the grabber to disappear in a puff of smoke should the sharpwitted and highly alert person at the keyboard fail to avoid

On the first screen you only have to avoid a solitary balloon but as you move up through the screen this is joined by kites and seagulls until no less than six of the beasts are bouncing around the screen like hyperactive ten-

It's like a sort of reverse tennis where you have to avoid the nis balls. bouncing bits instead of hitting them. Quite simple but fun nonetheless. - K.A.

Though the box art is extremely misleading—it doesn't look anything like that good!—this is nonetheless a very adequate implementation. Though the box art is extremely misleading—it doesn't look anything like that good!—this is nonetheless a very adequate implementation of the classic arcade game. You get the first space fortress. like that good! — this is nonetheless a very adequate implement space, of the classic arcade game. You get the first space fortress, out from the second fortress and the 7 arxon Robot encounter. of the classic arcade game. You get the first space fortress, outer space, the second fortress and the Zaxxon Robot encounter, send the Jaxxon Robot encounter, band and would and would be specified and the Jaxxon Robot encounter. ZAXXON/Atari (16/32K) the second fortress and the Zaxxon Robot encounter, seen from the usual 45° angle. Get through and you go back for another, are that the differences between the 16K and 32K versions are Sual 45° angle. Get through and you go back for another, harder pass.

The differences between the 16K and 32K versions are that first the first has no pause facility doesn't have base missiles in the first part of the first than the first part of the facility doesn't have base missiles in the first part of the facility doesn't have base missiles in the first part of the facility doesn't have been th The differences between the 16K and 32K versions are that first former has no pause facility, doesn't have base missiles in the destroy that fortress or altitude control in outer space, and you have to former has no pause facility, doesn't nave base missiles in the first fortress or altitude control in outer space, and you hade lot else to say a whole lot else to say a whole itself rather than its missile. Not a whole lot else to say a whole itself rather than its missile. tortress or altitude control in outer space, and you have to destroy the Zaxxon Robot itself, rather than its missile. Not a whole lot from 7 axxon results I means you must know more or less what to expect from 7 axxon. Zaxxon Robot itself, rather than its missile. Not a whole lot else to say, really. I mean you must know more or less what to expect from Zaxxon by now surely?

Aga

by now, surely? _ J.C. From: SEGA (US GOLD) Format: cassette/disc Price: 14.96



Oh Harry. This time he's gone too far.

Somewhere, buried deep in the lost caverns of Machu Pichu, Peru, lies the stolen and, of course, priceless Raj Diamond, along with a hoard of missing gold bars.

Harry's little niece Rhonda and Quickclaw, her cowardly cat, are supposed to be with him, but they strayed away and are lost in the bowels of the caves.

A wealthy university has asked him, while he's cleaning this mess up, to capture an elusive stoneage cave rat.

What fun.

He just has to avoid the occasional poisonous frog.

Oh yes. And the wickedly clawed condors.

The electric eels. And a very nasty line in thirsty vampire bats.

So you can see Harry could do with some help.
All you'll have to help you are your wits and some gas-filled balloons to bridge the wider chasms.
And you'll be in for the game of your life.

One thing puts Activision Software out on its own. The way you go on running it month after month. And Pitfall II is no exception.



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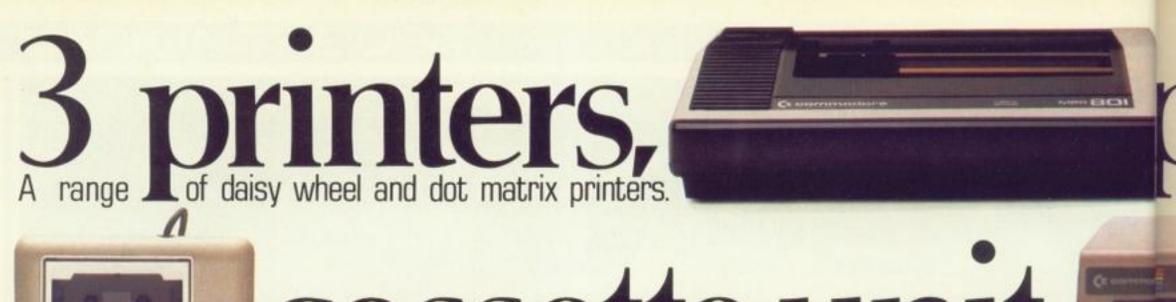
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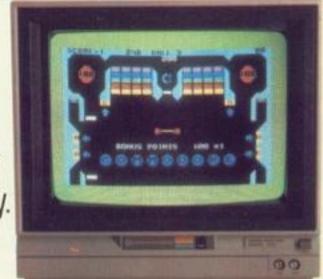




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About the only thing the Commodore 64 doesn't has a

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Stck package State State

tertain hallenging, and exciting.



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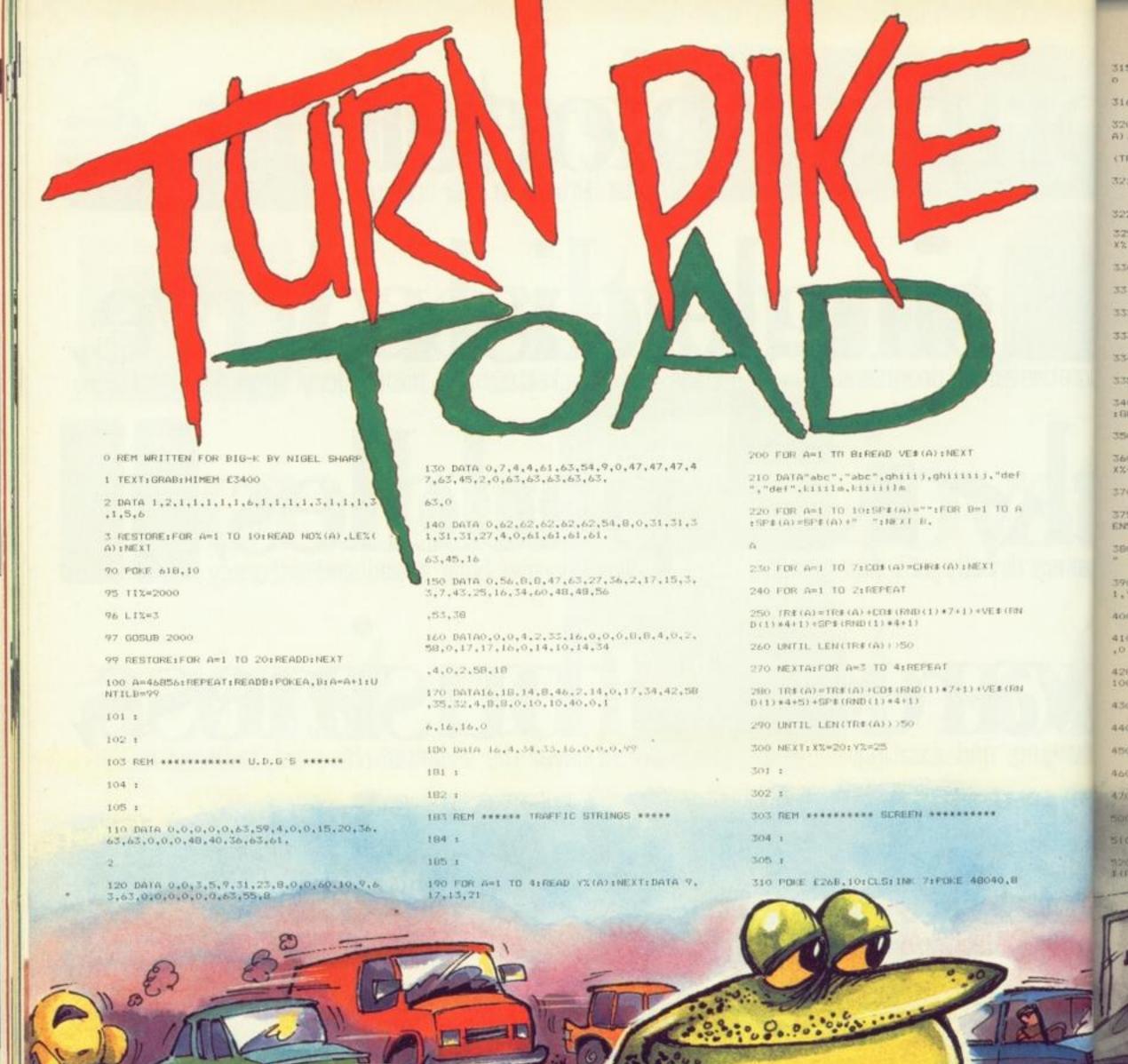


t has any serious competition.

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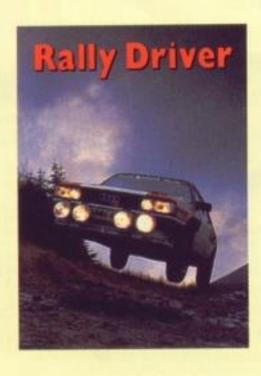


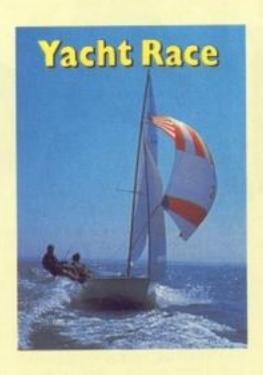


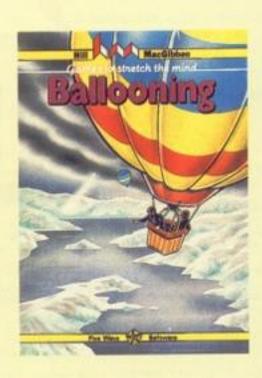
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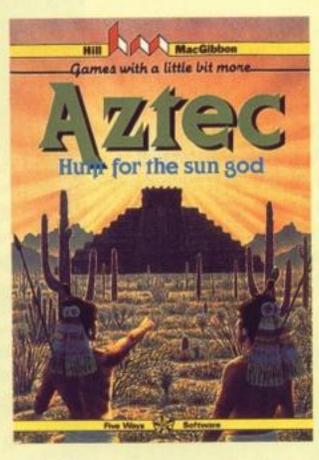
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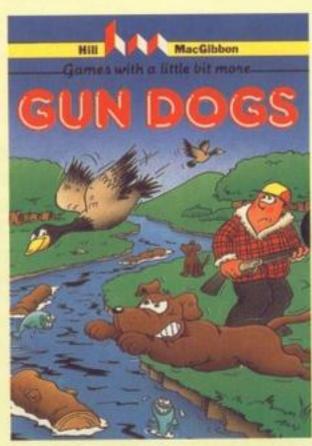


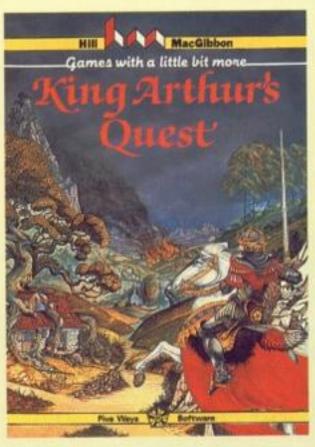


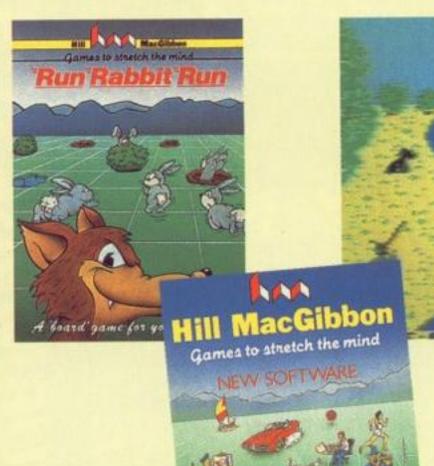










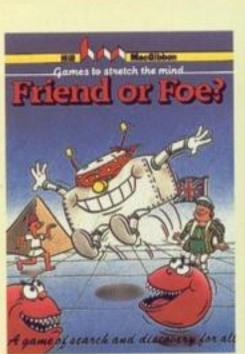




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THE BOUNTY HUNT

In the future of this galaxy few jobs are considered more dirty or despicable than bounty hunting. The dregs of criminal society, however, have to be caught and the task has fallen to the Strontium Dogs, mutant outcasts from 'normal' society. Johnny Alpha is the best there is. STEVE MacMANUS examines the background of this remarkable man.

Time was when a criminal could commit various acts of evil and hide forever in an expanding galaxy. That was before the coming of the Strontium Dogs - bounty hunters of the 22nd Century.

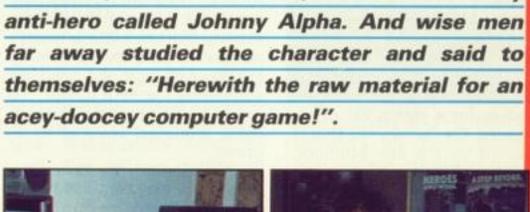
Strontium Dogs have to be good because, in their job, only the best survive. Every fugitive from justice fears their shadow, none more so than the one cast by the man they call Johnny Alpha. To most he is a coldhearted killer, a freak with a reputation of always bringing back his bounty, dead or alive. In truth he is just a man doing his job, one forced on him by cruel fate and the mutating effects of Strontium 90.

The Johnny Alpha story begins in 2150 A.D., just after the Great War on Earth. Strontium 90, a radioactive isotope present in nuclear fallout had 'warped' or mutated large sections of the populace. Inwardly they were the same as other people but their physical mutations attracted widespread loathing and disgust. They quickly became targets for hatred and prejudice.

One Nelson Bunker Kreelman fuelled the gathering antimutant feeling by passing a series of laws designed to degrade and harass the fallout victims. But Strontium 90 knew no politics and Kreelman's bigotry secretly rebounded on him when he discovered that his own son was a mutant.

The boy's name was Johnny. In appearance he looked completely normal — except for his eyes. They could emit Alpha Rays enabling him to see

IN THE BEGINNING there was a cult comic, 2000 AD, and its creation, a mean 'n moody acey-doocey computer game!".





through solid objects and, it was said, lay bare a man's soul.

When Johnny's mutation was discovered his father had him imprisoned, but at the age of twelve Johnny escaped and joined the newly created Mutant Army, established to fight for mutants' rights across Britain.

By now, Kreelman had banned mutants from all forms of employment and any areas inhabited by the normals. In retaliation, the Mutant Army stormed the British Parliament. Although they achieved initial success Kreelman's forces soon overcame them and Johnny, along with his fellow mutant leaders, was sentenced to death.

However, escape soon followed and Kreelman was forced to resign under threat of disclosure that one of the mutant generals was his own son.

A swift settlement of the war followed and, in return for amnesty, the generals agreed to leave Earth for good. Many of their loyal troops chose to follow them into exile; some to settle on other planets, others to lose themselves in the endlessness of space.

A few of the toughest joined a new agency set up by the Galactic Crime Commission. The job was one the norms would not touch - working as Search/ Destroy agents hunting the scum of the galaxy. Soon people had a new name for the mutant agents - Strontium Dogs. To have one on your trail means certain capture, even death if he is holding a termination warrant.

Johnny Alpha was one of the first to join the agency but prefers to spend most of his time in the field, trusting only his awesome array of weapons, his norm partner Wulf and their travelling companion, highly-strung Gronk.

Johnny Alpha and his companions have undertaken many weird assignments, like a journey into Hell itself. But, for a man whose life has been spent fighting the twin evils of hatred and ignorance, a duel with Old Nick was probably ... just routine.

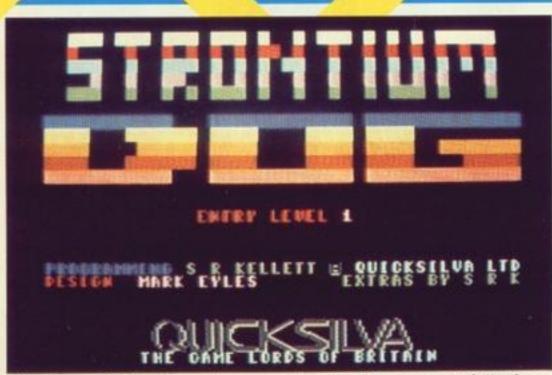
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ON THE TRAIL OF THE BOUNTY HUNTER



The story of Strontium Dog—
the computer game — begins in
that remote corner of the galaxy
known to all as Southampton.
To be truly accurate it begins in a
remote corner of Southampton
known to some as the offices of
Quicksilva, the self-styled Game
Lords. Here, in a remote corner
of the offices, Creative Design
Executive Mark Eyles (and a few
others, who wish to remain
nameless) sat reading their
weekly intake of thrill-power,
2000 AD.

For some time Mark had considered the many fantastic characters that appear in 2000 AD as prime material to base a computer game round, it was just a matter of choosing the best. First choice was Judge Dredd, the comic's top character and favourite with the readers (or Earthlets) almost since the very issue. Unfortunately, powerful money moguls in a land far away, which we'll call America, had already got most of the Judge Dredd merchandising tied up. Second choice was Strontium Dog, coincidentally the second most popular character with readers and one of the longest surviving 2000 AD

With the decision to go with Strontium Dog agreed on by all at Quicksilva, Mark then contacted the editorial staff of 2000 AD with some rough ideas to gauge their reaction. This proved positive and, with the official go-ahead given by 2000 AD's publishers, IPC Magazines, Mark began work on a basic concept for the game. "We wanted something that would suit the character and be fun to play," he told BIG K's roving reporter. Eventually a working concept for Strontium Dog and the Death Gauntlet was ready.

THE GAME

Strontium Dog Johnny Alpha is

heading for a planet full of renegades. On the way his ship is attacked by the Stix Brothers; Strontium Dogs themselves, but devoid of morals or scruples. Alpha's ship is shot down but he escapes in an escape pod and crash lands on the planet's surface. His partner Wulf and their companion the Gronk are waiting for him in the city on the other side of the planet which means Johnny must cross the hostile landscape, running the gauntlet of the hoards of hostile renegades all out to get him because he is a Search/Destroy agent . . . a Strontium Dog. The game covers this deadly journey through areas of desert, mountains and eventually the city.

ENTER THE MAESTRO

Steve Kellett is 17 years old, a university undergraduate, and knows all there is to know about programming Commodore micros. He would be a candidate for the archetypal 'whiz-kid' tag if not for a few points: He is incredibly self-confident, hyper-critical of fellow programmers' efforts and well into heavy metal music.

In fact, Steve could be looked on as the product of a whole new 'generation' of young programmers — those who have come into the field heavily influenced by the 'pioneers' of the genre. Steve's hero is Jeff Minter, who he credits for his ability to produce top quality sound into his games.

"If it hadn't been for Jeff I wouldn't have been able to program good sound," Steve told BIG K. "I asked him at a computer show how to do good sound and he told me to use variables and showed me the techniques he'd used on Grid Runner. I went home and churned out about ten new sound effects of my own. These were the ones I took to the Commodore User Show earlier this

year to show Paul Cooper of Quicksilva, who was very impressed and told me to keep in touch."

Those sound effects plus some sample work Steve had done for Ocean and another game completed in just two weeks was sufficient proof to Quicksilva he could handle games programming for them and, ultimately, got him the Strontium Dog assignment.

DIGITISING THE DOG

Work actually started on Strontium Dog and the Death Gauntlet at the beginning of August. Steve needed about a week to really get into the idea of the game. About a day was spent thinking about the scrolling routine. "I started on the scrolling about 3.00 pm one Friday, phoned Mark at 5.00 pm to say I couldn't do it, then had it working by 7.00 pm! If I can't do something I write it down." To prove his point reams of paper were produced covered in figures.

Animation of the Strontium Dog figure was especially complex. Twelve animation steps were used for walking, another twelve for running, seven for when he falls down, five when he gets up and a further eight while he's on the ground struggling. "A total of 88 sprites just for Alpha," Steve pointed.

"There's 50K of game, 42K in reality. That may seem inefficient to some people but I use a lot of memory on graphics, title pages, etc."

By the end of August the game was up and running and just needed the finishing touches added, including the sound — Steve's speciality.

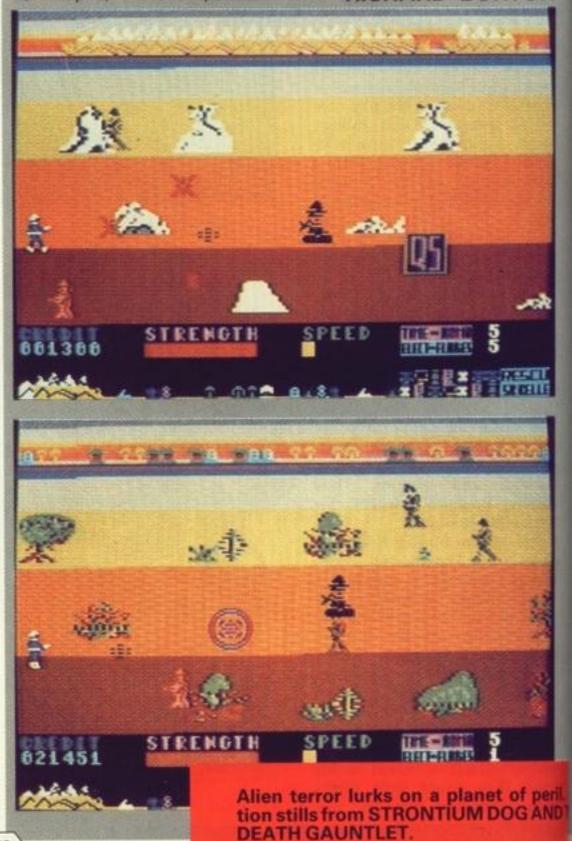
Next to sound, playability comes high on Steve Kellett's priority list. "I regard myself as a very good games player. I get good very quickly on games I really like. Minter's Sheep in Space, for example. I played that for two weeks and could get over a million. Any of Jeff's games I find easy. However, Quicksilva's Boogaboo (The Flea) I cannot beat, but it's good. I like 'cute' games."

A.D. — AFTER THE DOG

His work on the Strontium Dog over Steve returns to college where he'll continue to "... slap ideas down on paper" until he gets home at Christmas and back to his computer (he doesn't have access to one at college).

Steve has definite plans to stay with a career in programming when he graduates and has lots of ideas of his own. "But nobody wants zap 'em up games," he complains. "I love them and think there's still lots to be done with them.

RICHARD BURTON



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STRONTIUM DOG — THE KILLING

Meanwhile, in the place called Preston, strange but similar ideas were floating through the mind of John Williams, managing director of Channel 8 Software.

Like Mark Eyles, John is an avid fan of 2000 AD. He too could see the potential in some of the characters for computer games. But it wasn't until an idea for a new space game came his way that things began to move. "The game was good," John told BIG K, "but it lacked a theme and a direction." He didn't have to go far to find both. Strontium Dog was considered to be ideal but John also took it a stage further. Instead of basing an original game round the character of Strontium Dog, like Quicksilva, John decided to use the theme and elements of an actual episode of Strontium Dog that had appeared in 2000 AD.

The unenviable job of transferring an existing story onto the computer screen was given to Paul Hargreaves, who lives in Leyland, near Preston. At 15, Paul is already a programmer of some experience with his first game, Borzak, already out from Channel 8 Software.

Work began on the game in April and continued through till August. Paul worked on evenings during term time (after homework, of course!) and weekends. During school holidays he was able to work in Channel 8's offices.

THE GAME

On a planet in the very centre of the Milky Way the cruel Despots of Zed perpetuate an age-old ritual known simply as The Killing. Each year participants from all over the galaxy gather to take part. The objects is simple: to kill every other participant. The sole survivor is in line for vast riches. The ritual takes place in a city which is cleared to become a vast killing ground.

Participants in The Killing

are nearly all murderers and criminals with bounties on their heads — which naturally attracts bounty hunter Johnny Alpha. His reason for taking part is to catch — dead or alive — as many of the criminals as possible and collect the bounty on each. His weapons: his trusty blaster and electro-flares.

Paul's visualisation is accurate and superbly detailed. It incorporates many scenes from the actual 2000 AD story plus some very flashy screen routines.

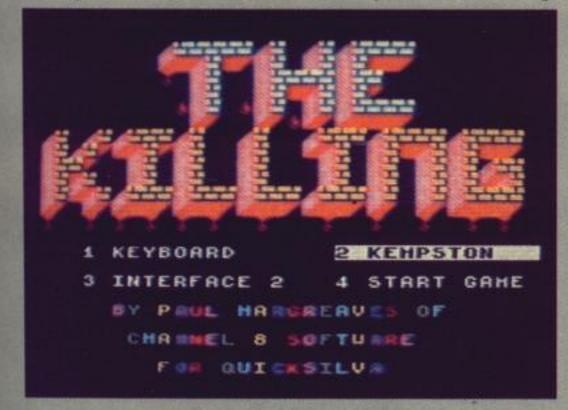
By late August the game was finished and both John and Paul travelled down to London to show the game to IPC Magazines, the copyright owners and — it should be said — also the publishers of a certain computer magazine that you are reading at this moment!

BIG K's expertise (ahem) was called in for evaluating the quality of the game and the magazine's computer room was quickly pressed into service for a 'screening'

of Channel 8's production. It was soon evident, from the graphics alone, that the company was onto a winner. Some of Tharg's droids were summoned from the nearby Command Module to add their enthusiastic approval of the game. BIG K was able to assure IPC Magazines that their character was in good hands.

But how to market the new game? Quicksilva had just pipped Channel 8 to the post in acquiring the licence to Strontium Dog and already had their own game well into development. At BIG K'S urging, John quickly got in touch with Quicksilva to see if some compromise could be reached.

About a week later the two companies met. It was clear to both sides that they each had a good product and that they should co-operate. Quicksilva agreed to take on the marketing of both games, with full credit being given to Channel 8 and Paul Hargreaves on Strontium









Johnny Alpha blasts his way through a deadly lazer schoot-up. Actual screen scenes from THE KILLING.



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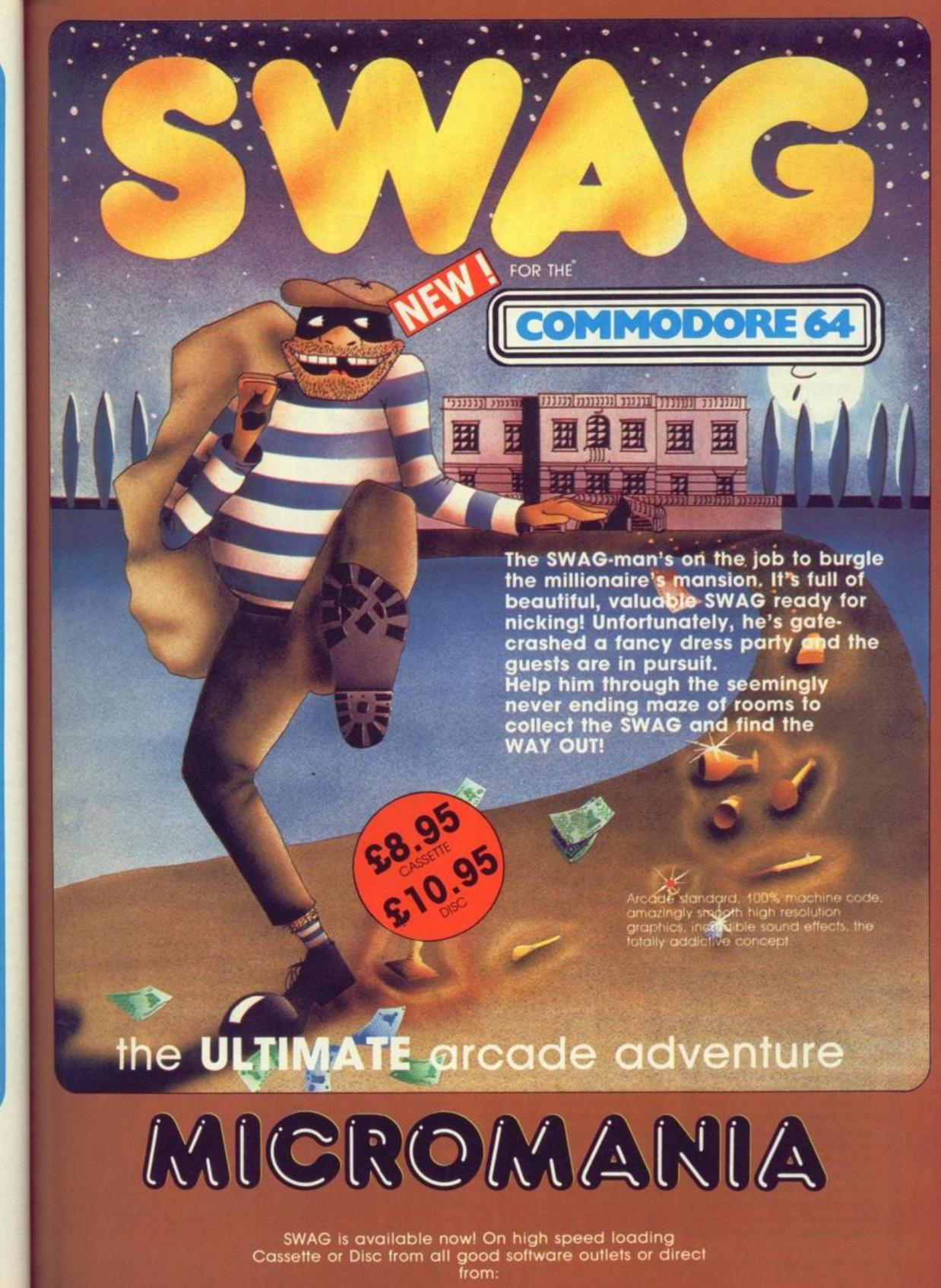
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CLASSIC GAMES OF OUR TIME

the game that brought people into the arcades in droves. STEVE KEATON charts the rise and rise of a humble vellow blob that brought a whole new experience to eating.

HIS NAME is legend, his curse incomparable. He's the littel yellow guy with the big mouth who opened the games closet and made joysticks respectable in mixed company. He's Pac-Man, the first arcade superstar! Few games can claim as many offspring. As Pac-mania raged we witnessed the birth of a whole Pac-Famly. Pac-Man begat Ms Pac-Man who in turn begat Baby-Pac and a whole slew of related yellow and blue merchandise. Back in '81 the world seemed peppered with little white energisers and people walked to a 'wocka-wocka' rhythm (which wasn't easy). Things got totally out of hand.

Addicts would wake ech morning beneath Pac-Sheets, drink Pac-Tea from a Pac-Mug and then dress in Pac-Apparel. There was even a Pac-Man cartoon show! This proved the final indignity. Upon seeing it the Pac-Phenomenon promptly pegged out and died. The gaming world was never to see its

like agiain.



Bally Midway originally licensed Pac-Man from little known Nipponese creators, Namco, for introduction to the United States. The weird gobbling game found itself residing amongst banks of straight shoot em ups and surprisingly prospered. Then there was an explosion and Pac-Man rocketed to the top slot of the U.S. Play Meter charts. The game had caught on with a vengeance! Bally churned out over 100,000 Pac-units to sate the demand while unscrupulous rivals equalled that figure with a flood of rip-offs masquerading under

such guises as Puck-Man and Gobbler. The market was saturated. Fall-out went global and for nigh on a year Pac-Man ruled the world.

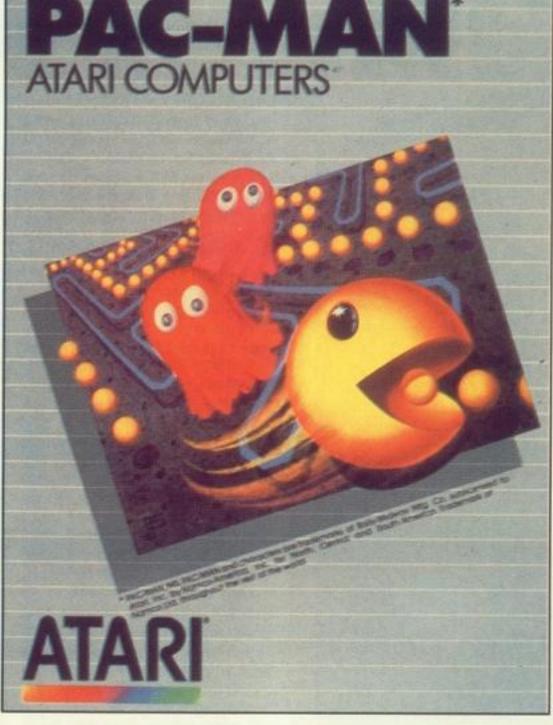
Armchair philosophers pondered its success. The first nonviolent video, some pompously declared; an expressionism, squealed others. Both claims were hooey. The little fella was just uniquely playable. A perfect combination of challenge, accessibility and audio-visual

It was also predictable. Amongst the debris I laughingly refer to as my studio, I have diagrams which would ensure total success over any screen. I never use them. Why spoil a brilliant game? I felt the same about the PEEKS and POKES for Miner Willy. Others, though, had fewer scruples and Pac-Masters appeared in evey arcade. You'd often see a queue of tireless individuals who for a couple of coins could hog a machine for a

the little fella to come home. It was a long wait. Atari trum-

peted the arrival of an officially licensed VCS ROM and then blew it in spectacular fashion. To this day it remains their worstever arcade conversion, sparking off hoots of derision whenever mentioned. Any similarities between it and the Midway monster are clearly unintentional! The familiar maze went out the window, as did the cast of monsters and bonus treats (also known as 'Pac-Lunches'). It looked awful and played even worse. Despite eight game variations only one was anywhere near acceptable and even that quickly became a doddle. Pac-Fans could hardly believe their (bad) luck.

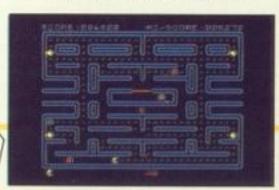
The company later redeemed themselves with a far more convincing conversion for their 400/ 600/800 computer range, restoring the missing features and improving the gameplay, but cynicism was rife. By way of an apology Atari converted Ms Pac-Man to the VCS with much greater effect. Curiously history repeated itself with the launch of the Atarisoft range. Once again Pac-Man was set up as a figurehead and once again Atari fum-

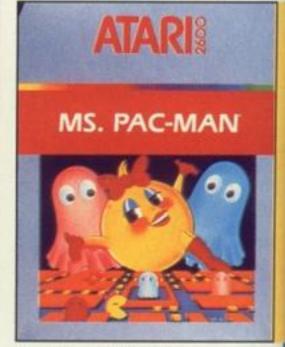


No.7 PAC MAN (Bally-Midway, Atari)

harmony. It delighted the senses and tickled the funny bone. There was nothing else like it at the time.

Pac-Man was paced to perfection. The perambulating maze monsters, Blinky, Winky, Pinky and Clyde were all deliciously geared. They begin at a sluggish pace and then speed up. Soon both Pac and monsters are travelling at the same speed, but survive too long and the Pac runs out of puff. Infuriating! The monsters' periods of edibility undulate in a similar fashion. Beginning at about 7 seconds, they dwindle to 2, then rise to 5 and then after a brief respite all but vanish. And just as you think your wrist will snap under the pressure, there's an intermission to break the tension. PacPEEKS and POKES for Miner Willy. Others, though, had fewer scruples and Pac-Masters appeared in evey arcade. You'd often see a queue of tireless individuals who for a couple of coins could hog a machine for a weekend. Million-plus players! To combat this new breed of punter, arcade owners set about the game with chainsaws. Clumsy brain surgery on the PCB resulted in the easier sheets being but eliminated. machines simply crashed at strategic points. Disgruntled, I left the arcades and waited for





bled the ball. Their Spectrum version was almost as big a turkey as the earlier VCS ROM. "Our big mistake was going for 16K," a spokesman was heard to moan. Realising their mistake Atari once again turned their attention to Ms Pac-Man. The as yet unreleased (48K) Spectrum conversion is brilliant. Unfortunately the damage has been done. No one wants to know any more. If the Pac-Family moved in next door most people would up and sell.

The little yellow guy still hangs on in the arcades though. Battered Pac-Men can be seen propping up the walls in seedy game parlours, like video winos. Few survive in their original cabinets and most boast duff joysticks and arthritic response times. A sad state of affairs. Newer visitors, stumbling over the old fella doubtless wonder

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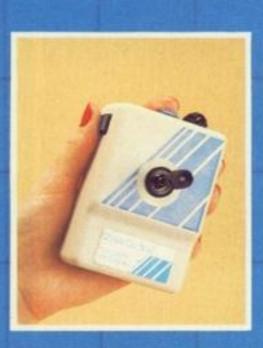
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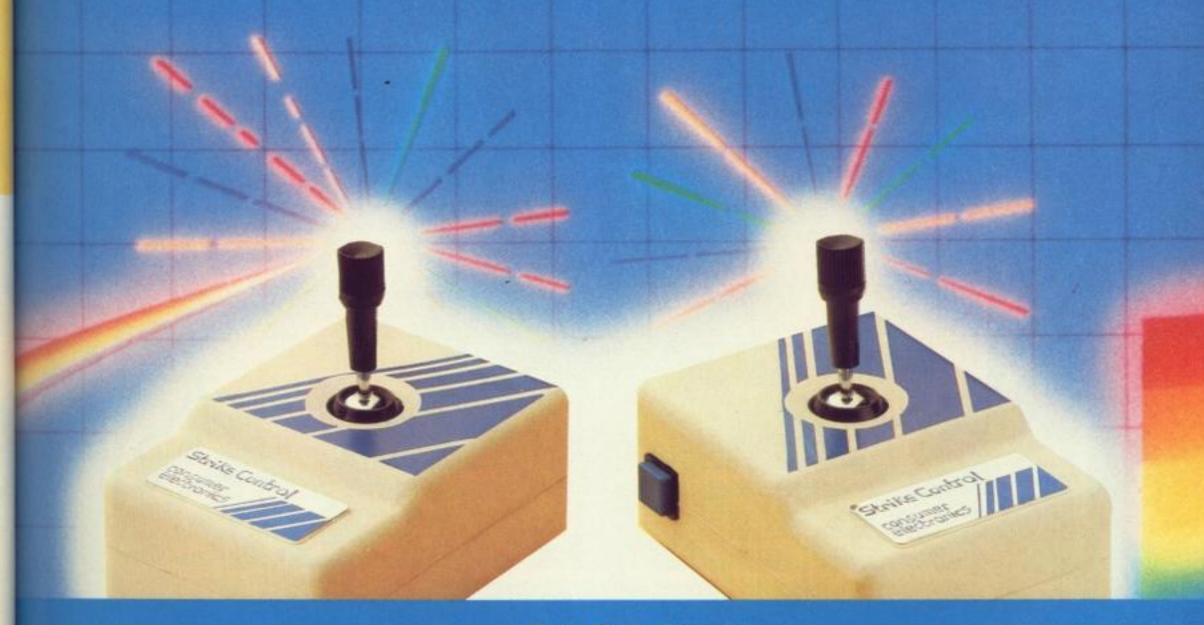
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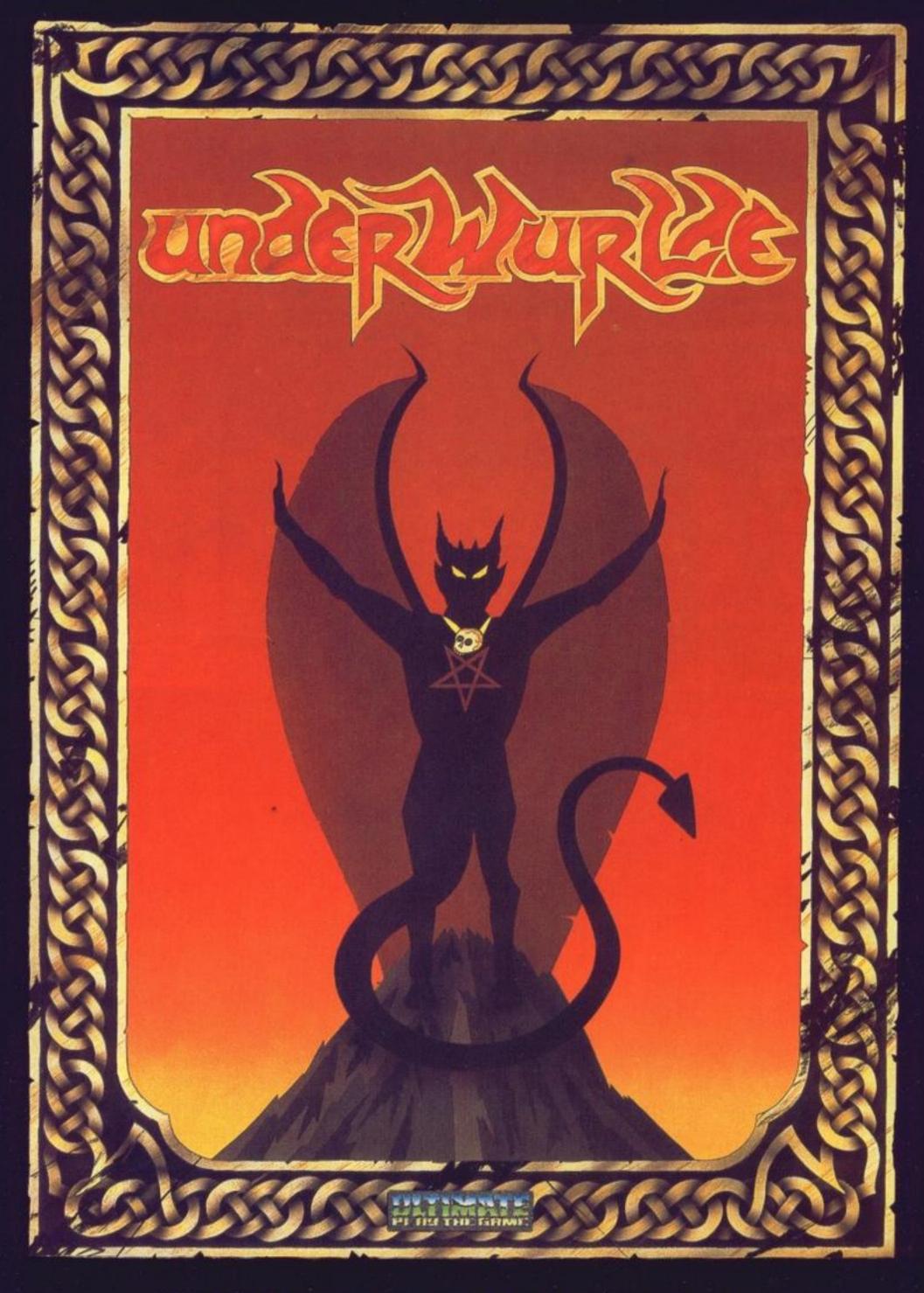
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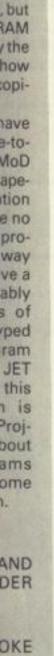
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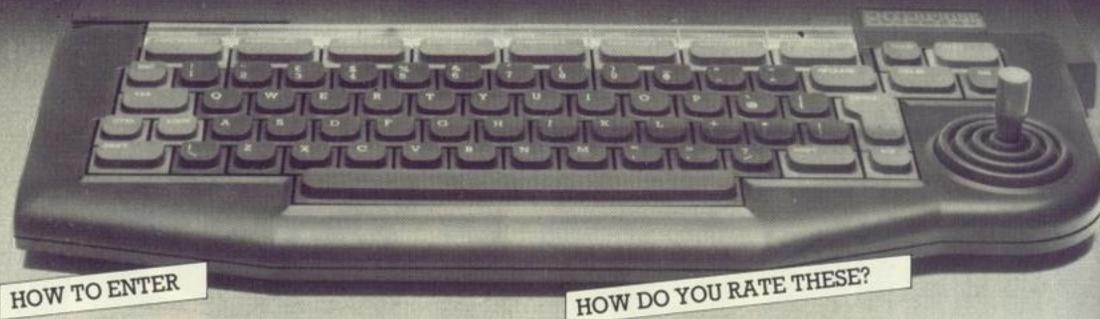
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The winners will be notified by post and the result published later in BIGK.





CHALLENGING SOFTWARE



THEY WROTE ONE

Peter and Trevor are not archetypal Hampstead Men—but they can spot one at the drop of a Gucci bag.
NICKY XIKLUNA meets the pair who have brought social climbing to the home micro . . .

In Hampstead

IF THE Sloane Rangers Handbook managed to curl the stiff upper lip into a self-effacing smile — in Hamp-stead the message is clear — social climbers come out!

ated

at . .

Hampstead is the software equivalent of the lush and clever coffee table book. It belongs in the genre of thinking man's fantasy - so far only occupied by two other real-life adventure games — Denis Through The Looking Glass and The Cricklewood Incident. Its designers think of themselves as market leaders in a new class of quasi-intellectual software. The game is a text-only adventure, and the quest is to make it to middle class Nirvana — Hampstead.

For those in far flung corners of the world - like Esher — who do not know, Hampstead does in fact exist. It lies on an enormous plateau (entirely the product of its occupants' imaginations) somewhere in North-West London. It is a collection of olde worlde buildings grouped next to a heath. It calls itself a 'village', despite a constant stream of heavy traffic (mostly Rolls Royces) that oozes down its centre. The thing to do in Hampstead is to stroll from cocktail to cappuccino, and once you've mastered the correct beautific smile, you can try casting it at the arty inhabitants, or fellow social climbers.

Once booted into the game, you'll find yourself ensconsed in a sleazy North London flat. 'Inv' shows 3-2-1 on the TV and a UB40. Exploration reveals a bedroom with such commercial prospects as a fungus farm and last night's biriani luxuriating in the wash basin. It's enough to kick the most easy-going slob onto the social mobility trail. From these humble beginnings you must go out and up. It's a highly literate game, and your way is fraught with as many wise-cracks as it is with pratfalls and red herrings.

Authors Trevor Lever and Peter Jones stress that it's not enough to cash your giro and head to Hampstead. You must rather ATTAIN Hampstead. Questioning revealed that neither author possessed a Hampstead address. But Peter's pink tie and Trevor's Mondrain-style, brightly coloured sweater prompted me to ask if they were on their way.

"Oh definitely. We want money, fame and a certain artiness. Hampstead the game will help. Of course, social climbing is not the most important thing in life — but it is the most satisfying if done properly."

How do you go about social climbing?

"In order to attain Hamp-

stead in life as in the game you must think like Hampstead Man. Consider the objects of behaviour you'd need to be accepted in Hampstead. Here's a tip. What you leave behind is often as important as what you take with you. As a social climber - you run the risk of being exposed as a fraud. But exposure is not the only cause of death in Hampstead. You also risk terminal writer's cramp, being eaten by a venus fly-trap, or choking on muesli."

The best game strategy is to establish yourself before trying to make it to Hampstead. Try your luck in the industrial maze or take a train to another location. Approach Hampstead with caution. Gather your wealth, status and power, then hit Hampstead like a bullet. And no one will know of your roots.

The Peter/Trevor partnership goes back a long

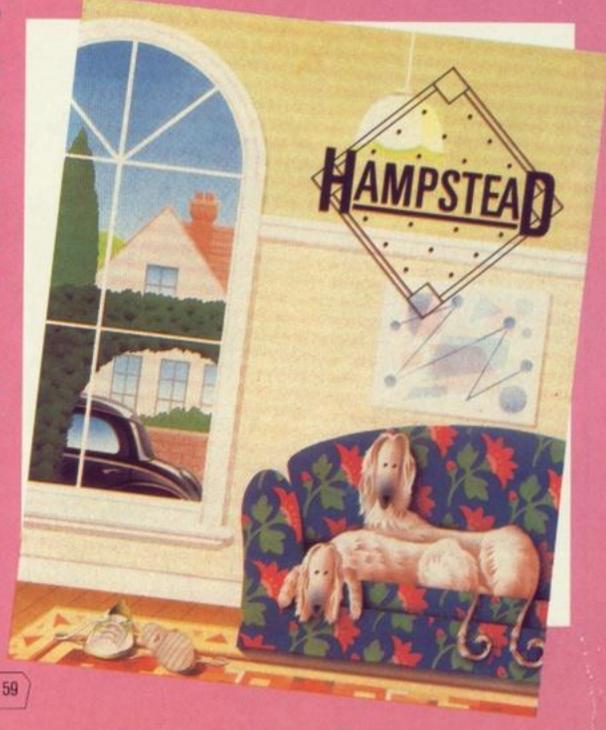
way. It even survived being heckled off stage in their Northern comedy doubleact debut - 'Liptrop and Pode'. Trevor describes himself as the 'solid computer man' of the duo, whilst Peter is the 'aesthete with his head in the clouds'. Both are PR men in the computer and video industries respectively. Neither are programmers and Hampstead was written on SMART - a kind of managemental Quill, and improved by MH.

"Neither of us have any desire to program. The industry needs new ideas more than anything at present. We've got them — and there are plenty of people around to put them into

practice."

Does this mean they don't think much of current adventure-ware? Peter hands me a card. "I see nothing special," it reads. The first of many that the duo had prepared for their interview. (I can only assume that Peter, himself a former journalist, has his own reasons for mistrusting the press.)

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DIN Bogy Men Guide Boris up the ladders, to collect a coin from the top of the screen, but beware! the bogy men are out to get you. He must return

to the bottom of the screen, avoiding the boay men and insert the coin in the electric meter. The lights will come on enabling you see the pitch fork, and after retrieving it, kill the bogy men.

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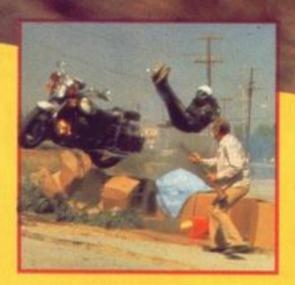


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EADY WHEN MARSEAVES

SEENE | Okay, sweeties, now I want absolute quiet on the set. Where's that Seavers stunt guy? Ah, there he is. Colt, baby, this is a piece of cake. All you've got to do is jump onto this train from the top of the brick tunnel, then run along the carriage roofs and jump down onto the track at the end. What did I tell you, big guy, it's easy peasy. Okay, this is take one and . . . action! That's it, Colt, onto the first carriage, the train's moving, getting faster. Move, baby, there's the tunnel coming up and ... oh, oh. Pick him up, boys, we'll go again. Take two and ... action! Okay, Colt, you're moving well this time. Jump the carriages, leap the gaps, don't fall between them ... er, oops. Colt, babe, you know I love you but there's only three takes allowed for this scene and we've got a whole movie to do. Let's get on with it.





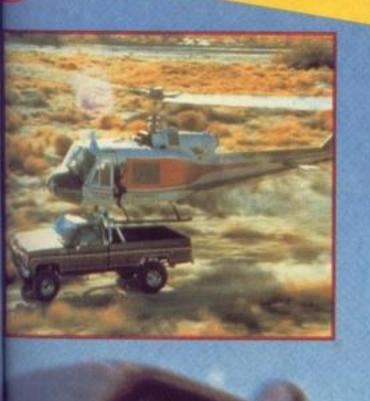


know you're worried. Standing on top of a burning skyscraper is not my idea of fun either but don't worry, help is on the way. Okay, we're going for a take and ... action! Watch out for the helicopter, Colt. Here it comes. Get ready to leap up and catch hold of the skids, the chopper will carry you to safety on the

next rooftop. Now, get ready and jum . . . er, right. Yeah, Harry, you'd better circle round while Colt picks himself up. Take two and . . . action! Beautiful Colt, you've grabbed the skids you're dangling well, now wait till you're over the the next building and let go. Not yet—you're too high! Right, Ham, we'll wait till the medico patches him up and go again. Take three Colt, the last one or the game's over for you.

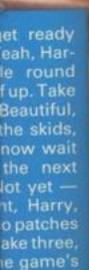


BIG K brings you an exclusive location report from the set of Elite's new computer game production of TV's THE FALL GUY . . .

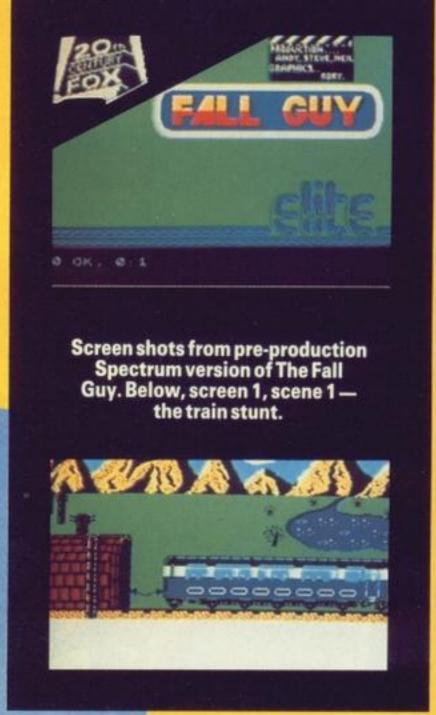


What's all that snow up there? Why, it's an avalanche effect, Colt, my little icicle. What would a mountain scene be without an avalanche? All you have to do once it starts is to get to safety without getting swept away. You must remember doing something like this on that 'Bionic Guy' show you worked on. Right, quiet on the set and . . . action! That's it, Colt, move quickly. Cue the avalanchel Hurry, Colt, it's coming up fast and ... oh, well. Send in the St. Bernard, we'll find Colt by morning.

Colt, sweetness, you must know by now that we've only got three takes on each of these scenes, you've got to get it right first time. There's still the broken bridge over the flooded river, wing walking between two planes and the raging inferno to escape, to name but a few. You may think it's only a game but some of us find it deadly serious.







A CRITIC REPORTS

I viewed this new production of The Fall Guy with interest. Obviously a spin-off from such a popular television series would attract a lot of attention from fans of the stunt man and modern-day bounty hunter. But would they appreciate the depiction of their hero as a computer game character?

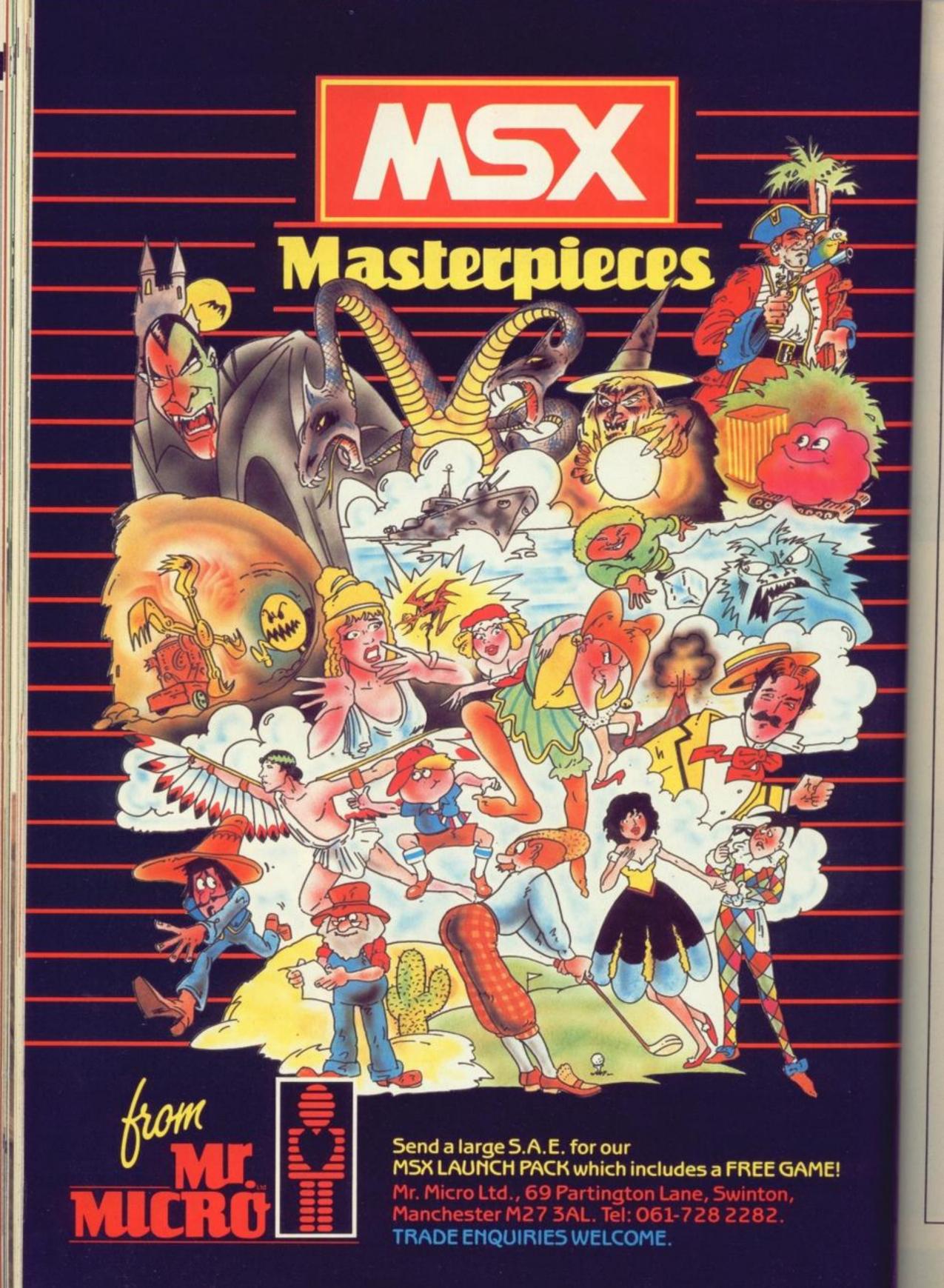
The player is presented with a series of situations worthy of the Big Guy himself, which have to be worked through. However, the plotline becomes somewhat pedantic after a while as stunt follows stunt. The bounty hunting activities of Colt Seavers are only exploited in the latter stages of the dozen screens available.

The graphics present the player with constantly changing scenarios and are of a high quality. Indeed the whole game stands up well to the many other TV adaptations that are proliferating across computer screens at present.

I think The Fall Guy has definite box office potential but I reserve my final judgement for the moment. As of writing the production has obviously run over schedule because the producers were only able to show me a rough cut. I look forward to seeing the completed version.

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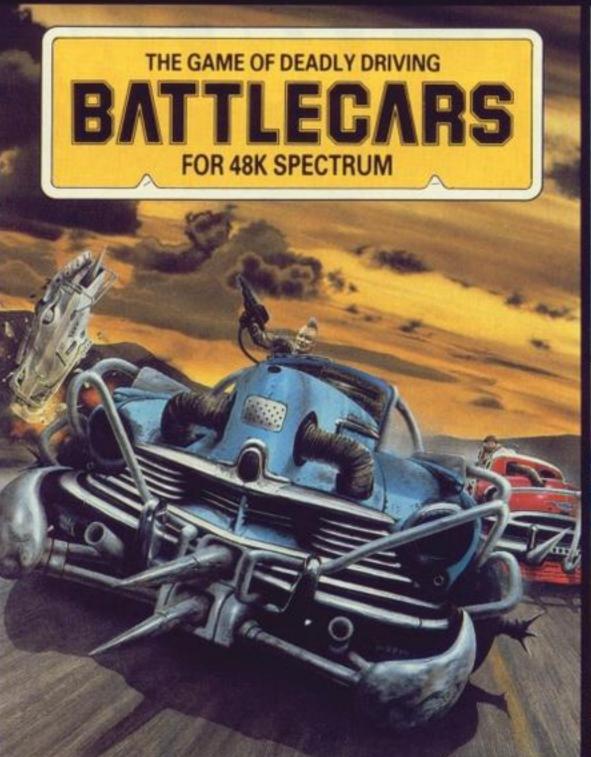
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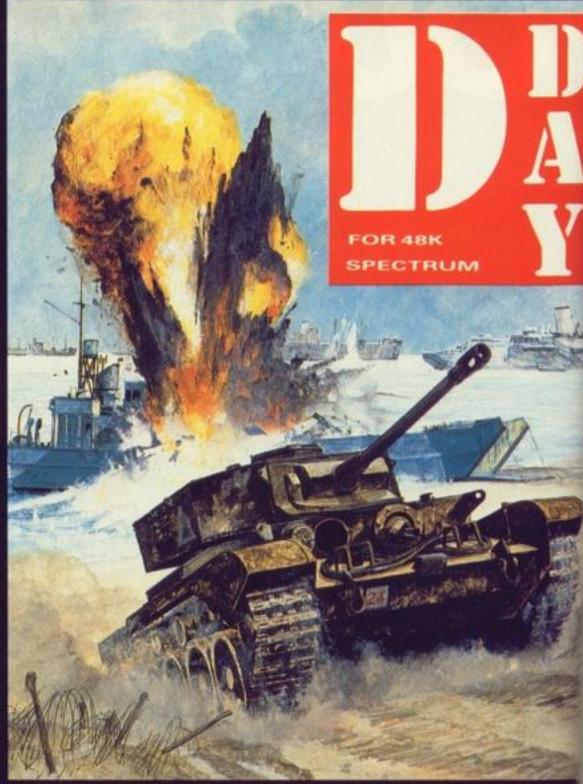
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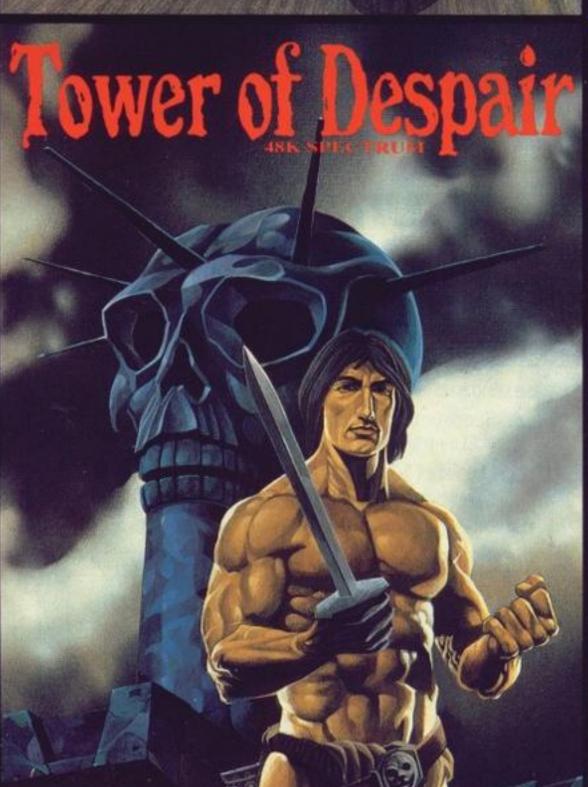
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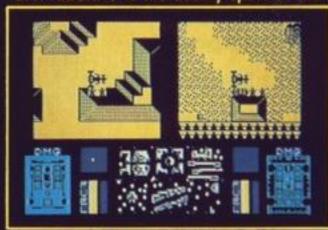




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CAD STANDS for 'Computer Aided Design'. Put more simply it means drawing pictures with a computer and it's a fun thing to mess around with.

Looking around the racks of Rip-Off Software Inc. it doesn't take a great deal of savvy to suss that every CAD package available is 'powerful, easy to use and versatile'. They also cost over twenty crisp oncers and they're usually in BASIC. Which is one reason for the existence of Graph-Pac.

First of all don't be put off it by the voluminous instructions. For the most part the only keys needed are the red function keys so all you need to do is slip a strip (poetry, geddit?) of key names under the plastic bit and there should be no problem. Any other keys are fairly obvious; COPY saves or loads a screen from tape, Q (for quit) gets you out of the program, etc.

The program centres around a technique known as 'Rubber Banding'. An animated line stretches from a fixed point to a cursor whose position is controlled by a joystick. Once you're happy with the position of the line press the fire button and the line is 'fixed' in position, the new fixed point being moved to the cursor position. If you don't have a joystick then invest in one. Believe me it's worth it for speed and ease of use.

Looking at the function keys first, starting from the top and working down:

F9 is used to draw ellipses. The joystick is used to control a rectangle which defines the limits of the major and minor axes of an ellipse (which is a flash way of saying an ellipse fits in the box). Get the rectangle to the size of ellipse you want and press the fire button. The rectangle disappears and an ellipse takes its place. You can have the ellipse rotated left or right, using the '<' and '>' keys to rotate the box before it's fixed and the origin (at the centre) can be moved along the x and y axes using the cursor keys.

Rectangles are drawn using the f8 key. Exactly the same as the ellipse key but a rectangle is produced. It can be rotated and have its origin moved in the same way as the ellipse.

Function key 7 is used to position text on the screen. After pressing f7 just enter text which will appear at the cursor position. Move it around with the joystick and

FASTEST DRAW IN N.W.11

ALDIS, who's thrown out his paint-daubed smock, his palette (and his onions) and produced a snappy and versatile CAD (Computer Aided Design) package for BIG K Beeb owners.

You've

You've heard of MAGRITTE? Neither has Aldis . . .



use the fire button to fix it. A useful point to remember is that CTRL H, I, J and K can be used to move back, forward, down and up respectively. This means you can have vertical or diagonal text. If you've defined characters using the character definer (more of that later) these are in the function keys in the order you defined them (fo first character, f1 second etc.). Just press them, you'll see.

Logically displayed colours can be changed using f6. This uses the VDU19 command and might need some experimentation. The routine expects numbers which must be input using the function keys. A list of logical colours is shown on page 165 of the User Guide. I'm sure you don't need wet nursing through it; just follow the prompts as they appear.

Coordinates of the cursor, current rubber band length and angle from the horizontal can be displayed using f5. Useful for accurate positioning of lines.

Line colour (and fill colour, more later) is changed using f4. Again this expects a number from the function keys. Check page 165 of the BBC Bible for the numbers of the colours.

F3 gives you an eraser. Be careful with this if you're working on something important. What happens is the cursor is replaced by a small triangular shape. This systematically demolishes anything it passes over in much the same way as a pencil eraser. Once it goes you can't get it back. Press the fire

button to get rid of it.

After you've mucked about with the rubber band for a while you'll probably realise it's a pain having each line connected to the previous key. Key f2 solves this by turning the line on and off. Once the line is off move the cursor to a new position and press the fire button. Turning the line on again will show that the new start position is the cursor position. (Sounds confusing? Try it, you'll soon get the hang of it). It's a good idea to have the cursor on while you're doing this so you know where you are. The cursor is toggled on and off by f1.

Function key 0 is fun. This is the fill routine. Position the cursor anywhere inside a shape and press f0. The shape fills with the current line colour. The routine only fills black areas and be careful that the area you fill is fully bounded by lines or blocks of colour. If not the fill will bleed over the screen boundaries and tie itself in knots. If this happens just wait a while, it gets fed up after ten minutes or so and stops but it's a real pain waiting.

That just about ties up the function keys, which leaves us with a few others dotted about the keyboard. Pressing ESCAPE clears the screen after checking that you really mean it. If you do, press 'Y' when it asks you; if not, any other key will do. The cursor keys are used for moving the origin of the rubber band and COPY takes you into load/save to preserve your precious masterpieces. Just

follow the prompts. Pressing ESCAPE will abort.

Unfortunately there was no room left for a printer dump and anyway, different people have different printers. Pressing 'Q' lets you out of the program without destroying the screen image so you can run your own printer dump. Typing 'RUN' gets you back into Graph-Pac.

The 'TAB' key lets you define characters which can be put on the screen in text mode (f7). As mentioned earlier your characters are stored in the function keys in the order you define them. The procedure is simple enough, after pressing the 'TAB' key you will see a small area in the bottom right of the screen with a small cursor in it. Use the cursor keys to move the cursor around and the 'SPACE' key to make or unmake a mark (each character is made of an eight by eight matrix). When you are happy with your design press the 'TAB' key again.

Finally there is a textured fill, of sorts, which is rather fun to muck about with. It's toggled in and out by pressing 'T' (for texture) and all it does is stop the rubber band from erasing itself before it moves. The result is a rather pleasing moiré effect.

The listing is in two parts. Type in the first part and save it. Type in the second part, save it as 'GP2' after the first part and run the first part which chains the second part.

And that just about sums it up. If it seems confusing don't worry — it's a lot easier than it looks.

out in the cold. Some people clearly have no vision.

As this issue of BIGK shambles aimlessly on its way toward the printing press details are sparse on the new Questprobe game, Spider-Man. It's only a third complete. "All I can reveal," says Mike "is that the adventure co-stars Madame Web and the Sandman as well as some of the best graphics yet seen on a home micro. We've developed a special graphics routine for it which will enable us to make the most of available memory. As with The Hulk it'll be available for a host of machines. In addithe tion to Spectrum, CBM64, Atari (32K/48K disc), Apple (disc), Dragon 32, TRS80 and BBC we aim to produce a version for the Amstrad and possibly MSX. We've a team of two programmers and three artists working on the U.K. conversions." Adventures' Mysterious mainman, Brian Howarth who was originally mooted to convert the games left the project some time ago.

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"Initially Scott Adams writes all his adventures in test-only form on his 48K Model 1 Tandy ," continues Mike. "Then he forwards them to Marvel for story approval and illustrations; a Marvel artist draws each scene in the game. The final coding is then done in Florida (Atari, Apple, CBM disc versions) and the U.K. Incidentally, Scott has actually redesigned the interpreter in his adventure-generator Spider-Man, to allow for full sentence input. It's the first time he's offered more than the usual verb/noun format in one of his adventures!"

Adams is of course something of a coffee-table name Dorkslavers. amongst However his initial reluctance to cater for the U.K. market has left him less than well played. I suspect I'm not alone in claiming my introduction via The Hulk! It's a game that's been steadily driving me off my trolley since its release. Has anyone else had trouble with the ants or is it just me?

Spectrum, CBM64 and Apple/Atari owners will have enjoyed the best Hulks as these are the only versions to feature both text 'n' graphics. Regular readers will no doubt

be amazed at this statement knowing of my well documented dislike for graphic adventures! But for once I actually believe that the art adds to the gameplay.

Thirty individual drawings are featured and these are augmented to great effect by a number of stylish overlays. A barren terrain f'rinstance is suddenly made to sprout anthills and then giant ants (curse 'em!) Such invention more than compensates for Scott's stilted, prehistoric prose style.

Initially bound to a chair in the guise of puny Bruce Banner vou must bust loose and ransack the Chief Examiner's dodgy dimension for glowing gems (dunno why). The Chief Examiner by the way is the overseer of the entire Questprobe series. Having successfully trashed the chair you're well on your way to encountering former superhero colleagues Doctor Strange and Henry Pym a.k.a. the Ant Man (a role Pym actually gave up some time ago) as well as some

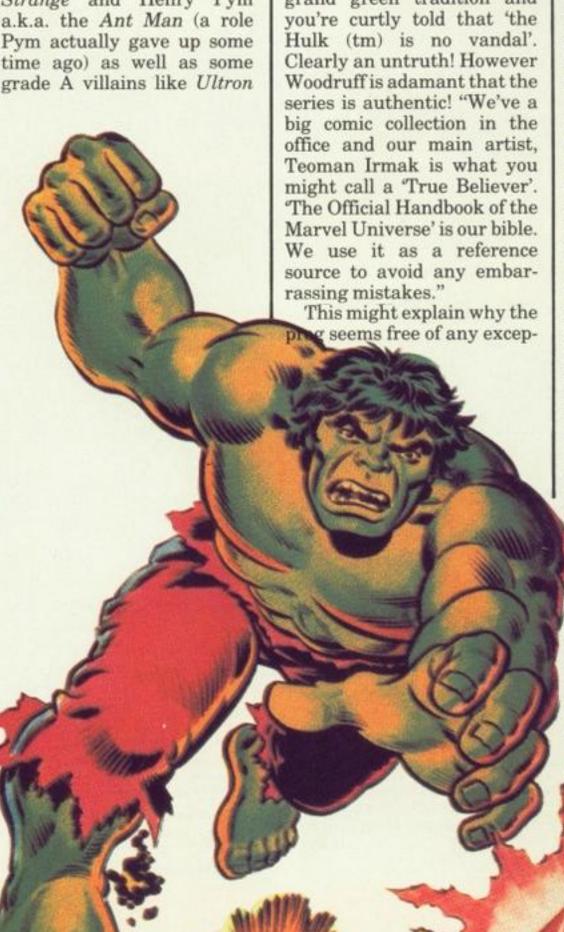
and Nightmare. A Questprobe comic (which must be said is fairly dire) sets the scene for the game.

Much as I like The Hulk though, I don't really think it cuts much ice as a genuine Marvel Comics spin-off. Try and smash the place up in the grand green tradition and you're curtly told that 'the Hulk (tm) is no vandal'. Clearly an untruth! However Woodruff is adamant that the series is authentic! "We've a big comic collection in the office and our main artist, Teoman Irmak is what you might call a 'True Believer'. The Official Handbook of the Marvel Universe' is our bible. We use it as a reference source to avoid any embarrassing mistakes."

tionally silly bugs. A shame as I've always regarded blunders as plus points. I can only advise frustrated (Spectrum) Hulkers not to beat the EN-TER key (with their heads) too often as you'll find yourself locked into a 'I can't do that ... yet!' cycle. Even suicide brings no release. Keep banging away and the game NEWs itself. If anyone finds a more notable gaff let me know.

While unusual the Marvel/ Adventure International collaboration is by no means unique. The precept was set some time ago in the States by Marvel's comic rivals, DC and Atari — then both owned by Warner Communications. The two shared a relationship that stretched back through a number of early releases for the elderly 2600 VCS. Titles such as Berserk, Defender and Star Raiders were all packaged with free half-size comic books. This crossover peaked with the release of the multi-cart graphic adventure Swordquest, a set of games not unlike the Raiders cart in style. The comics actually flesh-out helped videogames, adding plot and motive to the four ROM episodes. They also contained clues, significant as Atari were offering an astonishing \$150,000 worth of prizes to those that could solve the series. The challenge never made it across the pond.

Not to be outdone Marvel/ ott Adams are also offering prize, although they're playing it cagey at the moment. No one knows what it is. With another three years of Questprobe still to run it had better be good! Shame about Conan though . . .



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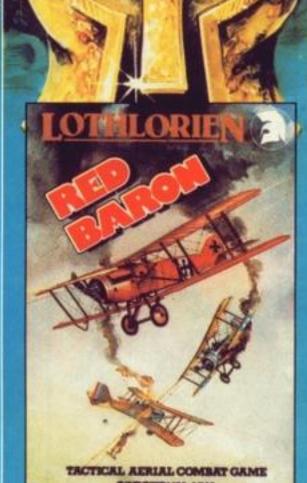


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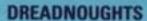


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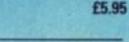
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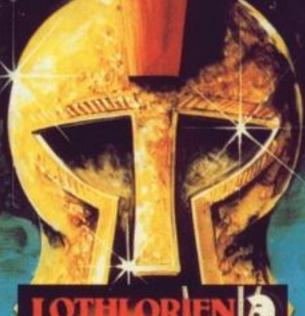
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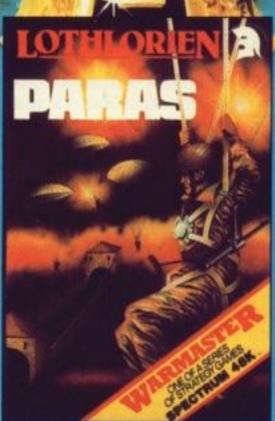
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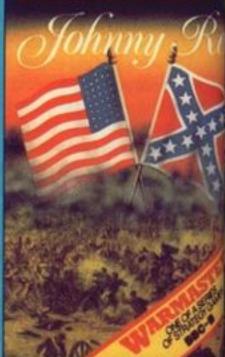


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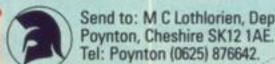
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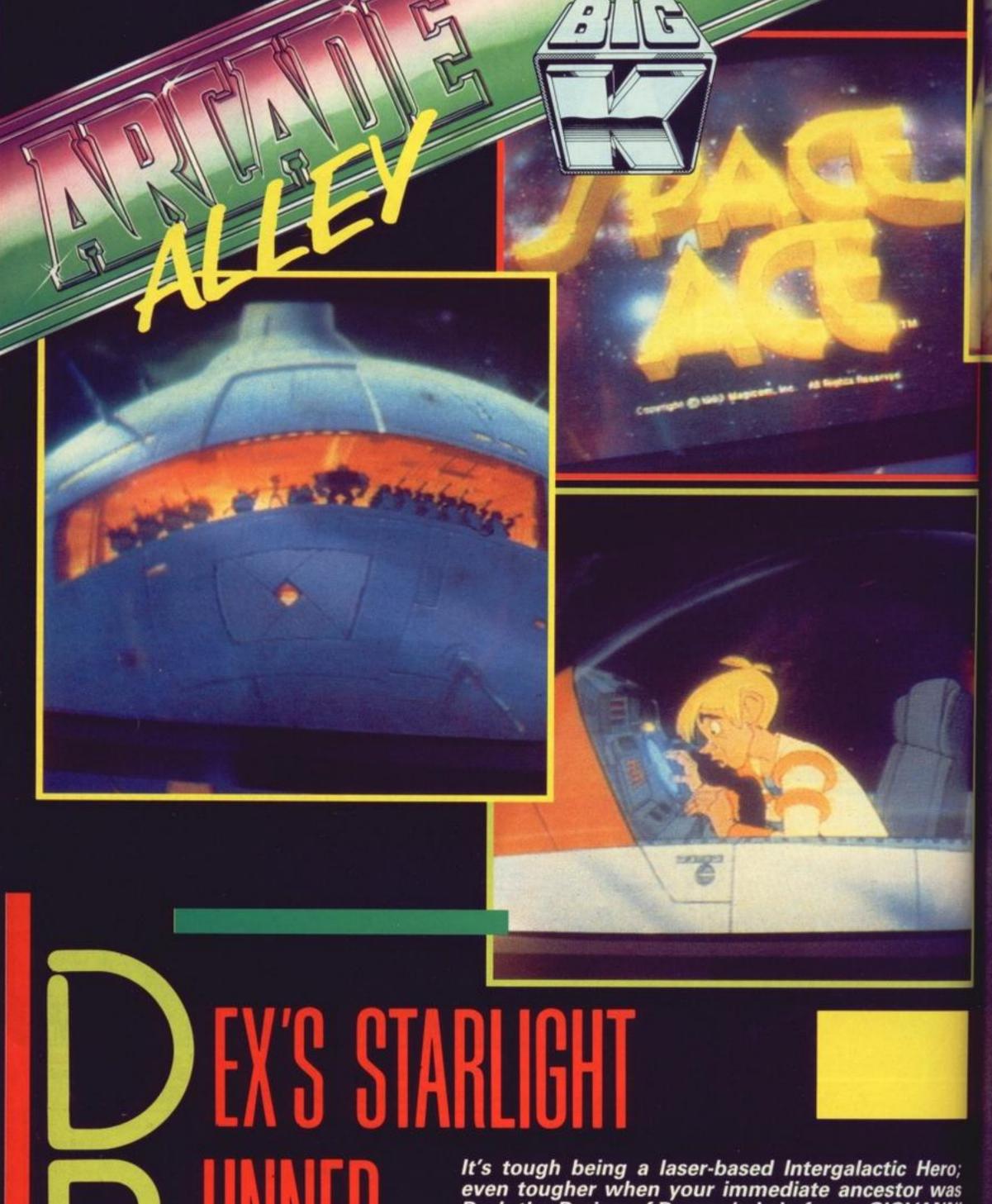
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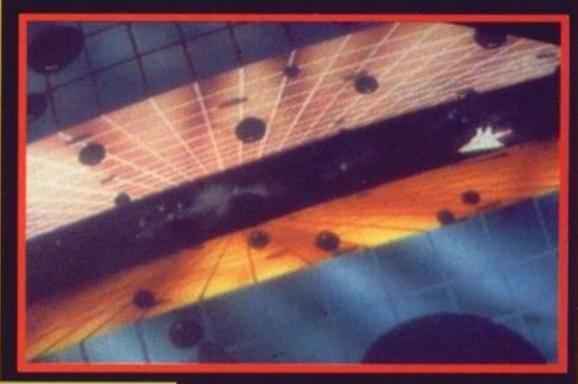
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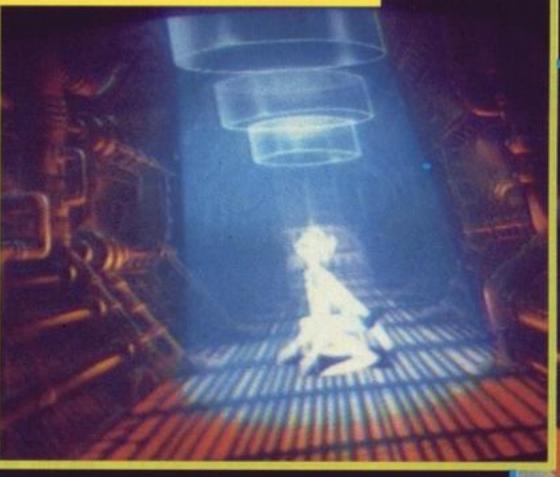
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It's tough being a laser-based Intergalactic Hero; even tougher when your immediate ancestor was Dork the Daring of Dragon's Lair fame. GIOVANNI DADOMO shells out the shekels for a bout of Space Ace role playing.









FROM THOSE wonderful people who gave us the superb animation game Dragon's Lair comes Space Ace, a second adventure in the same medium but this time, as the name suggests, with an intergalactic theme. The action's instant: no sooner do you drop your loot in the slot than the slight, fair-haired hero loses his bounteously curved female companion. Worse still, he has no time to mourn her kidnapping because the asteroid on which he's perched is immediately blasted to bits by an immense villain with blue skin and an Oriental top-knot, whose gross guffaws and belly to match give him a distinct resemblance to Popeye's old punchin' pal, Bluto.

In the initial stages of the game one's shown the location of a "safe" spot by a blinking blue light effect. Activate the joystick in the appropriate direction and

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young Dexter (for such is our hero's name) obediently leaps behind a conveniently placed boulder just in time to avoid a deadly ray-gun blast. Or not, as in the case of this novice, who took three attempts before even this first minor obstacle was conquered. From there on in the perils come thick and fast. A leap lands Dex on a handy hillock which is promptly atomised by a trio of hovering saucers. Skip left if you can and you'll maybe reach the safety of a spaceship, Dex! But leave this a second too late and you're caught in the deadly grip of a giant Meccano-type monstrosity that gleefully hurls you into a bottomless pit.

On top of that, there's a vast, weird, 'Alien'-type spacecraft to be negotiated, with peril piling on peril as Dexter tries to track down his missing miss before she's done

away with. In the meantime, of course, attempting to keep his own goose uncooked as he faces: a wild ride on a series of geometric surfboards that break up under his very feet, a whole catalogue of monsters reindeerhorned wolfy things, giant, multi-coloured carnivores, a pack of werecats — and confrontations sundry with the aforementioned blue meanie.

At one point he saves his girl only to see her suddenly transformed into a sickly blue alter ego of himself intent on murderous mayhem — what else? Another rivetting sequence occurs when the ship's suddenly flooded and he almost gets eaten by a giant fish. He avoids that only to find himself the intended dish of the day for an even bigger finned fiend (cue 'Jaws' music, of course).

Just in case you get

bored there are sporadic appearances of the word ENERGIZE' on the screen. Press the matching wordbutton and meek, weedy Dexter is suddenly transformed into a muscle-onmuscle Arnold Schwarzenegger type. When this happens you might think you're laughing (I did) but the big pectorals etc. are useless when not allied to a continued agility at the controls. Forget that and you'll just end up a Big Thingy's dinner.

Fast, furious, funny, tremendously varied, this is quite simply one of the most amusing arcade games to have come along since its 'DL' sibling. If you're a sucker for animation anyway (and this is miles better than your feeble 'He-Man' type cut-out) then look no further. Pricey, but well worth it. Mucho thrill-power, to borrow a fine, familiar phrase. Go to it!



SP = Spectrum, AC = Acorn, 64 = Commodore 64,



V20 = Vic 20, 81 = ZX 81, DR = Dragon 32, OR = 0ric

(Retail	NF5	W	- 1	A C	0	-	
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14 DALEY THOMPSON'S

15 LORDS OF MIDNIGHT

9 MATCH POINT

5 BEACH HEAD

27 RAPSCALLION

19 STOP THE EXPRESS

10 FOOTBALL MANAGER

6 MICRO-OLYMPICS

16 DECATHLON

17

22 PSYTRON

13 TRASHMAN

18 AUTOMANIA

12 BLUE THUNDER

23 CAVELON

Ī	30 GAMES (Retain)		4.0			9	10 5				35
			SP	AC	64	V20	81	DR	OR	Price	1
	DALEY THOMPSON'S DECATHLON	Ocean	*							£7.90	1
1	FULL THROTTLE	Micromega	*							£6.95	1
}	SABRE WULF	Ultimate	*	131						£9.95	I
1	TORNADO LOW LEVEL	Vortex	*							£5.95	ı
۱	JET SET WILLY	Software Projects	*							£5.95	ı
1	MATCH POINT	Psion	*		100					£5.95	١
	LORDS OF MIDNIGHT	Beyond	*		18		8			£9.95	ŀ
	BEACH HEAD	Access/US Gold		*						£9.95	١
ı	DECATHLON	Activision	18	*						£9.99	ı
1	MONTY MOLE	Gremlin Graphics	*	*						£6.95	ı
۱	MICRO-OLYMPICS	Database	*	*	*					£6.95	١
1	RAPSCALLION	Bug-Byte	*							£6.95	ŀ
	OLYMPICON	Mitech	*							£5.95	ı
н	3-D TANK DUEL	Real Time	*							£5.95	ı
п	THE EVIL DEAD	Palace		*						£6.99	ľ
ш	FIGHTER PILOT	Digital Integration	*							£7.95	l
н	ARABIAN NIGHTS	Interceptor		*						£7.00	ľ
	WORLD CUP FOOTBALL	Artic	*							£6.95	ŀ
	STOP THE EXPRESS	Psion	*							£5.95	L
	JACK AND THE BEANSTALK	Thor	*				33			£5.95	ľ
н	PSYTRON	Beyond	*							£7.95	ı
н	TRASHMAN	New Generation/Quicksilva	*	*						£5.95	
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	PERCY THE POTTY PIGEON	Gremlin Graphics		*						£7.95	
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в	STAR TRADER	Bug-Byte	*							£6.95	
	BLUE THUNDER	Richard Willcox	*					*		£5.50	

Compiled by MRIB Computer.

VIDEO GAMES

He for

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1	(1)	POLE POSITION (Atari)
		COLOR OUR PER CALL

- SPACE SHUTTLE (Activision) SUPER COBRA (Parker) (2)
- PITFALL 2 (Activision)
- MARIO BROTHERS (Atari) (8)
- 6 POPEYE (Parker) (4)
- MS PAC-MAN (Atari) (25)
- ENDURO (Activision) 9 DEATH STAR BATTLE (Parker)
- (6) Q-BERT (Parker)
- FROSTBITE (Activision)
- GALAXIAN (Atari) (19)
- PHOENIX (Atari)
- BATTLE ZONE (Atari) (12)
- FROGGER (Parker) (11)
- DONKEY KONG (CBS/Coleco) (14)
- SNOOPY VS THE RED BARON (Atal) (13)DIG DUG (Atari) (9)
- MOON PATROL (Atari) (10)
- PITFALL (Activision) (15)PAC-MAN (Atari) (21)
- BIG BIRD EGG CATCH (Atari) (18)RIVER RAID (Activision) (16)
- TUTANKHAM (Parker) (17)
- COOKIE MONSTER MUNCH (Ataril (24)
- SPACE INVADERS (Atari) (29)
- (20)JUNGLE HUNT (Atari)
- CENTIPEDE (Atari) (27)
- SMURFS (CBS/Ceoleco) (22)ROBOT TANK (Activision) (30)
- Compiled by MRIB Computer.

ATIC ATAC (Ultimate) **BUMPING BUGGIES** (Bubble Bus) CHUCK-E-EGG (A&F Software) COLDITZ (Phipps Associates) CYLON ATTACK (A&F Software) FIGHER PILOT

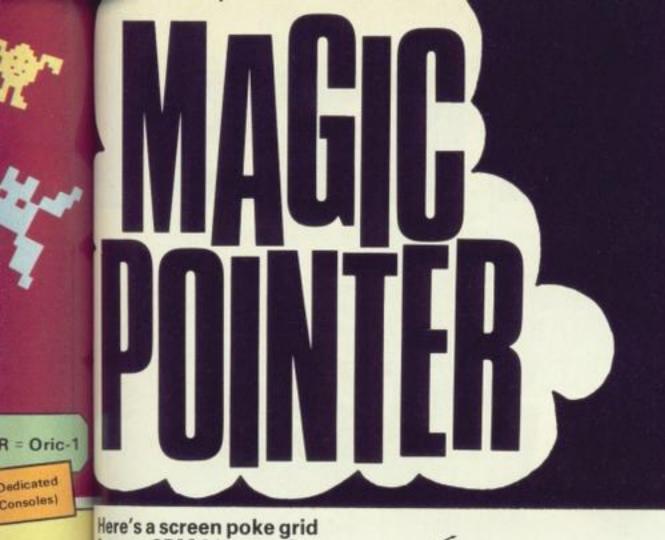
(Digital Integration)

also selling well in mail order

FLIGHT PATH (Anirog) THE FOREST (Phipps Associates) FLYING FEATHERS (Bubble Bus)

JET PAC (Ultimate) KRAKATOA (Abbex) MEGAWARZ (Paramount)

NIGHT RUNNER (Digital Integration) OUTBACK (Paramount) PILOT 64 (Abbex) RALLY SPEEDWAY (Aventure International) SPACE PILOT (Anirog) **TEST MATCH** (CRL)



Dedicated

Consoles

RON (Atari)

CH (Atari)

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for you CBM 64 users. It will greatly simplify calculating the character and colour on the screen. by M. R. HODGKINSON READY.

1 GOT01000 10 POKE53272, (PEEK (53272) AND 240) +12 20 FORI=12288T012288+7:READA:POKEI.A:NEX T:REM REDEFINE @ 30 DATA255,129,129,129,129,129,129,255 40 FORI=12528T012528+7:READA:POKEI.A:NEX T:REM REDEFINE 50 DATA255,195,165,153,153,165,195,255 60 FORI=12512T012512+7; READA: POKEI, A: NEX T: REM REDEFINE \ 70 DATA255,0.0.0.0.0.0.0 BO GOT010000 1000 PRINT"(CLR)";:POKE53280.7:POKE53281 .7:PRINTCHR#(149) 1010 PRINT"(CUR RT)(CUR RT)(CUR RT)(CUR RT) (CUR RT) (CUR RT) CHARACTER/COLOUR SCRE 1020 PRINT"(CUR RT)(CUR RT)(CUR RT)(CUR RT) (CUR RT) (CUR RT) (*T) (*T) (*T) (*T) (*T) (*T3 {#T3 {#T3 (#T) (#T) {#T3 {#T3 (#T) (#T) (#T) {#T3 {#T3 { " CT*3 CT*3 CT* 1030 PRINT"(RED)(CUR RT)(CUR RT)("" RT) THE AIM OF THIS LITTLE PROGRAM IS" 1040 PRINT"TO GREATLY SIMPLIFY EALCULATI NG THE" 1050 PRINT"CHARACTER AND COLDUR POKES ON THE SCREEN": 1060 PRINT"MEMORY MAP" 1070 PRINT 1080 PRINT" (BLK) (CUR RT) (CUR RT) USE THE FOLLOWING KEYS TO CONTROL" 1090 PRINT"THE CURSOR: -" 1100 PRINTTAB(12)" Z MOVES LEFT 1110 PRINTYAB(12)" X MOVES RIGHT 1120 PRINTTAB(12)" : MOVES UP 1130 PRINTTAB(12) " // MOVES DOWN 1140 PRINT"USE '=' TO 'MARK' YOUR DESIRE 1150 PRINT"USE C TO CANCEL A COORDINAT En 1165 PRINT 1170 PRINT" (RED) THE GRID COORDINATES ALT ER IN RESPONSE" 1180 PRINT"TO THE CURSOR MOVEMENT. SIMPL Y NOTE EACH": 1190 PRINT"COORDINATE AS YOU 'MARK' II, AND THEN" 1200 PRINT"USE IT TO PLAN YOUR DISPLAY" 1210 PRINT" (BLU) (CUR DN) (CUR RT) (CUR RT) CEUR RT) (CUR RT) (CUR RT) (CUR RT) (CUR RT) (CUR RT) PRESS A KEY TO START" 1220 GETA\$: IFA\$=""THEN1220 1230 PRINT"(CUR UP)(CUR UP)(CUR UP)":FOR U=0T039:PRINT" ";:NEXT 1240 PRINT"(CUR RT)(CUR RT)(CUR RT)(CUR RT) (CUR RT) (CUR RT) WAIT FOR THE DATA TO BE READ" 1250 GBTB63000 10000 PRINT" (CLR) ": PUKE53280, 1: PUKE53281 10010 FORT=OTO879:PRINT"(LT BLU)@"::NEXT 10020 FORS=OT039:PRINT"(LT BLU)\"::NEXT 10030 P1=1064: P2=P1: C1=55336 10040 PDKE650.128 10050 GETA# 10060 IFA#="Z"THENFZ=P1-1:C1=C1-1 10070 IFA#="X"THENP2=P1+1:C1=C1+1 10080 IFA#=";"THENP2=P1-40:C1=C1-40 10090 IFA#="/"THENP2=P1+40:C1=C1+40 10100 IFA = "= "THENPOKEC1.0 10110 IFA*="C"THENPOKEC1,14 10120 POKEP1,0:POKEP2,30 10130 P1=P2 10140 IFP1>1943THENP1=1943:C1=56215 10150 IFP1<1064THENP1=1064:C1=55336 10160 PRINT"(OR)(HOME)(CUR RT)(CUR RT)(C UR RT) CHARACTER": P1: " (CUR RT) (CUR RT) (CU R RT) (CUR RT) (CUR RT) COLOUR": C1 10170 GGTG10050 63000 PRINTCHR#(142) 63010 POKE52,48: POKE56,48: CLR 63020 PDKE56334, PEEK (56334) AND 254 63030 POKE1, PEEK (1) AND 251 63040 FORI=0T0511:POKEI+12288,PEEK(I+532

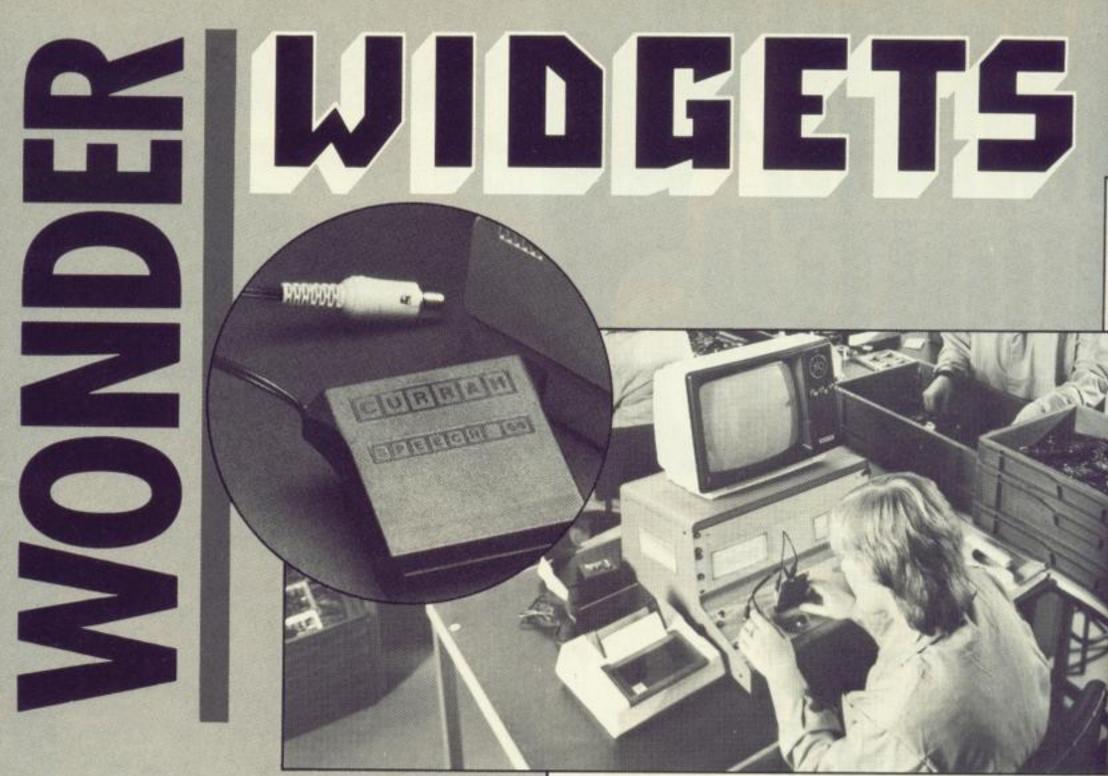
TURN TO PAGE 104 FOR YOUR FREE INLAY

48): NEXT

63070 BUTU10

63050 POKE1, PEEK (1) OR4

63060 POKE56334, PEEK (56334) OR1



R.A.T.



SAY IT with words on the '64. Yes, Currah have now converted their highly popular Spectrum noise box, giving 64 owners the power to produce strangulated verbals from the speakers of their tellies.

Speech quality is an improvement on the Spectrum version but it is still relatively easily confused by long words or complicated phrase strings.

For example, while "Make me a cup of coffee" comes out intelligibly and clearly, the vocals collapse rather on "supercalifragilisticexpialidocious" (admittedly a severe test), giving up after "fragil" and just pronouncing each subsequent letter individually.

Another small gripe concerns the dreaded ROM wobble. (Those with very long

FAMOUS RATS of history: The "dirty" one Cagney spoke of; Manuel's pet in Fawlty Towers; the early morning TV one called Roland. To this illustrious list may soon be added the one from Cheetah that controls your Spectrum.

R.A.T. - Remote Action Transmitter — is your actual infra-red controller. Look, ma, no wires! Cheetah reckon it'll put the joystick about level with the Dodo in terms of mass-appeal. But at nearly £30 a throw I don't think the Dodo's got much to worry about just yet. The R.A.T. consists of two parts. You hold the transmitter, an "ergonomically-designed" unit that looks like a reject from the model-making shop of Star Trek. It contrasts jarringly with the functional black box of the

other part, the receiver, which plugs into the Spectrum's expansion slot.

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The transmitter utilises two touch-sensitive pads (ex-ZX81) owners will feel right at home for all control functions: a firing pad, with rapid-fire facility, and an eight-direction control pad below. Signals are fed to two infra-red diodes on the R.A.T.'s 'nose' and beamed directly to the receiver which can be anything up to 30ft away (for games playing at this distance binoculars are a necessary optional extra). The infra-red signals operate on a different frequency to TV remote control units so there's no fear of suddenly switching over to 'Dynasty' just when you've cracked the 60th screen of Jet Set Willy.

In action the R.A.T. works

DATAPEN LIGHTPEN

memories will remember this phenomenon on the ZX81 rampacks.) So how anyone can undesign a cartridge for the 64 so that it sits in the vice-like cartridge socket and STILL wobbles — resulting in a resetting of the beast — is beyond the ken of we mere hackers.

The speech unit also uses the monitor socket so the snobs with dedicated monitors won't be able to add this particular widget to their collection. The unit can echo the keyboard, or be used for speech from within BASIC. A SAY command is added; say "it with words" does. A small idiosyncrasy is that the rest of any multi-statement line (i.e. after the SAY command) is ignored. For machine code buffs full documentation is given on how to use the unit directly. The speech unit can be disabled so that nonspeech programs which use the 4k area of memory (from 49152 upwards) which the unit uses, will run. It cannot, of course, be used with Simon's Basic or any other cartridges.

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On the whole a very good package in a highly interesting new applications field — and, at £29.95, not bad value either.

DUNCAN GAMBLE

well. Cheetah claim that it will work with 'most' Kempston-compatible games without any additional software and it seemed to do just that with most of the games it was tested on. Reaction times are fast and the angle of acceptance for the infra-red beam seems fairly wide.

Having no moving parts to contend with takes some getting used to and a control disc just doesn't have the same tactile feel that a joystick gives — too many video game companies have discovered this.

Cheetah deserve a big hand for the R.A.T. It's innovative, it's easy to use — and it's British! But at £29.95 it's not going to take over the world just yet. —R.B.

TRENDIEST LIGHT has got to be the lightpen. Budding Leonardos of the video age can be spotted instantly. The blank, expressionless stare caused by working within a centimetre of the CRT; the arthritic fingers from manipulating numerous key combinations

while drawing.

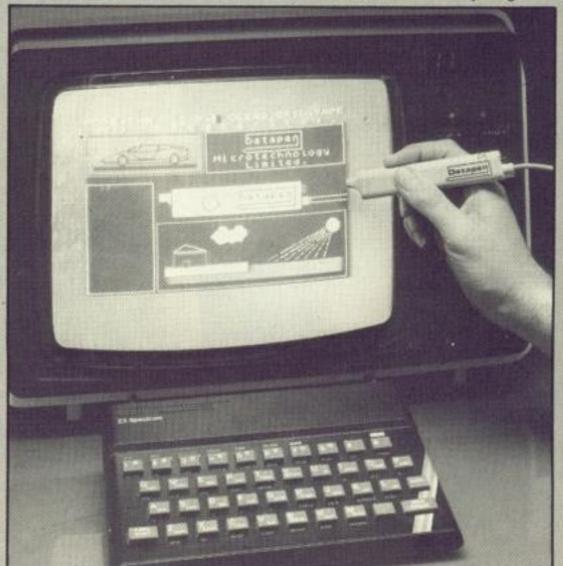
Welcome, then, the Datapen lightpen, as seen on other micros and now appearing on the Spectrum for the first time. It's neat, relatively compact, simply plugs into the Spectrum's expansion slot and is ready to go. No dangling external battery packs or complicated key sequences to memorise.

All electronics are packed inside the pen body itself. A useful button on the outside switches in the computer only when you are satisfied the pen is in the correct position on the screen. A red LED on the back of the pen lights to confirm acquisition of valid video data.

Software included with the Datapen features an introductory program, a music composer, a user-defined graphics designer and a full hi-res drawing program. This is capable of producing pictures to pixel accuracy and includes pre-defined shapes for cicle, restangle and triangle drawing. Freehand drawing is, surprisingly, not catered for. The makers claim the program contains enough commands to make this ".. unnecessary".

In use the Datapen is comfortable to hold and very easy to control. Most programs use x, y-axis scanning bars which are fairly fast and don't require the pen to be held in position for long. A friendly bleep tells you all is well when an action is complete. The pen doesn't seem too bothered about exterior lighting conditions.

The Datapen lightpen is a worthwhile addition to the Spectrum artist's electronic palette. £29.00 buys you a ticket to creative contentment. — R.B.



POSHWARE CORNER

DELILAH IS wearing the very latest in off-the-shoulderware. Cut in daring, tear-proof Cordura nylon these new carrying bags from the House of Inmac are the very epitome of what's 'right' for the computer owner of taste.

Generous thick, highdensity foam padding cradles snuggly the smooth form of the Apple II or Apricot computers — the machines that speak of 'class'. There are matching accessory cases for disc drives and monitors. Designer handles and adjustable shoulder straps complement the whole ensemble and industrial grade zips add that working class touch that is considered tres chic in these troublesome

The 'low end' of the market, however, is catered for with a bag for the BBC. Well, we have to consider those more unfortunate than ourselves.

The Inmac Carry Cases come ready-to-wear for less than the price of a good meal at Fiorucci's. If we can be vulgar for the moment, they cost from between £17.00 to £27.50 each. — R.B.



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```
1 A=7680
2 SC=0
3 POKE 36869, 255
5 POKE36879,9
10 TI$="000000"
                                  FE F
15 PRINT" (CLR) (WHT) (CUR UP)
20 PRINT"EEEE EEEEEE EEEEE"
                                     EF"
25 PRINT" (CUR UP)
30 PRINT"E EEEEEE EEEEEEEEE E"
35 PRINT" (CUR UP)
 40 PRINT"EEEEEEE EEEEEE EEEEEE"
 45 PRINT" (CUR UP)F EF
 50 PRINT"E EEEEEEEEEEEEEEEEE
 60 PRINT"EEEEEE EEEEEEEE E E E"
                                FE
 65 PRINT" (CUR UP)
 70 PRINT"EEEE EEEEEE EEEEE E EE"
 BO PRINT"E EEEEEEEEEEEEEEEEEEE
 85 PRINT" (CUR UP) F
 90 PRINT"EEEEEEEE EEEEEE EEEEEE"
  95 PRINT"(CUR UP) F
  100 PRINT"EEEEEEEEEEEEEEEE
  101 PRINT" (CUR UP) (CUR RT) (CUR RT) (CUR R
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  102 PRINT" (CUR RT) (CUR RT) (CUR RT) (CUR R
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   103 PRINT" (CUR RT) (CUR RT) (CUR RT)
   T) (CUR RT) (CUR RT) (CUR RT) (CUR RT) (CUR R
   T) (CUR RT) (CUR RT) (CUR RT) (CUR RT)
   T) (CUR RT) EEE"
   150 POKEA, 4
   160 IFA$="Z"THENA=A-1:POKEA+1,32:GOTO400
    165 IFA$="X"THENA=A+1:POKEA-1,32:GOTO400
    170 IFA#="; "THENA=A-22: POKEA+22, 32: GOTO4
    175 IFA#="/"THENA=A+22:POKEA-22,32:GOTO4
     180 IFPEEK (A) =5THEN1000
     183 IFPEEK (A) = 22THEN5000
     185 IFFEEK (A) =6THEN2000
     186 IFTI$>"000060"THEN3000
     190 GOTO150
     200 END
     1010 PRINT" (CLR) (PUR) (CUR DN) (CUR DN) (CU
     R DN) (CUR RT) (CUR RT) (CUR RT) LIM
      NJK (RED) OKNO !"
      1015 PRINT" (CUR DN) (BLK) *****
      1020 FORT=1T03000:NEXT
      1025 GOTO1
      2000 SC=SC+5
       2010 GOTO150
       3010 PRINT" (CLR) (PUR) (CUR DN) (CUR DN) (CU
       R DN) (CUR RT) (CUR RT) (CUR RT) LIM
       3015 PRINT" (RED) (CUR DN) (CUR RT) (CUR RT)
       (CUR RT) (CUR RT) (CUR RT) (CUR RT)
        (CUR RT) QSTK .. "
        3020 PRINT" (CUR DN) (BLK) *****
        3023 PRINT" (CUR DN) (CUR DN) (CUR DN) (CUR
        DN) (CUR RT) (CUR RT) (CUR RT) GHIJK-0"
        3025 FORT=1T03000:NEXT
         3030 G0T01
         4000 POKE36878,15
         4001 FORI=160T0240STEP5
         4002 PDKE36876, I
         4003 FORM=1T0100: NEXTM
         4004 POKE36876,0
         4005 GOTO180
         5010 PRINT" (CLR) (PUR) (CUR DN) (CUR DN) (CU
         5000 POKE36879,27
         R DN) (CUR RT) (CUR RT) (CUR RT) (CUR RT) (CU
         R RT) (CUR RT) (CUR RT) (CUR RT) UITK."
          5015 PRINT" (RED) (CUR DN) **********
          5020 PRINT" (BLU) (CUR DN) (CUR DN) (CUR DN)
          (CUR RT)(CUR RT)GHIJK- ";SC
          5030 FORT=1T04000: NEXT
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5040 GOTO1

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MAZE OF GOLD There's gold in that thar maze! Type in this prog for almost instant riches. Use keys Z, X, ; and / for direction control. NOTE: This is a TRANSLATED listing. All instructions in 'wavy' brackets (including the brackets) should NOT be typed in but followed, i.e. CUR RT = cursor right. by G. Roberts for any VIC 20

COMPUTER SOSTWARE



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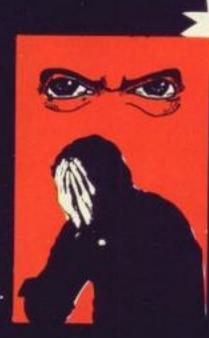
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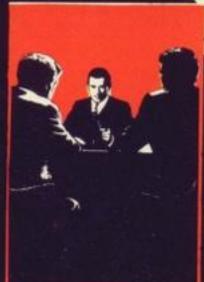
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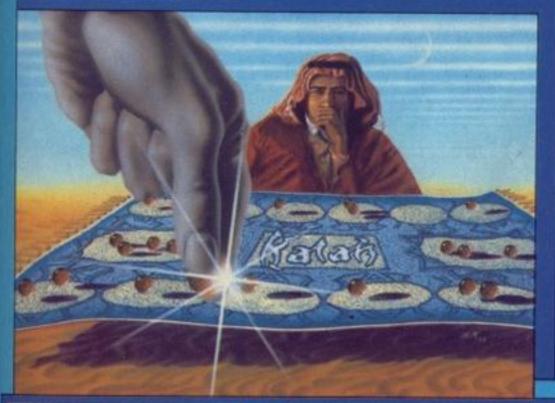
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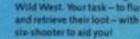
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RICHARD TAYLOR'S PAGE

LAST MONTH'S machine code allowed you to rotate the outline of a plane around your TV screen in 3D. Problem is, though, you're stuck with the plane whether you like it or not, and there's no particularly easy way to change it. Fortunately, my endeavour to correct this dreadful misdemeanour is here in the form of Listing 1. Simply tap it in and SAVE, making it auto-run from line 10. If you don't have a Microdrive, then don't bother with the drive, SAVE and LOAD routines at lines 5500-5570 and 6500-6560 respectively. If you don't have an Interface 1 connected then you'll find that the computer's a bit cagey about accepting some of those lines anyway. Immediately after the recording of Listing 1 make a copy of the machine code from last month's BIG K.

The program's a sort of 3D design/editor, allowing you to construct an object, watch it build up on the screen, view it from various different postions and at varying sizes. There are SAVE/LOAD options allowing you to store an object on tape or Microdrive and return to it at a ner date, assuming it hasn't been accidentally wiped in the meantime. After loading Listing 1 (it will automatically load the machine code) you're greeted with, of all things, a black screen. At this point, you'd either load an object from tape/drive or start off from scratch by creating a new object. The program's driven by single key commands, as listed below. Simply press the appropriate key and the computer will do its stuff:

C - This one lets you change the current INK, PAPER and BOR-DER colours. Due to the problems created by the Spectrum's restrictive attribute system, it's not possible to make objects in multiple inks.

E - This is the End option. Press this and you'll get the 'STOP statement' report. If you in-

GOTO 100 will set you back on the right lines with no harm done.

Q - If you've got a ZX Printer then this should give you a screen copy.

S - This one lets you save your masterpiece to either tape (with the option of verifying) or to one of the 8 possible Microdrives (have you ever seen a Spectrum with 8 drives, 'cos I ain't?).

L-Lets you LOAD an object back in from tape/drive, "binning" any object you were working on at the time. So use with care.

M - Allows you to enlarge or

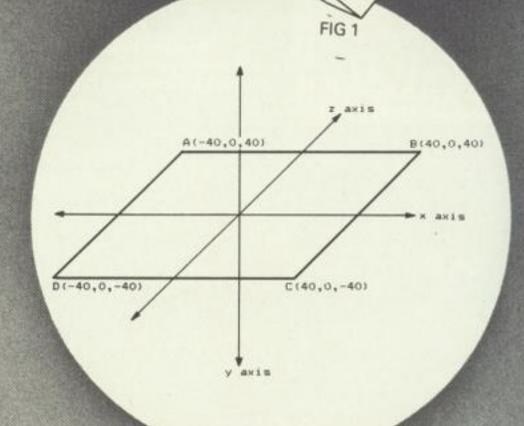
ROTATION: The Next Move

diminish an object. After choosing which of the two possible options you require, you're asked for a magnification or diminishing factor. If you squash an object too much then you'll find that even when you re-magnify it to its former size it might look slightly different due to small rounding errors when it was a little 'un. Going to the other extreme, you'll find that your Spectrum won't be able to fit the whole object on the screen at one time. Getting a bit upset about this state of affairs it will refuse to draw any lines that don't completely fit on the screen, with some rather oddlooking results.

Keys: X, Y and Z — As with last month's demo prog, these keys allow you to rotate the object in the appropriate axis.

Digit keys 1 to 9 — Again, in common with last month's prog, these keys define how much the object rotates when you press one of the rotation keys.

The final three commands are associated with actually entering the data needed to construct an object. As I mentioned last month, 3D points are represented using x, y and z coordinates. The program uses the method of defining 3D objects as points joined (or not, as the case may be) by lines. Imaging that you had in your possession a piece of very rare and expens sive 3D graph paper. Given the coordinates of a point on the paper, then you could place the tip of a pen in the appropriate position. Given another point you could draw a straight line from the first point to the second, or you could simply leave it blank. You could then continue in the same manner through a third and fourth point etc. This is exactly how the program builds objects up, using lines joining points in three dimensional space.



There's only one problem with this method; it isn't possible to draw curves. This is no great handicap, however, since in most applications you don't need to draw curves anyway and, when these are required, you can often form approximations of curves using several straight lines. The commands to construct objects are as follows: T-If you press this then the computer will ask for the x, y and Z coordinates of the next point. The computer will then move its imaginary pen from its old position to the one specified, drawing a line as it goes.

P-Much as the 't' command, except that the machine doesn't bother to actually draw in the line between the old and new points.

D - Press this and the last line or jump ('p' line) that you entered is instantly scrapped (if it's a line, then you'll actually see it disappear from the screen representation of the object).

There are many different ways of entering the data for an object into a program such as this.

while others are easier for us'humans. The method I've used is relatively simple for computers, but it's not the easiest of methods for us. However, since the object actually builds up on the screen as you enter the data for it, it's not hard to spot mistakes and quickly erase them using the 'd' command before they become too much of a problem.

Now to some real objects. The first simple example of an object is a plain old 2D square as shown in fig. 1. It has four points on it, so you need to enter five sets of data. "FIVE", I hear you exclaim. "Why five?" The answer is that to make objects rotate properly the origin must lie directly in an object's centre. The first set of coordinates simply allows you to move the pen from its resting position at the origin to the first point on the object. Even if you use "t" for the first entry, the computer doesn't draw a line from the origin since it knows that the first set of coprdinates are simply there to get the pen in the correct starting

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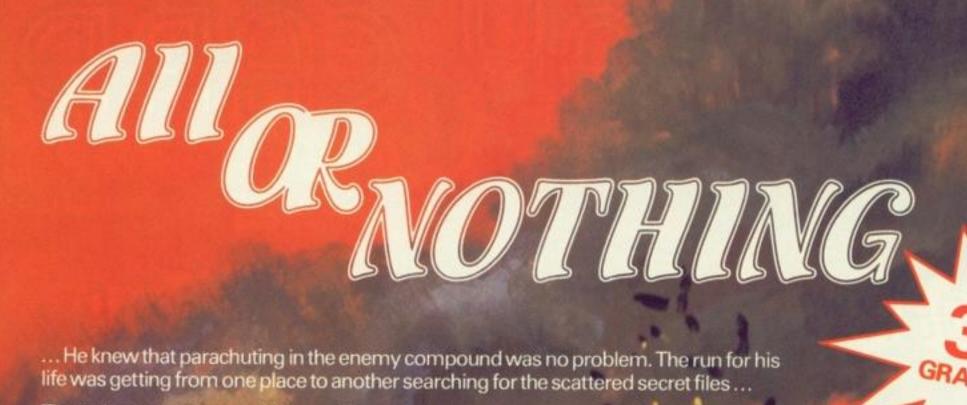
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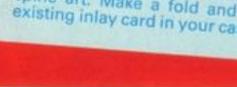
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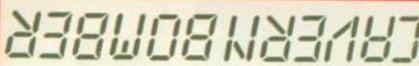
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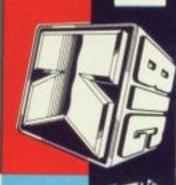






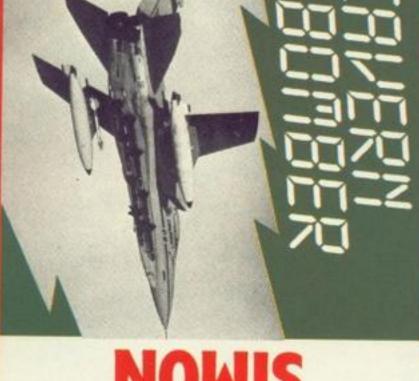














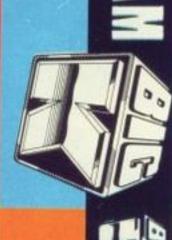




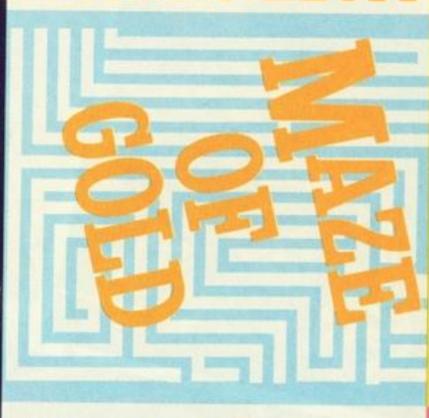








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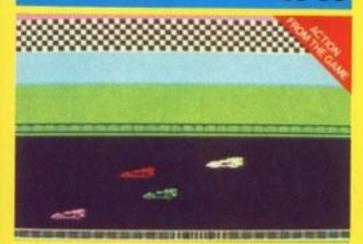
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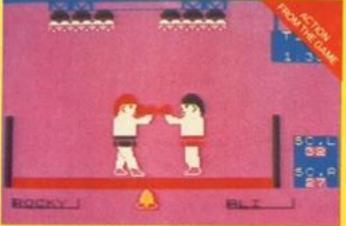
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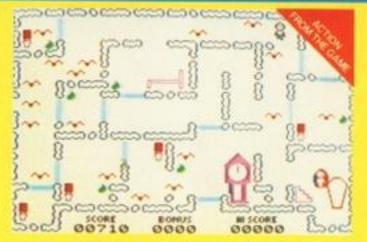
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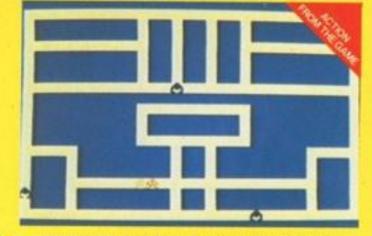
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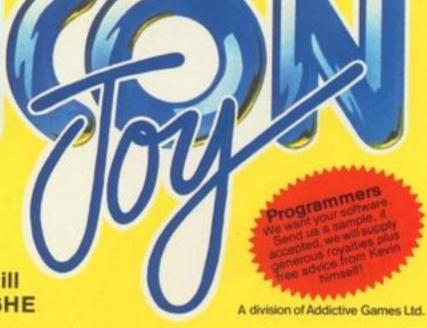
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SOOFOR 02=3 10 24

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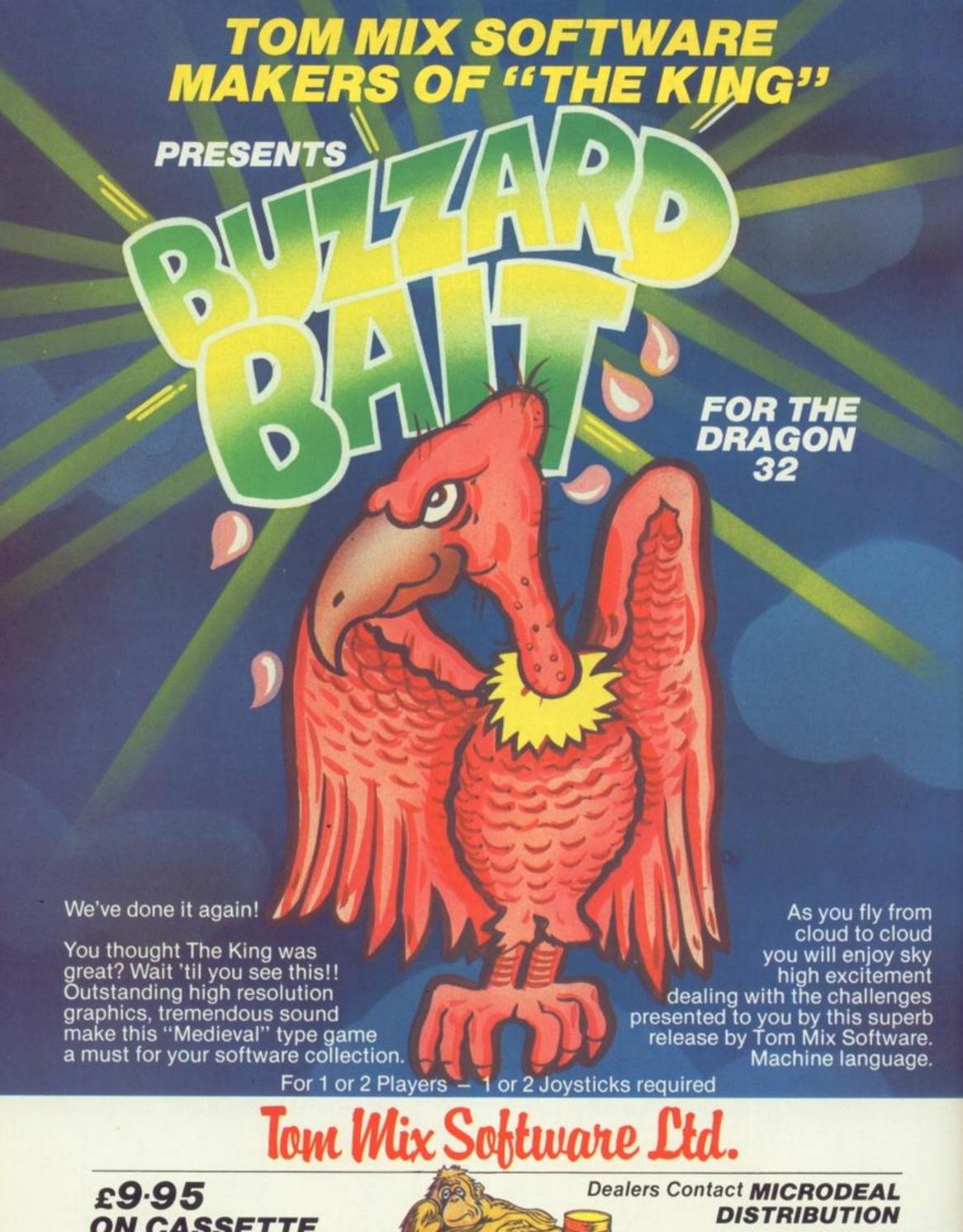
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6207874=S% 6401F RND(20)=1 THEN FRINT TAB(38, JZ); CHR#135; "-- "; 650TF FLAGX=0 THEN GOTO 460 660FRINT TAB(XBZ 1, YBZ);" " 670VB%=VB%+1 6BOPOX=7 (HIMEH+XBX+YBX*40) 6901F VB%/22 OR XB%(2 OR PO%=255 THEN FLAGX=0: SOUND 0, 15,2,3:5010 720 700IF PD%=94 THEN ENVELOPE1,1,64, 96, 32,15,15,15,126,0,0, 1,126,126; SOUND 1,1 ,100,3:FLAGE=0:PRINT TAG(XEZ, YEZ); " ":FIL ELX=FUELX:100:SCX=SCX:10:GBTG 720 FIOPRINT TAB(XB%, YEX); "Y" 720UNT H 0 730ENDPROC 740: 750REM XX Type the machine code TYOREM xx in carefully or else 36-10 7BOREM ** it may destroy the 推推 whole program. 79 OREM ** B00: 810: BYODEE PROCMC 830FOR 1%=0 TO 2 STEP Z D40F%=&C00 SSOLUPT 1% 860LDA 1878 870STA &70 SSOLDA 1370 890STA 871 900LDA £255 910STA &75 920LDX CZZ 930.LOUP1 SHOLDVES 950.LBBP2 VALORS 970LDA (\$70),* SBODEY 9908TA(870),Y 10001NY 1010EPV 637 TOSOBHE FORES 1030LDA 876 1040EME EQ TOSOBNE LESSZ

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1770A%=A%-1



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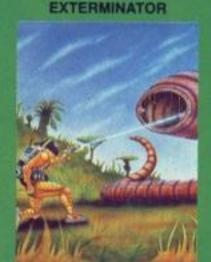
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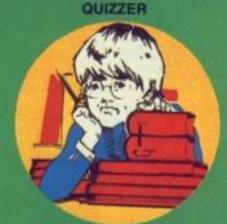


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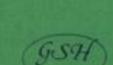
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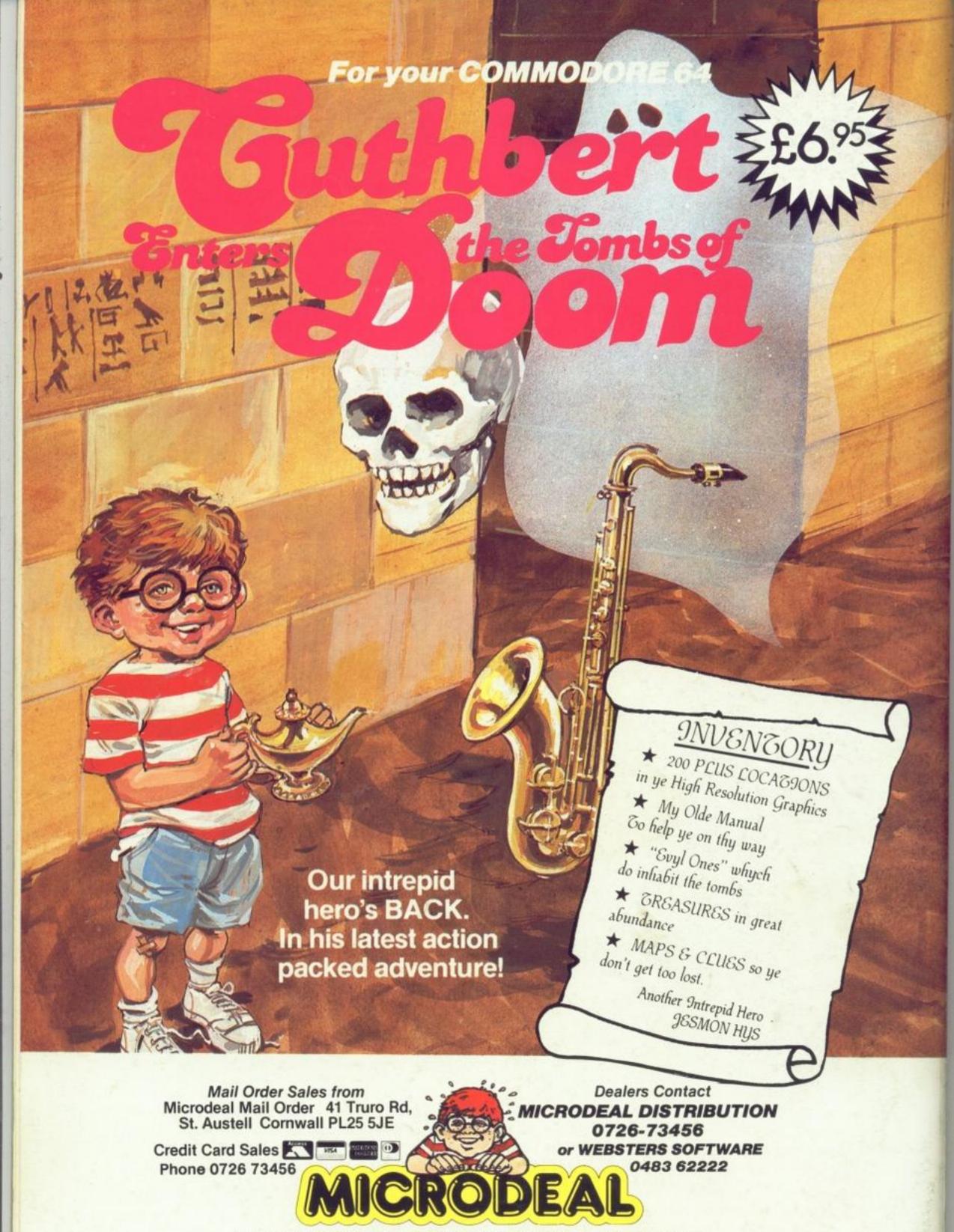
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