



**GAMES TO BEEP OVER /
UTILITIES TO WEEP OVER /**
for Spectrum, BBC, CBM 64,
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No. 8 NOV. 1984

85p



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OF TWO
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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 widely regarded as, at best a creative art form that is enjoying 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 close connection link between the two worlds — imagination. Without it comic 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 880 K take an exclusive look at the making of two games based on the 2000 AD character, Strontium Dog. Combining the theme, Steve Skoton examines the latest manifestation of some American comic 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. Philip-Hughes of Granham is welcome to collect his brick, at any time) on 880 K or computer life in general.

RICHARD BURTON

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侍ソフトウェア 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 mist of time, the magnificent Skull Lord attacked and defeated a clan of noble Deuses. The Deuses lost many treasure, the most valuable of these being the "Clans of Deuses King". For many ages did they attempt to regain the wisdom, and for many ages did they fail.

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Samurai Invaders

This contest is featuring Samurai warrior software sets in to prevent the Alien Invaders from gaining control of the earth. To help you in this task, you are armed with Samurai, because we're all fighting alien.



Ms. Mazey

Can you guide the intrepid Ms. Mazey around the perilous maze and collect the jewels? Or will you fall victim to the evil skull robot? (It's a puzzle!) Or will you get the "missed quest" to see the skull? Well Ms. Mazey can get in see the tower of the East, Poly Omelet!



Rooster Run

Why DID the chicken cross the road? You don't know? Neither do we, but with the help of the game you may just find out! Your aim is to guide the hapless rooster across the road, then, get in the boat and avoid the numerous hazards. What could be simpler?

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 IMMEDIATE DISPATCH

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 so first prize... a \$1,500 grand prize of computer equipment, plus the \$50,000 . . .

To wit, a \$1,500 educational endowment from Commodore to study computer art somewhere in the world (anywhere)? How about... oh, baby, inspiration for the same name that earned his creator his jump-jet dream (sent away from the do/donuts) of life in Compuworld, Manchester was provided by 19-year old Hugh's baby son.

However, though his entry ...

settled cryptically enough Louis (Weatherman Follows US) And Obnoxiousness ... may have been triggered by kid Louis, this art belongs to daddy! (You're dead ...)

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

Hugh comments: "The \$3,000 endowment will enable me to learn from some of the world's most respected experts and at the same time develop techniques which will stand me in good stead when I return to Britain."

He has never sent back his LHM.



FLARED JEANS FIASCO COMES GOOD

"YIPPEE, TERRY, it's like this.

"There I was, having a quiet walkie stroll in the Winchester, with Dave giving me the G&T of the warble about the stars, when it walks like giraffe — funny suit — second-best to come in and nice little career."

"Well, you know me Terry, never miss a trick, so naturally I asked 'em 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 there ... get the card 'ere somewhere ... OK? You see — storage name ... and would I sign on the dotted line because of he and some other geezers 'ave made this video game based on, well for I, you and me, Terry!"

"So we did a deal then and then and the result is, you're in, my son, for the time of ... er ... had a monkey, think, monkey suit. No, don't thank me, Terry."

"Anyway, after 'e'd gone I got onto Caligula Tomkinson, the one 'ee brother is daft' four years in Britain for video piracy. 'E' 'ad this load of computers, so I thought the

ten Caligula notices I can shift 'em for an easy two hundred a time. Jupiter Aces, they're called. What do you think of that?"

"How 'bout I want you to do for me Terry in this ..."

WINNER, from **OK Friends**, by agreement with Thames TV, is on the **COMBAT**, Spectrum, Amstrad and all MSX machines. It sells for six nine nine five pence.



CAMEL MAN IN SHOCK NUMBER CRUNCHING ORGY

The number? 3.5 million. This, we hasten to add, is not nearly the income of Jeff Minter, ace programmer, bearded supreme of Lhasasoft Ltd. No, it's actually his personal best score on his own new Commodore game, *Antipital*.

The game is billed as being a "Progressive Arcade Game". This seems to mean that it's a very de-

tailed arcade adventure. Features are one hundred separate screens, with a single key-press HELP facility for each screen. Minter himself claims to have solved only 83%.

Next big question is, does it mean a break with the tradition of furry ungulates — camels, sheep, llamas etc. Surely it can't all end here, with the world's wildlife still unexploited.

IT'S FOR YOO-HOO

TULLO, TULLO. Bubby here. I'm singing to convey for support. Save Bubby's Beak, the cry goes out — and for why? 'Cos dark deeds are afoot. Rumours abound. Word is that I'm not considered fit-enough for the official dog and bone brigade.

"Worse still, I've heard that there's a rival fawning in on my patch. This hot chick goes by the name of Firebird, so I've heard. A sauced-up winged warrior of the airwaves that's set to boost me into extinction. Well, not

without a fight, I say. Let me tell you, I may not be fast, I may not be sleek and aerodynamically fit, but I'm famous and I'm lovable and I'm quality." and ... **SOLLAAWWEEK!**

Right. End of space-filling fantasy. On with the news. Firebird is seen as Bubby's alter-ego, and is in fact the nom de plume (goddit!) of host for id's A New Range Of Computer Software's currently being put out by those dedicated people who gave you: "Oscar Monogotia! But I was chatting my Aunt Doris

in Dorling!" Vs. British Telecom.

The BT man-on-the-phone, was at pains to stress that the aim of Firebird is to provide open, honest, value-for-money products. To this end, box illustrations have been replaced with screen shots — "What you see is what you get."

Their initial launch of twenty titles, across the range of BBC, IBM 64, Spectrum and Vis 20, are aimed at pocket money punters, and retail at £2.98 each.



You Haven't Lived Until You've Died In MUD...

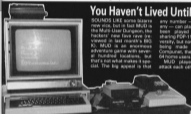
SOUNDS LIKE some gamers now vice, but in fact MUD is the Multi-User Dungeon, the "hackers' new fave rave" (reviewed in last month's BBC R). MUD is an enormous adventure game with several hundred locations, but that's not what makes it special. The big appeal is that

any number — well almost any — can play. To date it's been played on a time-sharing PDP-11 at Essex University, but now the game is being made available on Comshare, the Commodore 64 home users network.

MUD players can talk, attack each other, give each

other help, all within the adventure universe.

As you gain skill you get to be a Wizard or Witch, and there the sadism really starts. These elite Überweenchiefs can use the command "MUD" to watch what other players are doing, torment them, or (score change) we'll bet) give them useful tips. The headline is a quote from an actual player, so watch your name! For those prepared to risk it, MUD is to be launched at the beginning of October by Century Communications.



Use 'Smart Milk' To Destroy Alien Biscuit — OK?

SEVEN THIRTY! As you spoon your morning nutritional intake of protein-filled, milk-and-sugar-covered quantity stuff mouthwards with one hand, you can now use the other to control the antics of Dunk, Crunch, Bixie, Bixies and Brian — okay? If you can keep those bleary, morning-after peepers firmly fixed on your monitor screen then you could be game for the latest offering from a certain mess of baker — Welta-Bix versus the Titchies is here for your delectation.

As part of a mega-million pound campaign, Welta-Bix's promotional consultants — Clarke, Cooper — have joined forces with software producers Barmk to

put out what they claim to be the first-ever generation of computer games.

At the time of going to press, the first packages of these compressed, wheat-based nutritional units with the software have not yet materialised across them are winging their way to the shops. The game is only

available from Welta-Bix and retails at £3.75 for those minor mortals not members of the Welta-Bix Club. Clubs can buy it for a whole pound less. More.

Both Barmk and Clarke Cooper Ltd would appear to be squinting with excitement at the possibilities of this giant step for bean-kid.

It remains to be seen whether the punters consider this arcade-style about 'em-up to be in the best possible taste.

Today the breakfast table, tomorrow — Hollywood? Are we on route for Welta-Bix: the Motion Picture And who controls the cereal rights?



GARBAGE IN GARBAGE OUT

by The Shadow

You Get the Cream To Whisk The Kinky (Probably Not 'N). You are looking at the new ultra hard-core or even, at times, an ultra-irresponsible games software company. So, you really are. It's just that the business isn't covered around. Official sources tell us that this product and others are for serious entertainment of an exciting new wave of Gamers, while the idea is to give the world an. They have to be the emerging direction to take some of the software. The company? The overwhelming. Or, at least — then Chairman Reads The Question. Another a Week. 2001.



The images saga gets on (before) and you remember that and one but five games housed are being from the others — but no more seemingly for integrating Eugene Ernie ... hope he saved some of the hard-earned ... However, Mark Butler reached where OK, clinging to all can, thanks, and can't now be found — along with T. Reed — in dad's fine storage ... Said Best Man, meanwhile, keeps mysteriously ringing up the Tower of Power offering what he calls "the real story" on ...

Some, Tim, get to involve the fifty-year rule on this one ... Fellow Livermoreites Software Projects have meanwhile taken on most of the reluctant investigators, who by now (the Shadow assumed) know all about The No Possibility Syndrome ...

All together now, an' let's sing out the G. Effect: "Wake up, the morning, get'ing up with my microphone! Also occurred to me, the keyboard is just as much (and what's game software can't), can it?"

Rightly cited, long-awaited (uncommented), unapreciated, customer-discouraged machine survives? OK yeah?

Never mind Making It How Do You Address What You've Got It? ... Unperturbed by a recent RGM follow-up with their Organizer the tale at Poles have found a new use for the tiny computer. Doctors in family planning clinics will be advised about the effects of different kinds of contraceptive pill in a special RGM pack ...

Ladies, which well-known person has unexpectedly with the computer industry, deep in the heart of Silicon Valley (maybe, but not by the LAPD Cops, Mafioso, Stanky) (avoiding Olympic Games invite letters to major partners for Large Sums of Money? Can (Delisted) his business really reach that stage? The Shadow knows, for he walks by night — when everybody knows the idea should be getting some. So like the rest of us, the poor old boy looks chapped out these days ...

IS THIS A KEYBOARD THAT I SEE BEFORE ME?

Oh is it? something entirely new? The first adventure game scripted by talented screenwriter to the movie screen Bill Shakespeare arrived this month. Marketed on his behalf by Oxford Digital Enterprises, it's an interactive version of the down-brood and sage-ridden Macbeth.

Academics purists may well throw up their hands at this

one. After all, how can it rival Macbeth when the player can alter the entire plot by either being loyal enough to get caught red-handed killing King Duncan's throat, or alternatively by saving off the computer Macbeth at the end thereby averting continued occupation of the Scottish throne?

But ODE have done their best to sidestep any accusations of "infidelity". The package comes complete with a 120 page book containing a copy of Macbeth, plus lengthy notes on the action.

The game itself is a biggy. The play's split into four separate adventures, and there are plenty of graphic screens. The key to solving Macbeth seems to be an article for elaborate word-play. Very Elizabethan. However, a quick look-over suggests that it may not be that easy. Each game segment is automatically followed by a psychoanalysis program, in it all a plot by Oxford dare to show the punters real? Is there a K&S connection?

The public should be told.



TEMPESTUS DRIFICE TAKE BRONZE!

STRANGE BITS of abominable ruse and unappreciated practices have changed from Games Workshop, organizers of Games Day '84.

Down at the Royal Horticultural Hall, massed hordes of game-crazed death-brains queued up to participate as the character of their choice in any one of 99 simultaneous role-playing games. The mind cannot grasp the enormity of this scenario.

For those of us not hip to the game, we speak not of computer games, but of extended pseudo-drama involving up to twenty real-player-type people. Unaware (instead of the computer, we played the Dungeon Master, a person the characters and their world. Which brings us to the Games Awards. Plenty of these, involving the unknown to list. The most new role-playing game is undoubtedly called Middle Earth, but we are pleased to note that the original and totally amazing Judges Guild was the subject of the No. 1 SF board-game. Most surprising award — the third prize for games features — went to the eventually titled, Tempestus Drifite. It and when we get hold of a copy, you'll hear more.

It is absolutely brain-boggling to discover that this awards was the first Games Day — after eight years of the event — to feature winners. Where have they been? The new line may have something to do with the launch of these new Games Workshop titles. Remember how glad is a unit of Death Metal 2000 with best-selling releases. Two mega-road-hogs ship it out with heavy weapons in a play Centre. Also coming is D-Day, a four player version of the well-known war movie.

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(max 200)



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ACTING	12.95	6.48	017153	Unrated
ACTING	12.95	6.48	017154	Unrated
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Signature: _____



The Red Kipper Flies at Midnight

YOU GET HOME ONE EVENING to discover a message on your answering machine. Something you'd thought hidden for good has reared its ugly head once again. Valkyrie 17 is active.

Over the next five nights a series of frantic phone calls convince you that the matter deserves further investigation. You receive a dossier on the activities of Valkyrie 17. Pieced together from fragmentary reports culled from the last forty years you slowly begin to put the whole thing together. Drakenfou, Heinrich and Reichsmuller. The badge pressed into your hand on the station at _____.

And that last desperate call for help from the Glitz Hotel overlooking Lake Bourne.

Your cover is good. Very good in fact. You spend a few days sniffing around and then head up towards Lake Bourne. You check in to the Glitz Hotel. It's the last lead you have. You seem to be getting nowhere.

Then on your way to the bar you sense a movement in the shadows. You feel a blow on your temple. And everything goes black...

Valkyrie 17 is an Adventure featuring both graphic and text locations. You will meet several different characters some of whom may help you while others see your demise as their sole purpose in life.

Included in the pack is a comprehensive dossier on Valkyrie 17. On the reverse of the cassette tape are the answering machine messages. And then of course there's the game itself.

LOADING TIME	8 1/2 minutes.	MICRODRIVE	1/2 PER FUNCTION
LOCATIONS	100+	FUN FACTOR	B
LEVEL	?		
SOUND	Bleep Bloop		

HINTS

Watch your back, try not to get killed and mind your language.

The Publisher/Designer cannot accept responsibility for any other incidents which occurred during the playing of Valkyrie 17. Furthermore the publisher of this work offers no warranty rights.

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Although only an instant classic, only because.



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BUS LOAD TRANSPORTS OF DELIGHT

WELSH RARE BYTE

Cardiff's Microbus System

MICROBUS is now being launched in Cardiff. It's a computer program devised by the City Treasurer's Computer Centre to make the urban bus fleet more efficient. "All aspects of the transport system will be computerized," says Eddie Lee, Senior Administrative Officer with Cardiff City Transport. "These traffic management and engineering through to collecting fares."

All vehicles on the road are continuously monitored both individually and according to their routes. Drivers are linked by radio to a control room from where the information is fed on to computers. Each journey is scrutinized to cover a vehicle leaves doors, in which instance a bus on a nearby route can be traced by computer and directed to pick up stranded passengers. Mileage covered by each bus is also to be recorded, thereby enabling transport managers to observe how well-observed routes to daily wear and tear. Similarly, the computer is programmed to monitor vehicle's fuel supply and to notify drivers when re-fueling is needed.

The Flouguard system will

encourage drivers to record the easily forgotten small defects which come to light on route — for example, a water leak or alignment. The driver can radio the computer operator giving the bus number and detailing the work needed. The computer will then inform the engineering section of the fleet — and ensure that it is rectified.

"Computers will also be used to cost and record engineering

work carried out on each vehicle," says Eddie Lee. "As well as updating the bus' comprehensive life history, it will enable us to determine whole state of bus is the most efficient and economic to run. Under our present manual systems this is difficult to judge, but when provided with accurate data we'll be able to decide which makes should be added to the fleet and which discarded." Similarly, individual

buses can be assessed. They usually last 12-15 years, and the computer is used to pinpoint which vehicles are coming to the ends of their useful lives.

Cardiff City Transport operates a fareless system, in which drivers don't handle money, instead passengers pay their fares into a validated machine. These machines are disconnected every evening so that the day's cash returns can be counted on computer. The money is then checked against the tickets used. As each ticket specifies the route and stops at which passengers board the bus, the computer also works out which stops and routes are the most popular. This enables transport managers have sufficient data to pinpoint districts in need of more buses and to show how routes can be extended to cover new estates being built in the city's outer suburbs.

"The computer system is a means of making the bus fleet more competitive," Lee explains. "We also believe that it has marketing potential."

ISLA SMITH



GAMES AID RECOVERY

COMPUTER GAMES have been prescribed as a new road to recovery for serious head injury victims. Gordon Pennington, Institute in Bristol, is a pioneer in using games as physiotherapy for the brain. Gordon's patients, mostly under the age of 25, are playing games for two to three hours a day. The result is rapid improvement in memory, concentration, reasoning ability and hand-eye coordination. The very first on the programme was 18-year-old Richard Bennett.

Richard was knocked down from his motorbike by a car last October. He retained serious head injuries and nearly died. He lay in a coma for a month. Friends

and family visited — played rock music and danced — and finally, Richard awoke.

"It wasn't like in the film," said his father. "It was a gradual business: the flicker of an eye, the twitch of a finger. One someone had the bright idea of giving him speed. Well, painfully, he awoke. 'R.L.C.'... and he knew he was going to get better.' And what it came to recovery, 'he couldn't have been in a better place at a better time.' Richard began playing games in February, and is already almost fully recovered — six months early.

So much for the bosses who keep telling us they're human.



AUTOMATA U.K.

The Piman's Software House



DEUS EX MACHINA

DEUS EX MACHINA 48K Spec, Komparon joystick & ZX Interface 2 compatible. The simple new era of entertainment, also new for Ours, Joe Pevensy, Piman's Heaven & You, in an animated television fantasy, synchronized to an incredible stereo sound track. There is nothing like it in this world.



PIMANIA

PIMANIA 48K Spec, The Gun Adventure Party to visit! Could you be the lucky winner of 1st (Golden) 2nd (Silver) or 3rd (Bronze) Prize? 1000000 in prizes of 1000 by the Computer 1 table Association Limit version!



Pimania

PIMANIA 48K Spec, M/C Arcade Style, Komparon joystick & ZX Interface 2 compatible. Strike a light! Fire your imagination. The bright spark of a Piman is having hell on to make the students of Lustrum Towers the boss of the town! Can you help slither those demons the Piman's outstretched arms and help the demons give up smoking!



DARTZ

DARTZ 48K Spec, Family Fun. The 3rd version of your local's favourite game! Includes true life scoring with 'The more you play the more you think, the more your game becomes' rule!



P-EYED

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WHEN Asterix bursts forth from the depths of Accornsoft, a few months ago I shot a radiant glow at a somewhat unimpeccable software market and created a shamed sense of admiration of the kind you see around a man who kicks balls under the area that makes a hell a hell. So when I burst into the big K office the other day screaming IT'S BETTER, IT'S BETTER, I thought it might provoke some kind of reaction. It did. They're angry, someone muttered a large loss of last month's income hit me especially between the eyes. This was not the kind of reaction I expected. It evoked a nearby hand firmly by the ears, dragged it over to the nearest BBC and loaded the game. As I started showing him how to play, the player, overworked and gradually faded from his eyes baring to that of the hard-core game 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 developed for a crack at this most recent work of genius. It looked as though that was the last I

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was going to see of Elite for some time.

And it really is that good. Fast and highly complicated. It's sort of space arcade-atomic-war/strategy game where you run the planets carrying a dangerous firing trail between the planets, avoiding planets and hostile atoms and behaving yourself — or not — when the local law comes sniffing at your tail.

As the game, or should I say, epic, begins you find yourself sublimely decked in an orbiting docking station above the planet Pluto. Launching your ship you find it to be a Vulcan Mk. III trading/combat craft, equipped with a front-firing proton laser and a twenty-tonne cargo hold. You check the mar-



YOU BET YOUR ASTEROIDS

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

bet prices and decide to fill your hold with low priced food. There's no way of knowing he size but there's a pretty good chance of selling it for a profit on Laseeth. With a quick glance to make sure everything is OK, you launch the Vulcan and set hyperdrive co-ordinates for Laseeth, a small, light industrial settlement a few light years away. Within minutes the hypodrive cuts in and before long your viewscope show Laseeth, but far away. You open up to full power, life is hard enough scrubbing a living on the sparsely without being half your cargo to planets, and the

planet looms closer. Just as you're approaching the safety of local space a ship 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 reverse to meet them, firing rapidly and manage to pick one off. Another man goes down to a hovering missile, but the rest are too smart. Your only chance is to run for it. You swing round to face Laseeth and after what seems like hours of endless dodging and weaving, your control panel indicates that you are within the defen-

sive screen of Laseeth'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 bean laser you're always been promising yourself. If that last episode was anything to go by you were going to need it.

So goes a typical session at the controls of Elite. The whole session takes place in real time — very real — like graphics, similar to those which made Asterix 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

Planet View



running contraband, slaves or narcotics, then watch out for the local law. They take none too kindly to bopy traders trying to make loads of their own and they show it. Once they're on your tail you'll never catch them off the top of this there are the Thargoids, virtually indestructible, invincibly 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 shrug about to the limits of the work for making inter-questions, but now? Who knows, anything is possible. Whatever happens, this is a classic — in the genuine sense where classic means Forever.

Reviewer Impressed By Unexpected Humility of Software Genius

A FEW phone calls got Big K in touch with David Andon, 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 Andon, it turns out, is a small antenna student and Ian Bell studies music, 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? He started off as a combat game.

Neither of them have got any further than a 'competent' status, which still leaves 'changeling' and 'mighty' to go before they reach 'elite', the ultimate accolade. If the creators can only get that far, what chance

do an ordinary mortal stand? There's a rumour floating around that Accornsoft is searching 'mildly' but I'm not sure who.

Andon was very careful to point out that Elite has nothing to do with Asterix. In spite of the obvious visual similarities — which is understandable considering the amount of work they've put into it. Let's hope the loop's up.



CARPET CAPERS
Spectravox 492

Take a collection of clearly made, designed carpet layers bearing multi-colored walls behind them, add a selection of objects to be picked up as you move from room to room, and the result should you'd? It is — inevitably.

Initially, though, it's not overly irritating. The carpet layer figures are headless, wackier, stick men, which take a bit of getting used to. And then there's the, matching objects that you're after, and often making a mess of it, to your confusion.

Since you get going, however, it's completely absorbing. I looked at my watch after a couple of games and was astonished to find that I'd been at it for an hour and a half. The trick is to get the objects you need to keep you going, get a key to get into the next room, muddle all, many other surprises in the game and fly a couple of carpet without thinking yourself in a corner. It makes really silly patterns, too. — D.R.

From: TRUMBLE SOFTWARE
Price: £5.95

Graphics: 32
Playability: 3.5
Additions: none

ELECTRON INVADERS
ELECTRON

K K V

**GOOD
GOOD
ELECTRON
INVADERS**



Now would begin here. Did anyone play this, there's plenty more for you to read.

Then the editor to Electron magazine was Space Invaders. It was a great success story and was bound to be a hit. It was the very first video game that had been made for the computer. It was the very first video game that had been made for the computer. It was the very first video game that had been made for the computer.

Then the editor to Electron magazine was Space Invaders. It was a great success story and was bound to be a hit. It was the very first video game that had been made for the computer. It was the very first video game that had been made for the computer. It was the very first video game that had been made for the computer.

BEAM RIDER
Dragon 32

K

Let's see... The beamer looks like a yellow episode 70 and those loosely packed fire blue boxes are blobs of nuclear waste. Clear as misty clouds as possible by running over blocks with your beamer before being its beam. Okay.

Using the joystick you move the beamer over springs continuously or vertically as required, whatever the nearest block, whatever is adjacent on across a goal. Therefore, you fit nicely around the screen while you keep on about trying to think your path, with fatal consequences.

A circle with a ring of 160 lines around the screen rebounding from both blocks which temporarily change colour. By pressing about the beamer becomes purple to beat a circle or both returns in a pretty routine shortly the beamer fragments, the bits according to the button of the screen, if a shot a plain sure to get stuck, surely a weakness in any game.

Having developed a strategy for guaranteed success (not another's joystick control) why not a keyboard option? It is not precise enough to respond to your every whim. Thus, all your plans go up the street when you alternate a block you wanted to see. Although not mentioned you can grab 200,000 by shooting the last row game in display.

There are several pattern of boards to clear as it the whole concept is a spring — 7.5.

From: Dragon 32
Price: £5.95
Graphics: 32
Playability: 3.5
Additions: 7

Each involves about ten. All the familiar elements are familiarly repeated, patterns upon patterns, but some, the machine, can be used in various ways to get better and better with.

Sound, graphics and colour are excellent. Simple but, right and the controls make it easy to see. Options include 1 or 2 players and

replayed later. A recommended title to the world of arcade games, looking for it on Electron owners with the special mouse and other... — D.R.
From: Dragon 32
Price: £5.95
Graphics: 32
Playability: 3.5
Additions: 7.5



GRABBER
Dragon's 32

A review for Grabber which doesn't like realism. Don't lose this. For those who have details ready.

Grabber is a poor reason of the PlayStation. A novel idea presents you with a robot program featuring two alien worlds featuring two alien worlds and two alien worlds. There are four levels and two "power-ups" in each world and two alien worlds. Using the grabber you move around a maze and collecting them one by one. Many levels feature an empty box.

Monsters, make life in any life and share you, also talking and treasure from the boxes if possible. If you

are caught you lose a life, get a "power-up" and you kill the monsters. Alternatively, pressing the key makes means to follow the maze when you like to avoid how the maze changes whether both means continue solving your efforts whether you are there at all. Successfully playing at night is a different part of maze.

Good idea isn't for Grabber, the documentation is inaccurate, the graphics is pathetic, the levels are mostly empty and the music is not. February — T.S.
FRANK TONE
SCOTT BARK
FRANK TONE
FRANK TONE
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FRANK TONE



MICRODEAL

BUZZARD BAIT
Dragon's 32

Design a dangle and throw a thief! This program, packaged in an awful plastic box, comes complete with a little black velvet hat. Tapes aren't used without a dangle and there's only one dangle per purchase. "Waf" said.

Buzzard Bait is a Dragon version of the arcade game, Just. Mounted on your tray (press, controlled, control), launch the ready and four lives at your disposal, you fly high to do battle with yellow-bell.

The fire button controls, fight while "gravity" hinders it. Clouds provide strategic red dots and obstacles to maneuver and, a built-in rebound effect can have you bouncing around all over the screen if you're not careful. . . . even if you are careful actually. The disposition consists of several fun who's numbers increase as you progress. There are dispatched by colliding with them, meaning that you are at the greater altitude. Otherwise you are dispatched and your reinforcement appears on a cloud (not a help in flight). (Shoutout to my opponent don't "bluff" it first. Take too long to steal a "waf" and a periodically appears to attack you with vicious and fatal sways. Difficulty increases automatically as a monstrous hand to land disintegrating and the Dragon can die. It leaves great check you know the skies should you fly too near.

This game shows what the Dragon can do. It leaves great other software in the shade. Control responses is excellent while the graphics, animation and sound make for an excellent one that but the price is a little bit. — T.S.
FRANK TONE
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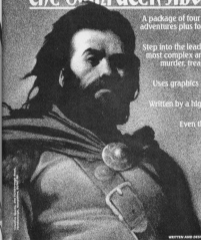
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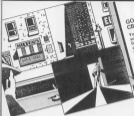
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MUGGY
Spectrum 48K

Despite having been touted as one of the most of space shooter games ever, Commander Muggo has not done as well as anticipated for the early days of the Spectrum 48K. Still, the game's charming, whimsical, and colorful graphics make it worth a look.

As Muggo, a hero, you must take control of a spaceship and fly through a series of levels, fighting a variety of alien ships. The game is fairly simple, but the graphics are quite good, especially the alien ships and the colorful backgrounds. The game is also quite easy to play, making it a good choice for those who are new to the genre.

K **GO SPRITE COMBAT**

You can have a lot of fun with something like this trying to knock out all you can in an extremely fast pace. You can't, naturally, knock out all you can, so you'll have to wait until a good example of a game to watch someone else play to see if you can do it.

Go Sprite is a sophisticated sprite action game with graphics that are fast and furious. It's a fast-paced, action-packed game that's easy to play. The graphics are quite good, and the sound is excellent. The game is also quite easy to play, making it a good choice for those who are new to the genre.

The first screen is the drawing screen where all the drawing and editing of sprites and dots. This is fairly standard stuff, but the editing is quite good. The game is also quite easy to play, making it a good choice for those who are new to the genre.

Price: \$10.00
Spectrum 48K
Playability: 5
Attractiveness: 4

THE HOUSE OF USHER
COMMERCIAL

Here we have one of those super-ambitious, single player character games. Even with magnificent graphics and a diverse state you must face your own mind about death's variety of horrors. It's a bit of a stretch to get through, all difficult enough to fit you up the the spine.

All the graphics are of the highest quality and you're along with variety, the graphics are quite good. The game is also quite easy to play, making it a good choice for those who are new to the genre.

Price: \$10.00
Spectrum 48K
Playability: 5
Attractiveness: 5

MASTER MARKER
Spectrum 48K

In which you control the good ship "Titan Trader" and, through a variety of means, you must control the ship's position in the Atlantic Ocean. As you can see, this is a bit of a stretch to get through, all difficult enough to fit you up the spine.

Price: \$10.00
Spectrum 48K
Playability: 5
Attractiveness: 5



K

Certainly I had another screen tucked away somewhere up at the making a few screens in the background of the screen and this is where all the drawing and editing is done. Sprites are drawn over into each other and you can also draw on top of each other using a pencil. It's a bit of a stretch to get through, all difficult enough to fit you up the spine.

When you've finished making the graphics screen, where the sprites are drawn into a line, they are then drawn onto the screen together with some coordinates if they can be automated.

After all this Go Sprite has a very good game. The graphics are quite good, and the sound is excellent. The game is also quite easy to play, making it a good choice for those who are new to the genre.

Price: \$10.00
Spectrum 48K
Playability: 5
Attractiveness: 5

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



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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 streamlining dive and roll.
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Fast loading cassette.



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You swear

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Learn how to communicate with animals and move objects by sheer concentration alone.

You can develop a "Sixth Sense" that warns you of imminent danger. It may also reveal the true nature of a stranger.

"Tracking" may help you choose the right path and decipher prints or tracks of creatures in the wild.



The discipline of "Healing" can restore your "Endurance" after being wounded in combat.

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MIKE GOLD probes the new regime at Atari.

YOU KNOW, if Atari ever gets out of business, we micro-watchers won't have much to talk about.

The 7800 video game unit promoted more games than sales, *Laserdiscs* transition from *The Force* to *The Chip* proved to be in vain, and Warner Communications got sick of running a half-billion dollar loss. They sold the home division — everything but the arcade games and the mythical (and thus far mythical) AtariTel units — to Jack Tramiel.

TRAMIEL-STYLE

The deal is surprisingly simple: Warner virtually gave Tramiel Atari for a flat-fee of 100,000 and stock options. If Atari turns the corner — and it's one hell of a corner — Warner will waive some real money. If not, well, it was dying anyway.

Tramiel's the founder of and the power behind Commodore. He's still the founder, but earlier this year he was unceremoniously dumped amid a slew of rumors. Commodore says — and it is — extremely successful, the problems arise of a more personal nature. Ostensibly, Tramiel wanted to install his sons in positions of authority at Commodore.

To say Atari's new owner runs a tight ship is to imply there's some sort of chain of command. Atari now is the Tramiel family ship. Jack is the company's chairman, his son Sam is president, his son Leonard runs software development, and his son Gary

has the unenviable task of collecting unpaid debts. Family arguments now have a direct bearing on employment lines.

If the Tramiel family can save Atari, it's with the same know-how and practices that made Commodore a company to beat. The formula is simple: low overheads, foreign production, low prices. Move everything overseas where labor is cheap and unions don't exist, and then buy the raw materials cheaper than anybody else.

They had to build a new type of revolving door: the day Jack Tramiel arrived at Atari, he and his sons came in, and nearly everybody else was fired.

Then they moved fast. Atari clamped a tight lid on information — a stunt that worked well for IBM. They killed or tried to kill as much advertising as they could, including the potentially lucrative television campaign Warners had in place during the summer Olympic games. They weren't entirely successful, but they had already made the decision to continue the popular and successful *Man-A-Hole* ads for the 8088L, so this expensive and valuable airtime was put to good use.

Tramiel fired the first two shots in his war against his former company. He immediately killed all AtariSoft games for the Commodore 64, and he hired a bunch of his bright-guys from Commodore. It's clear to see who Tramiel sees as the enemy.

Jack Tramiel has a formidable task: Making room in an already crowded market. It's tough to beat IBM at the high-end, and the middle-ground is owned by Apple. Radio Shack/Tandy has a solid foothold in both fields. Commodore had a look on the under (300) end of the market, but the C6464 is seen as ancient and the Plus/4 as something only a bit more interesting than Atari's 7800.

NEW BROOM

The 2600 is a dinosaur staring at oblivion, but nobody's sure when the animal will die out. There are between ten and 15 million 2600s still in people's homes, but exactly how many of them are still being used is unknown. So what did Jack Tramiel buy?

He bought the Atari name — still the most recognized

name in the home computer field. He bought a large but dying market for 2600 software, and he bought the mildly successful 8088L. Separately, Tramiel bought a ton of disc drives, which he will use on the 8008L, or on some new marvel.

THE CHALLENGE

So what is going to happen? A few highly-educated guesses:

- (1) The 5200 is dead. Warners killed the hardware; Tramiel will kill the software.
- (2) The 7800 might very well be a lifeline. If it ever sees the light of day, it will be dumped in the fashion Warners dumped the Atari 1200 (which never made it to the U.S.).
- (3) Atari will continue to sell 8088Ls and make AtariSoft and 2600 software, at least for the time being. Tramiel has to keep the Atari name alive.
- (4) Stock will be dumped at bargain basement prices in an effort to bring cash into the company. The 2600 unit is expected to sell for around \$30 by Christmas.

SUPPOSING . . .

(5) Something new and fantastic will be in the stores shortly after the first of the year. Lots of memory and bells and whistles — something that will leave the Commodore 64 in the dust.

And what is Commodore doing? They just purchased Amiga Corporation, a small outfit that is producing a 32-bit micro described by the *Wall Street Journal* as "Macintosh-like" but for one-third the cost.

Jack Tramiel wanted Amiga.

Atari-watching is more fun than ever.

STATESIDE CHATTER

The Coleco Adam still is floating in there. During the fall months, Coleco is literally trying to give the machines away. The unit retails for \$799 (but is sold for much less), and Coleco now is throwing in \$100 worth of free software.

During the fall months, Coleco is offering "certain individuals" what amounts to \$600 scholarships. These certain individuals must be under 18 years old, they

must buy the Adam this fall, and they can't turn 18 until fall of 1985. That leaves one hell of a lot of people.

If these kids enter college, they will receive a college for \$125 at the end of each school year they complete, up to a maximum of \$600.

There appears no truth to the rumor that, if the *Price* software and free tuition help campaigns fail, Coleco will begin shifting marketing \$160 paper-franchising to a

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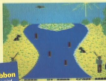
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ON THE TRAIL OF THE BOUNTY HUNTER

IT'S A DOG'S LIFE

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

Time was when a criminal could command various acts of evil and hide himself 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 negative from justice bears their shadow, and more so than the one cast by the man they call Johnny Alpha. To most he is a cold-blooded 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 remaining effects of Strontium 90.

The Johnny Alpha story begins in 1980 A.D., just after the Great War on Earth. Strontium 90, a radioactive isotope present in nuclear fallout had "messed" or mutated large sections of the population, basically they were the same as other people but their physical mutations attracted widespread loathing and disgust. They quickly became targets for hatred and prejudice.

The Milton Barker Kremling funded the gathering anti-mutant feeling by passing a series of laws designed to discriminate and harass the mutant victims. But Strontium 90 knew no politics and Kremling's bigotry soon rebounded on him when he discovered that his own son was a mutant.

The boy's name was Johnny. It appeared 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 man 'so moody anti-hero called Johnny Alpha. And vice versa far away studied the character and sold to themselves: "Morwith the raw material for an any-dooey 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 mutant's rights across Britain.

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

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

A quiet settlement of the war followed and, in return for amnesty, the general agreed to leave Earth for good. Many of his loyal troops chose to follow them into exile; some to settle on other planets, others to lose themselves in the anonymity 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 "Special" Demolition agents hunting the scum of the galaxy. Such 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 extensive array of weapons, his more partner Wolf and their travelling companion, the highly-strung Dross.

Johnny Alpha and his companions have undertaken many varied 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 dual with Old Nick was probably ... just routine.

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ON THE TRAIL OF THE BOUNTY HUNTER



The story of *Stromium Dog*—the computer game—begins in that remote corner of the galaxy known to us as Southampton. To be sure, accounts it begins in a remote corner of Southampton known to some as the office of Quixativa, the self-styled Game Lord. Here, in a remote corner of the office, Creative Design Executive Mark Eyles (and a few others, who wish to remain nameless) sit reading their weekly intake of thrill-papers, 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 favorite with the readers (or Earthlings) almost since the very first issue. Unfortunately, powerful money moguls in a land far away, which we'll call America, had already got most of the Judge Dredd merchandise tied up. Second choice was *Stromium Dog*, considerably the second most popular character with reader satisfaction of the longest surviving 2000 AD series.

With the decision to go with *Stromium Dog* agreed on by all at Quixativa, 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 working a basic concept for the game. "We wanted something that would suit the character and be fun to play," he told *WQ*. It's a working reporter. Eventually a script concept for *Stromium Dog* and the *Death Gladiator* was ready.

THE GAME

Stromium Dog Johnny Alpha is

heading for a planet full of rogues. On the way his ship is attacked by the Six Brothers; *Stromium Dog* saves themselves, but several of Alpha's scrapes. Alpha's ship is shot down twice escape in an escape pod and crash lands on the planet's surface. His partner Wolf and their companion the Grunk are waiting for him in the city on the other side of the planet which means Johnny must cross the hostile landscape, facing the guards of the hordes of hostile natives all out to get him. His class here is a Search/Escort agent... a *Stromium Dog*. The game covers the classic journey through areas of desert, mountains and eventually the city.

ENTER THE MAESTRO

Steve Mallon is 17 years old, a university undergraduate, and knows all there is to know about programming Commodore music. He would be a candidate for the unenviable "white-lie" tag if not for the point to get his credibility off center. In an oral of "before programmer" efforts and well-to-do 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 "glossier" 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 *WQ*. "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 channeled 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 Quixativa, who was very impressed and told me to keep in touch."

These sound effects plus some sample work Steve had done for Minter and another game completed in just two weeks were sufficient proof to Quixativa; he could handle game programming for them and, ultimately, get him the *Stromium Dog* assignment.

DIGITING THE DOG

Work actually started on *Stromium Dog* and the *Death Gladiator* 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 3:30 pm one Friday afternoon at 5:00 pm to say I couldn't do it, then had it working by 3:00 pm if I can't do something I write it down." To prove his point pieces of paper were produced covered in figures.

Animation of the *Stromium Dog* figures 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. "I was a bit nervous just for Alpha," Steve smiled.

"There's 60K of game, 40K in reality. That may seem insufficient 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 to Steve's specialty.

Next to sound, playability comes high on Steve's list of priorities. "I regard myself as a very good game player. I get good very quickly in 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 really get into. However, Quixativa's *Dragonator* (999) I just cannot beat, but it's good like your games."

A.D. — AFTER THE DOG

His work on the *Stromium Dog* over Steve returns to college where he'll continue "... also ideas down on paper" until he gets home at Christmas and back to his computer the 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 to do 100 games," he complains. "I love them and think there's still lots to be done with them."

RICHARD BURTON



Allen leaves marks on a planet of his, once again from *STROMIUM DOG* AND *DEATH GLADIATOR*.

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 2800 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 BBC 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 Quicksilver, John decided to use the theme and elements of an actual episode of Strontium Dog that had appeared in 2800 AD.

The unenviable job of transferring an existing story onto the computer screen was given to Paul Har-

graves, who flies in Leyland, near Preston. At 16, Paul is already a programmer of some experience with his first game, Rozak, 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 mad Despot of Zed perpetuates an age-old ritual known simply as The Killing. Each year participants from all over the galaxy gather to take part. The object is simple: to kill every other participant. The sole survivor is in line for star-fishes. The ritual takes place in a city which is designed to become a vast killing ground.

Participants in The Killing

are nearly all murderers and criminals with bounty 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-flare.

Paul's visualisation is accurate and superbly detailed. It incorporates many scenes from the actual 2800 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!

BBC K's expertise (John was called in for evaluating the quality of the game and the magazine's computer staff 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 Thing's droids were summoned from the nearby Command Module to add their enthusiastic approval of the game. BBC K was able to assure IPC Magazines that their character was in good hands.

But how to market the new game? Quicksilver had just pigged Channel 8 to the post in acquiring the licence to Strontium Dog and already had their own game well into development. At BBC K's urging, John quickly got in touch with Quicksilver 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 cooperate. Quicksilver agreed to take on the marketing of both games, with full credit being given to Channel 8 and Paul Hargraves on Strontium



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GREAT VIDEO DS OF OUR TIME... And cl

We're not going to join those old fogies who constantly tell you that too much computer game playing can turn you into a mindless green zombie with purple boils. No, but we do say that some very real health hazards do exist in gaming if you don't take care. JOHN CONQUEST, wounded in the line of BIG K reviewing duty, diagnoses the dreaded Video Wrist . . .

A while ago I started noticing a slight ache in my wrist, a tender sensation at the base of the thumb and an occasional feeling of real pain. I worried about it off and on for a week or two while it got steadily, though not crippling, worse until one day I jerked my wrist rather suddenly and, man, it exploded! Really agonizing. White-knoped and trembling I staggered to my local health centre (The Wrist, Upper and Trembling), where I discovered that I had De Quervain's Disease, otherwise known as tenosynovitis, otherwise known as Video Wrist.

Actually Video Wrist is only one manifestation of tenosynovitis, so it's also fairly common among DPses — from prolonged typing, handwriting and so on, driving — using copiers, especially wordprocessors, and machines without washing machines, from wringing out nappies. It's an inflammation of any tendon sheath, most commonly in the wrist and hands, from over-use in repetitive movements.

As my brother, tenosynovitis, excessive-use injury, is probably not going to crop up much among computer folk, Video Wrist is a matter of repeated mild irritations of the tendon running over the radial styloid, involving the muscles that move the thumb, the abductor pollicis longus and the extensor pollicis brevis. Rotate your thumb and you'll see these guys in action. When you work a joystick, particularly one with handle and fire control, you put all this stuff under tension for ex-

tended periods, subjecting it to tiny traumatic movements and stresses. Do this enough and you'll have Video Wrist.

Caring it is pretty straightforward. There's a whole range of things you shouldn't do — inflammatory agents — alcohol, aspirin — which are about the most investigated group of medicines around. Just as well because they do have side effects which your doctor should make you fully aware of. Oh, and you have to stop using a joystick for a week or two. Well, you didn't expect the cure to be easy, did you? If I felt my problem much longer, or had to respond to the pills, then the next step would have been an injection of cortisone under anaesthetic directly into the swollen sheath. Things would have got a lot worse before they got better, with or without 24 hours of pretty nasty pain, but results are pretty well guaranteed. This is a very heavy duty solution, though.

So there you have it — how I caught Video Wrist and lived to tell the tale. Not the deadliest disease going, but unpleasant enough. If you get any of the symptoms — aches, twinges or whatever down where the thumb runs into the wrist — it really is a good idea to get it sorted out right away because it won't disappear if it over-occurs; not unless you manage to immobilise your wrist completely for a week or two, which hardly sounds practical. And if you do leave it, it'll only get worse and the treatment could end up being very painful.



DISEASES

collapse ware

Listen, is it just me? Do I have some kind of electronic jinx? Am I computer-unfriendly? This here is an appeal to BIG K readers to tell me that I'm not alone in having a pile of non-functioning electronic junk. Hear my story (it's sad but true!) and then let us have yours.

Easily the most expensive of my write-offs is a C65 Colecovision. Now I loved that machine and it's well possible that I loved it to death. Last Christmas I took it to a festive house party, many members of which became a total all-out C65bug addict. I mean, that machine was running at 12-hour intervals every after day (well, it got dark early, didn't it?). It took another few Min Maxxing when Baseball came out and in between was being regularly finished. Now it doesn't want to know. After half an hour or so it gets tired and dependent, the screen starts jumping, the colors go weird, the controls won't respond and it's time to switch off. For all practical purposes, it's been totalled.

Funny much the same thing happened to an Intellivision console that several people played for so much. Advanced Dungeons & Dragons on Heathen machine: Intellivision-entertainment was up to that kind of use and something inside overheated and warped. I'm not being deliberately vague, somebody who actually knows about these things was over both of them and failed to identify exactly where the problems were. That's the trouble with this stuff, a chip that doesn't work looks exactly the same as one that does and if it's on the board, rather than some dead testing won't necessarily point the finger at the right culprit.

Moving along the catalogue we come to an Atari 490 Program Recorder. This little blackboxed function for some time lessened for a while I assumed that the glitch lay in Atari's notoriously unreliable cassette interface. But, as usual, the SBCXL was blameless. When the guilty party was finally identified, I again assumed that we were looking at stopped recording/playback heads. Not so. As I managed to persuade Atari to replace it with a 1024 recorder, I never found out what the actual problem was, or whether it was fixable.

Normally I wouldn't take any particular notice of limited playbacks. In my experience they are like unto the flowers of springtime, destined to blossom for a certain season and then wither and die. My dead Colecovision controller and Quikstart (if joystickless, therefore, hardly worthy of remark. However) do look some prize in having about out

a Wile 'n' Coyote.

Those of you with '88 memories or better may well be saying to themselves, "Is this not the very same Conquest who only last August was calling the Wile 'n' Coyote the 'top of the range' and recommending it?" To his, friends, what can I say? For six happy months the Three Wile 'n' Coyote worked, as the superior to my every other joystick that I didn't happen to shoot in pieces. Then one day my fingers batted round a right corner, I pulled it over to grab the stress points — and it snapped! It jerked! It twisted!

Now Wile 'n' Coyote bearings are about the best around, but even these are only plastic. My problem was that in six months' usage use, including a period of severe River-Raid addiction, I'd either worn a flat spot onto the bearing or broken the springs out of true, either of which would produce the observed effects. Unfortunately a joystick that is 75% satisfactory is 100% unsatisfactory and sports in the nature of the beast, there's not much that can be done about it. The only cure is a whole new joystick. To be fair to Wile, I wouldn't consider getting anything else.

OK, so I haven't done anything really spectacular, like sink an entire microcomputer, but add up a Colecovision C65 and Intellivision C28 console, the Atari recorder (490), the Wile joystick (200) and suddenly you're talking about a couple of mankys worth, without even mentioning adds and teds like the non-loading software.

True story time: A friend of mine recently bought two complete Spectrum setups, including recorders, interfaces and joysticks, for the youth clubs she runs. Fortunately she bought them at Lion House in London which has a strict policy of testing everything before they let you walk out of the shop. That's how she saw two recorders and an interface being slung into the 'Return to Spencer' box. Mine's talking Goodtime stuff here, straight out of the boxes, which makes me feel that my write-up isn't just down to me but has a certain something to do with industry standards.

If the proposition is true then there must be an awful lot of people with similar stories to tell. Have you written one of...? JOHN CONQUEST





CLASSIC GAMES OF OUR TIME

It's the game that brought people into the arcade in droves. **STEVE KRATON** charts the rise and rise of a humble yellow blob that brought a whole new experience to eating.

HE NAME is legend, his name inoperable. He's the little yellow guy with the big mouth who opened the game's chest and made possible the rest of the arcade company. He's Pac-Man, the first arcade superstar! Many games can claim as many offspring. As Pac-Man's name we witnessed the birth of a whole Pac-Family. Pac-Man began life Pac-Man who is now Pac-Man (Baby-Pac) and a whole slew of related yellow and blue characters. Back in '81 the world seemed peppered with little white oranges and people walked to a "wook-wook" rhythm (which wasn't navy). Things got really out of hand.

Adults would wake up morning beneath Pac-Man, drink Pac-Tee from a Pac-Mug and then dress in Pac-Apparel. There was even a Pac-Attention shoe! This caused the first indignity. Upon seeing it the Pac-Fans became promptly pepped up and died. The gaming world was never to see it like again.

Such games as Pac-Man and Golden. The maker was satisfied. Without great effort and flourish an a year Pac-Man ruled the world.

Another philosopher pondered its success. The first non-violent video, some pompously declared, an expressionist, squeezed others. Both claims were hokey. The little fellow was just uniquely playable. A perfect combination of challenge, accessibility and audiovisual

It was also profitable. Amongst the debris (teachings) rest to as my studies. I have old games which would insure total success over any arena. I never use them. Who said a brilliant game? I felt the same about the **MIKE** and **POKE** for Miss Willy. Others, though, had fewer scraps and Pac-Man's appeared in every arcade. You'd often see a queue of lines outside a machine for a couple of coins

to the little fellow is come home.

It was a long wait. Atari trumpeted the arrival of an officially licensed VCS ROM and then blew it in spectacular fashion. To this day it remains their most-remembered anecdote, sparking off hosts of debates whenever mentioned. Any similarities between it and the little yellow monster are clearly unintentional! The familiar name went out the window, as did the rest of monsters and bonus fruits (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 couldn't become a double. Pac-Fans could hardly believe their bad luck.

The company later released themselves with a far more convincing conversion for their 4000 400000 computer range, restoring the missing features and improving the gameplay, but Cyclone was 1986. 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 Atari-50 range. Once again Pac-Man was set up as a figurehead and once again Atari fup-

PAC-MAN[®] ATARI COMPUTERS



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

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

Pac-Man was perfect in perfection. The participating manufacturers, 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 top loss and the Pac runs out of life. Introducing The monsters' periods of activity available in a similar fashion. Beginning at one Pac-Man, they double to 2 then rise to 4 and then after a brief respite all but vanish. And just as you think your wrist will snap under the pressure, there's an indication to break the tension. Pac-

PERKS and **POKE** for Miss Willy. Others, though, had fewer scraps and Pac-Man's appeared in every arcade. You'd often see a queue of lines outside a machine for a couple of coins to combat this new breed of punter. arcade owners set about the game-walk-chairman's. Clue to learn surgery on the PCB resulted in the solder (leads) being all but eliminated! Some machines simply ceased at strategic points. Disappointed, I left the arcade and waited for

ated the ball. Then Spectrum owners was almost as bad a turn as the earlier VCS ROM. "Our big mistake was going for 18K," a spokesman was heard to moan. Realising their mistake Atari once again turned their attention to Ms. Pac-Man. This as yet unremembered (S&K) Spectrum conversion is brilliant. Unfortunately the damage has been done. No-one wants to know any more. If the Pac-Family moved its next disc most people would up and sell.

The little yellow guy still hangs on in its arcade though. Game's Pac-Man can be seen propping up the walls in busy game parlours, like video game. You survive in their original colours and reap those old joys! And artistic reasons there. A sad state of affairs. Newer visitors, stumbling over the old file doubtless wonder



Bally Midway originally licensed Pac-Man from little known Japanese creator, Namco, for introduction to the United States. The word gobbling game found itself residing amongst banks of strategic shoot 'em up and surprisingly prospered. Then there was an explosion and Pac-Man resided in the top slot of the U.S. Play Meter charts. The game had caught on with a vengeance! Bally shined up over 100,000 Pac-Units to take the demand while unscrupulous rivals exploited that figure with a flood of rip-offs masquerading under



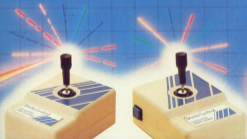
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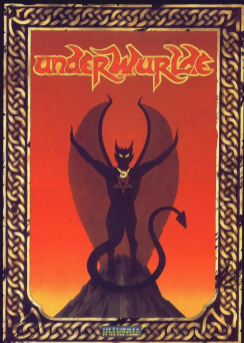
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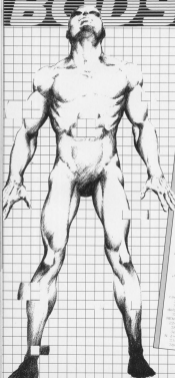
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BODYSU



If you've a lust to design characters for use in your own games—but have until now lived in mortal terror of BBC Basic's VDU 13 statement—fear no longer. This easy-to-use prog allows you to build up shapes on a grid and save them to tape in some Future Point in Time. Full instructions in the prog.

by Himesh Shah
For BBC 'B'

```

1000 0
1010 PRINT "*****"
1020 GOTO 1000
1030 GOTO 1000
1040 GOTO 1000
1050 GOTO 1000
1060 GOTO 1000
1070 GOTO 1000
1080 GOTO 1000
1090 GOTO 1000
1100 GOTO 1000
1110 GOTO 1000
1120 GOTO 1000
1130 GOTO 1000
1140 GOTO 1000
1150 GOTO 1000
1160 GOTO 1000
1170 GOTO 1000
1180 GOTO 1000
1190 GOTO 1000
1200 GOTO 1000
1210 GOTO 1000
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1860 GOTO 1000
1870 GOTO 1000
1880 GOTO 1000
1890 GOTO 1000
1900 GOTO 1000
1910 GOTO 1000
1920 GOTO 1000
1930 GOTO 1000
1940 GOTO 1000
1950 GOTO 1000
1960 GOTO 1000
1970 GOTO 1000
1980 GOTO 1000
1990 GOTO 1000
2000 GOTO 1000

```


A while back, reader GARETT JOHNSON lent a home-grown Spectrum prog to a "friend" — later he was notified, to say the least, when he discovered copies of the prog circulating locally at £1 a time. Surprised, he set-driven to figure out how this Could Never Happen Again (he doesn't say what happened to the friend) ... and here's the result.

members, we will at some stage incorporate the tape-copying program and present it as copying all of the programs. Listing 2 shows how to do this. Some tape-copying programs reside in the printer buffer (you do not need to know what this is, but it is basically a part of RAM that is reserved for use by the printer). Listing 4 shows how to deal with such tapecopiers.

The last problem we have to deal with is that of tape-to-tape copying. Since the MacQ has limited SCL DMA's access to tape copying protection devices, there seems to be no way of preventing the program being copied. The way to get round this is to have a stream of numbers (arbitrarily in colour, or a series of colours) that must be typed in at the start of the program like at the beginning of JT GET BUILT. (Incidentally this method of protection is copyright by Software Projects.) Physicists are keen about protecting your programs, so I'm sure you can come up with your own system.

LISTING 1

```
10 POK 23669:0
20 PRINT AT 0:0 "TRY AND STOP THIS" : GOTO 8
PRINT "GOTO 8"
```

LISTING 2

```
1 POK 23669:0: POK 23669:0
```

```
2 REM The program must then continue at line 7
```

```
3 REM If you use INPUT or DO anything that involves the keyboard one of the numbers you must first temporarily read the value of 23669 ... to POK 23669:0: GOTO POK 23669:0
```

```
4 REM When SAVING your program, SAVE it in the following way ... POK 23669:0: SAVE "program" LINE (first line number)
```

LISTING 3

```
1 REM Fill up any spare line numbers like this — 2600 REM
```

```
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXX
```

LISTING 4

```
2 IF PEEK 23669:0 THEN NEW: REM this should be in a loader program that loads in the user's program
```

```
5 LOAD "": REM if you use LOAD "": CODE if machine code.
```

work an auto-run is required (you can make any BASIC program auto-run by SAVING it in the form SAVE "PROG-NAME" LINE (first line number)). Most loading games know that MERGE-ing a program will prevent an auto-run. This shows you a way of stopping or preventing the MERGE-ing routine. When a program is MERGE-d the computer automatically places the loaded with a number greater than 9999 (usually will point out that you cannot paste any part of memory with a number greater than 999 — to whom I say go and look at chapter 26 of the Spectrum manual). We can cause a crash if the program does not auto-run after being LOAD-ed. It does not matter if you do not fully understand this ... if you want to find out more, take a look at page 156 of the Spectrum manual which shows how a line in a BASIC program is stored. Anyway, the content of this is that the program cannot be loaded into "memory". Listing 2 shows what to do.

Near comes the problem of tape-copying programs. This is however quite a simple solution to this problem ... since the tape-copying program has to take up some part of memory, so if we can fill up ALL of the

Because these pieces of information need to be updated and managed, the system variables are held in RAM and not in ROM, therefore the programmer can also change them and this is where the system variables are of use to us.

Address 23669 DP 52 controls and keeps track of how many lines there are in the bottom part of the screen, if we POK 23669:0 telling the computer that there are no lines in the bottom part of the screen) we can stop anyone from breaking into a program. Why? Because when anyone presses the BREAK key and stops the program the computer tries to print up a "1, BREAK into program" message at the bottom part of the screen. However, because we have told the computer that there are no lines in the bottom part of the screen, it cannot print the message and a system crash occurs thus wiping the program from memory. You can see what happens if you type out the above program in listing 1.

There is however a slight catch ... for this method to

AFTER READING my latest masterpiece to a friend for a couple of days, I was amazed and annoyed to find copies of it being sold for a pound each.

This caused me to wonder if there was a way that BASIC programs could be safeguarded from copying.

Ploughing through several copies of the latest weekly and monthly computer rags, I found to my surprise that not one article had been written for the Spectrum about program protection.

The only piece of information I could find was that POK 23669:0 would stop people breaking into programs. "Gosh" I thought and rushed off to try it ... it didn't work. Why it didn't work will become clear later.

On page 155 of the Spectrum manual you will find a complete list of the system variables (those are used by the system to update various pieces of information),

PROTECTOR!



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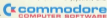
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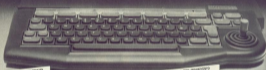
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1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

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ADDRESS

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

Two Go

MAD

In Hampstead

If Ted Sorensen's *Barbed* managed to curl the lip upper lip into a self-savouring smile — in Hampstead's message is clear — social climbers come out!

Hampstead is the software equivalent of the lush and silver coffee table book. It belongs in the genre of thinking man's fantasy — so far only occupied by two other real-life adventure games — *Dennis* through *The Looking Glass* and *The Cocklewood Incident*: its designers think of themselves as market leaders in a new class of quiz-intellectual software. The game is a text-only adventure, and the quest is to make it to middle class Britain — *Hampstead*.

For those in far-flung corners of the world — like *Baker* — who do not know, *Hampstead* does in fact exist. It lies on an enormous plateau (entirely the product of its occupiers' imaginations) somewhere in North-West London. It is a collection of side-by-side buildings grouped next to a beach. It calls itself a village, despite a constant stream of heavy traffic (mostly *Polls* *Playoffs*) that runs down its centre. The thing to do in *Hampstead* is stroll from cocktail to repoussing, and once you've mastered the correct leisurely smile, you can try using it at the arty inebriants, or fellow social climber.

bers.

Once hooked into the game, you'll find yourself immersed in a sleeky North London 'let, try' shows 2-2-1 on the TV and a UDA4. Exploration reveals a bedroom with such commercial prospects as a fungus farm and last night's bikini hor- rorizing in the wash basin. It's enough to kick the most easy-going slab onto the sal- clemminity trail. From these humble beginnings you must go out and up. It's a highly libidinal game, and your way is fraught with as many woe-wracks as it is with pastels and red hair- ings.

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

"Oh definitely. We want money, fame and a certain address. *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* like. 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 cramps, being eaten by a virus fly-trap, or choking on toast."

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 reason. Gather your wealth, status and power, then hit *Hampstead* like a bullet. And no one will know of your roots.

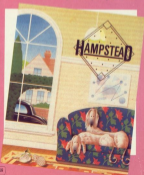
The Peter/Trevor partnership goes back a long

way. It even survived being backlist all stage in their Northern comedy double-act debut — *Tigress and Bird*. Trevor describes himself as the 'solid computer man' of the duo, whilst Peter is the 'sensitive 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 managerial GUI, and improved by IRL.

"Neither of us has 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-games? Peter hands me a card. "I got 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.

"It really is time for something new. We aim to create a series of real-life adventures without recourse to magic, apocryphal or hand-to-hand combat. All that drag- goning and treasure hunting can't go on forever."



ROBOTS ...ON THE

Kim Aldis forsakes the fascinating world of wall-gazing to check out things that go clunk, whirr, beep in the night — and day. The Movits, D-I-Y robots with a difference.

SO THERE I was, sitting in my room watching a lake ink stain on the wall, jiggling the edge on how long it would take to slide down to the floor. Life gets exciting like that, especially in sunny Balham and today looked as though it was going to be as exciting as any. Suddenly, a small whirring noise grabbed my attention. I looked down and saw a small bubble-like object making its way across the floor towards me. This was annoying. To one with such earth-

shattering ideas on his mind, an electric rat can be most distracting. I slid one toe under the front of it and casually flicked it against the wall. It bounced, once against the ink stain, then again off the floor and carried on about its business, frantically finding refuge under the desk. Interesting. I returned my attention to the stain on the wall, but it was no good, the whirring din coming under the desk had smothered any chance of serious concentration. I grabbed a stick to poke at it

— after all it might bite — and it tumbled out into view, apparently none the wiser for its flying lesson.

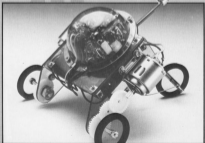
What was it? It was a Movit, one of the five built-it-yourself beetles from Frim, and I wanted one. It could be the answer to the penicillin plan in the kitchen which had once been known as the washing up. I picked up the phone and before long five small beetles were winging their way to the GPO K offices.

Step one on the ladder to total reality was to build

them. I must admit to a certain amount of trepidation at this point. Previous experience of building this type of thing has been fraught with pitfalls usually ending with a pile of bits on one side and a hideous monster on the other. Far from it, the diagrams and instructions that come with all of the Movits were exceptionally clear and all the parts, although rather small and fiddly, were in clearly labelled packets. All that was needed was to take the right bit out of the right packet and put it in the right place as indicated on the diagram. The whole launch took about a day to assemble and they all worked first time round.

There are five of them in all. The cheapest in the range at £9.99 is Money and it's probably the most amusing. The two hooked arms at the top allow it to be hung from a length of cord like a pair of Y-fronts on a washing line. Any sudden noise — a handbell works quite well — sends it swinging arm over arm along the cord. It keeps going for five seconds or so before stopping — and then sits there waiting for another noise.

Next come Line Tracer II. This is, wait for it, a line tracer, meaning it follows any dark line on a sign or floor or vice versa. It finds its way round using an optical sensor on its belly. The only problem here is finding a suitably flat floor. My kitchen floor boasts table-top black and white tiles which give it problems. What it does do is run in one of its two tracks and it picks up a sensor shape on the floor. This causes the current motor to cut out



ROBOTS REMOVE

Moves! . . . these Roboburgers are a real taste bite!



and the other to cut in making it change direction. If the carriers are lighter than its turning circle (about 20mm) it wanders off and does its own thing against its nearest wall. The lighter floor really gives it a serious breakdown. The error underneath is very sensitive, even picking up pencil marks on paper and it responds very quickly even on lines a good deal thinner than those recommended for use.

Plan Mouse is good for a laugh. It's a three-wheeled affair controlled by a remote which takes it through a cycle of moves. The first blow of the whistle sets it scuttling off to the left then subsequent moves make it stop, go right, stop, go forward and then finally stop again, in that order. You have to be quite close (within about 3 metres) to make it respond and sometimes — if the microphone is facing the other way — you have to get even closer. Mylar someone will throw up a hearing aid for

it. Aside from that the whistle is enough to drive a sane person. After about half an hour a pack of rather unfriendly stray dogs had gathered outside the kitchen window, usually disturbing anyone who happened past.

My favourite was the Circular. All the rest of the Movies use some real flesh methods to control them but the Circular goes back to good old-fashioned radio control. Its appearance, as the name suggests, it's circular in shape and the wheels form two rims around the outside. The rims go round when it moves but the main bulk of the thing remains stationary giving the illusion that it's gliding along the floor. It's very sensitive about how rough the floor is. If it hits a bump it makes a kind of grinding noise and stops completely at the same time — if very manoeuvrable, turning very fast and almost on a dime. Very nice.

Last, and most expensive, in the range is the Meritonic Explorer, a sort of shapely-down turbo. It's programmed in steps by means of a small plug-in keyboard. Control is given over left, right and forward with the added bonus of a sleeper and a LED which can be activated at will. After programming, the keyboard is detached, a small button touched and it sets off about its business until you either switch it off or tread on it! It's a bit frustrating to find that it's not that accurate. Sending it in a straight line for more than a metre or so allows it to veer off course quite substantially. On the other hand it's not expensive when compared to some of the more sophisticated toys available and making it more accurate would mean either more accurate motors or some kind of positional feedback which in turn would make it more expensive. For my money I would rather see the price kept down.

The Movies are fun, interesting and a goodly quantity but been in quantity and good value rather than being cheap and interesting in quantity. For those amongst you who aren't millionaires, I found them most appealing at the building stage, the main drawback being that once built there's not much variety in what they can do. At the same time, because of the way they're made, it would be quite possible to kind of jumble them all together into some sort of Frankenstein's monster. For the moment, though, it looks like my washing up stays furry, unless, of course, someone wants to come round and do it for me.

PRICES:

Monkey	£9.99
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Guide Thomas the cat along the 13 walls of SOLAR street to his lady friend, who awaits him on the end of the wall, but beware of the flying boots, bottles and mops, which are just a few of the hazards you will encounter.

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Guide Bob 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 bogy men and insert the coin in the electric meter. The lights will come on enabling you to see the pitch fork, and after retrieving it, kill the bogy men.

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READY WHEN? MR. SEAVER

SCENE 1

Okay, great! Now, please, everybody, absolute quiet on the set. Where's that Seaver stunt guy? Ah, there he is. Call, 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, skidman along the carriage rails 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, Call, come for the first carriage, the train's moving, getting faster. Move, baby, there's the tunnel coming up and . . . ah, oh, Pick him up, honey, we'll get again. Take two and . . . action! Okay, Call, you're moving well, but time. Jump the carriage, keep the gear, don't fall between them . . . er, okay, Call, baby, 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 go on with it.



SCENE 2

Call, honey, I know you're worried. Standing on top of a burning helicopter is not the best 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, Call, 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 out and jump . . . er, right, that's for it, you'd better circle your while Call gets himself up. Take two and . . . action! Beautiful, Call, you've grabbed the skids, you're dangling well, now all that you've got to do is hold on to the building and let go. Be careful, you're too high! Right, honey, we'll hold till the rescue party then up and go again. Take three, Call, the last one is the game over for you.

YOU ARE

THE

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

SCENE 3

What's all this snow up there? Why, it's an avalanche effect. Galt, my little little. What would a mountain scene be without an avalanche? All you have to do once it starts is to get to safety without getting totally away. You must remember doing something like this on that *Beavis and Butt-head* show you worked on. Right, just to the set and...uh...uh...That's it, Galt, move quickly. Cut the bridge! Huh, Galt, it's coming up fast and...uh...uh...Stand on the St. Bernard, we'll find Galt by morning.

Galt, bossman, 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 a statistic book on 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 feel it's deadly serious.



Screen shots from pre-production Spectrum version of *The Fall Guy*. Below, screen 1, Locomotive — the train starts.



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 beauty hunter. But would it appear as the depiction of their lives 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 failures abound. The beauty hunting activities of Colt Seavers are only explicated in the latter stages of the dozen screens available.

The graphics present the player with continually 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 it requires 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.

THE Official Licensed Computer Game Version of the TWENTIETH CENTURY FOX Television series featuring Lee Majors as THE FALL GUY. An ELITE Production for the IBM Spectrum (GB, FR) and Commodore 64 (GB, FR, ES, DE).

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HI, I'M SID! YOU CAN MAKE ME SOUND GOOD!



Young Sid the sound chip lurks inside every Commodore 64 and is, according to **KIM ALDIS**, '... more powerful than that of any other home computer.' But how do you get great sound out of it? Read on

SOUND ON the Commodore 64 has a 2, 1980s said that Florida film to the rather regions of the north. Sea with his feet crossed in concrete and a knot in his neck. Looking you see an the Commodore is particularly easy to use and makes it easier to use both direct and indirect. The problem is an organized manner the machine is capable of some extraordinary things. Take sound for instance. Young Sid the sound chip is probably more powerful and versatile than that of any other home computer.

Three voices, a choice of four waveforms, three types of filtering, ring modulation and envelope control all combine to give control over the type of sound you can make. As rare computers it's even been known for fidelity to assets.

The great secret to easy use of the SID chip is an understanding of the seemingly vast number of control registers and a reasonable knowledge of how sound works.

Let's have a look at the nature of sound first. The total quality of a note is governed largely by its waveform. A detailed explanation would fill a fat-sized book but for now it's enough to accept that a waveform is a graphical plot of amplitude (how loud) against time (lag). The Commodore can generate four

different waveforms: sine, saw-tooth, pulse and noise. A quick footnote at this point is that the sort of noise they make. The noise waveform is just a mish-mash of random pulses and sounds like an elephant using what elephants do best.

Now the sound envelope. This is what governs how a sound starts, what it does when it's sounding and how it dies away. The envelope is split into four parts (lag, **3**, **RTNCE**, the rate at which the sound builds to its peak volume, **DECAY**, the rate it falls to the **SUSTAIN** level which is the main part of the sound. Finally **RELEASE** which is how long the sound takes to die away.

So now you know all about sound. Question is how to teach

the Commodore about it? The chip responsible for the various bumps, latches or whatever that the 64 can make is the SID (Sound Interface Device) on internal occasions. SID consists of a sixteen counting array of 24 registers starting at location **56031**. It's divided to making sound, the other two used for analogue joystick.

O.K., you've got 24 locations to muck about with, what do you do. First Law of Commodore Computing:

PANIC

Feel better? Now look at the problem logically. To start off we'll only look at simple sounds using one voice. For this you only need eight registers. Mode/Vol (register 28) is one of these, check the lower four bits control volume for all three voices which means a total of 16 settings, 0 to 15. The four high bits are for filtering which is to double-check, do forget them for now.

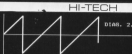
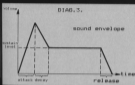
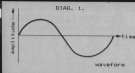
voice needs to control waveform and envelope characters too.

Get the minicos over Table 1, which gives the layout of registers for voice 1 plus the Mode/Vol location at register 28. To save memory space the big C tends to use some registers in two and use them as a sort of dual purpose register. Mode/Vol (register 28) is one of these, check the lower four bits control volume for all three voices which means a total of 16 settings, 0 to 15. The four high bits are for filtering which is to double-check, do forget them for now.

Working through the rest of the registers for voice 1, frequency is just a fancy word for how high or low the note sounds. This uses two registers, frequency low and frequency high. The best way of looking at this is to think of the top as a usualised scale (twelve) as in fig. 4. This arrangement means you can whip a bigger number from the frequency of the note and we get a wider range of sound.

Point worth high and low depends on the same principle but control the pulse width for a square wave. We'll come back to this later.

The next register gets interesting. Look at fig. 5. The top four bits of the Control register do the waveform (0 type of sound you get. Don't worry about bits 7 to 3, they're used for things like ring modulation and synchronising with other voices. The 0, however, plus control. This is the **Q1E** bit which switches the envelope generator.



DIAG. 4



DIAG. 5

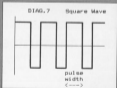


DIAG. 6

ATTACK DECAY

SUSTAIN RELEASE

The Envelope Registers



also in and out. When this bit is set the envelope generator is "gated" or triggered and the ATTACK/DECAY/SUSTAIN cycle of the envelope is started. Clearing the bit indicates the RELEASE cycle ends; the sound starts to die away. Ramp, noise? Set the bit to start the sound, clear the bit to stop. But don't forget to set the waveform first.

Before you can start and stop an envelope, you need an envelope to start and stop which brings us to the last two registers in Table 1, ATTACK/DECAY and SUSTAIN/RELEASE. You guessed it, they contain the resolution parameters. Again, the Commodore does a bit of clever using its charming two-bit memory to a byte as in diag. 6.

Now you've got that lot clear in your mind the real is fairly straightforward. The basic procedure for making a sound runs roughly as follows:

1. Pick the frequency (regs. 7 and 8)
2. Then the waveform (reg. 9)
3. Now set up the envelope parameters in regs. 6 and 7
4. Pick a volume into reg. 24
5. Set the GATE bit in reg. 4
6. Go into a FOR ... NEXT loop for as long as you want the sound to last and then ...
7. Clear the GATE bit.

That's what you do and Prog. 1 shows you do it. Changing the values in lines 35 to 60 will give you different notes.

Let's do come back to the square wave pulse. You may well have tried to run Prog. 1 with a square wave and got nothing from it. That's because a pulse width has to be put into registers 7 and 8. The pulse

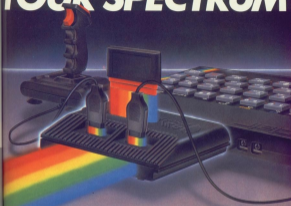
width is the width of a square wave as shown in diag. 7. Set ahead and put one in. If you've understood most of what's gone on so far you should have no problem in adapting prog. 1.

In case you're wondering what the other 71 registers have got to do with all this, bear in mind that there are more voice registers 8 to 9. The next are for filtering of sound and reading the analogue port. I'll

cover these later in the series. As an added bonus (note for money is the name of the game in this mag), prog. 2 is a short utility for making sounds. All the sound parameters are displayed as you change them and instructions are displayed on the screen, so go ahead and keep the neighbours awake for a while. They've got to get up in the morning anyway, so why care?

Register	Table 1 Register name
0	Frequency Low
1	Frequency High
2	Pulse Width Low
3	Pulse Width High
4	Control Register
5	Attack/Decay
6	Sustain/Release
24	Mode/Vol

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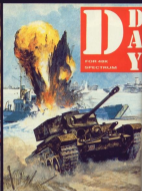
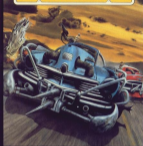
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by KEVIN FLYNN

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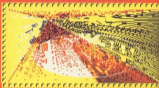
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FASTEST DRAW IN N.W.11

... is **KIM AIDIS**, who's thrown out his paint-daubed smock, his palette (and his colors) and produced a snappy and versatile CAD (Computer Aided Design) package for BBS K look owners.

You've heard of **MAORITTE?** Neither has **Aidis**.



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

Looking around the ranks of Big-OR Software Inc. it doesn't take a great deal of savvy to see that every CAD package available is "powerful, easy-to-use and versatile." They also cost over twenty crisp ones and they're usually in BASIC, which is one reason for the existence of Graph-Pac.

First of all don't be put off by the voluminous instructions. For the most part the only keys needed are the real function keys so all you need to do is flip a switch (open, good!) or key names under the plastic lid 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 centers around a multipoint cursor as "Rubber Banding." An activated 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 fix 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 the investment is one. Believe it or not it's worth it for speed and ease of use.

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

F8 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 fast way of saying an ellipse is in the box). Set the rectangle to the size of ellipse you want and press the fix button. The rectangle disappears and an ellipse takes its place. You can have the ellipse rotated left or right, using the "L" and "R" keys to rotate the box before it's fixed and the origin (at the center) can be moved along the X and Y axes using the cursor keys. Rectangles are drawn using the fix 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 **F7** is used to position text on the screen. After pressing **F7** just enter the text which will appear at the cursor position. Move it around with the joystick and

use the fix button to fix it. A useful point to remember is that **CTRL**, **F1**, **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 editor (most of but later) these are in the function keys in the order you defined them. **90** and **91** are used to draw lines. Just press them, you'll see.

Logically displayed options can be changed using **F5**. This uses the **MS-DOS** command and might need some experimentation. The fix key expects numbers which must be input using the function keys. A list of logical options is shown on page 185 of the user Guide. I'm sure you don't need me just running through it just follow the prompts as they appear.

Coordinates of the cursor, current angles (and length) can be displayed using **F6**. Useful for accurate positioning of lines.

Line colour (and fill colour, more later) is changed using **M**. Again this expects a number from the function keys. Check page 185 of the BBS Bible for the numbers of the colours.

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

button to get rid of it.

After you've messed about with the rubber band for a while you'll probably realize it's a pain having each line connected to the previous key. Key **D** solves this by turning the line on and off. Once the line is off move the cursor to a new position and press the fix 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 great idea to have the cursor on while you're doing things so you know where you are. The cursor is toggled on and off by **F1**.

Function key **O** is fun. This is the fill routine. Position the cursor anywhere inside a shape and press **O**. The shape fills with the current line colour. The routine only fills filled areas and be careful that the area you fill is fully bounded by lines or blocks of colour. If not the fill will flood over the screen boundaries and the text is lost. If this happens just wait a while, it gets hot up after ten minutes or so and stops but it's a real pain writing.

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** saves you into loadmode to preserve your previous masterpiece. Just

follow the prompts. Pressing **ESCAPE** will abort.

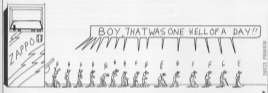
Unfortunately there was no room left for a prime dump and anyway, different people have different printers. Pressing **O** lets you out of the program without destroying the screen image so you can run your own printer dump. Tapping **ESC** gets you back into Graph-Pac.

The **TAB** key lets you define characters which can be put on the screen in text mode (TI). 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 box 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 small text character. It's made of an eight by eight matrix. When you are happy with your design press the **TAB** key again.

Really there is a tonnered lot of items, which is rather fun to mess about with. It's toggled on and off by pressing **W** (for Window) and all it does is stop the rubber band from erasing itself before it moves. The result is a rather pleasing mood effect.

The listing is in two parts. Type in the first part and save it. Type in the second part, save it as **GRAPH** after the first part and save the first part which shows the second part.

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



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could appear in a Scott Adams adventure
STEVE KEATON probes the new quest for comic
superstars . . .

UPON THE silver screen a man mountain called Arnold poses dramatically. Triceps bulging in the Mexican sun, he raises his broadsword high above his head and glowers. Around him, Sara Douglas' early thongs (no doubt recognizing this stance as a prelude to much physical damage) groan with dismay. An antibody, they realize, was not the wisest of moves. With a grunt Schwarzenegger lunges forward and severed heads and sandy organs fly carelessly into the air. The audience whoops in wide-eyed delight.

The movie of course is Conan the Destroyer, to my mind the finest attempt yet to capture the real glory of *Conan and Slaying* on film and indisputable viewing for amateur adventurers. Why though, I wonder in those darkly rampant lovin'g days, the genre's premier hero gone unconverted? I mean, Conan would love to stand for his own adventure series! As if in agreement Arnold swings a sword the size of a small truck

and a passing horse tumbles into an undignified heap.

An hour or so later, following a climactic battle with one of Carlo Rambaldi's grosser special effects, I raise further on the subject. Surely the Marvel Comics Group, whose innumerable Conan publications have done much to popularize the character, could adapt him? Their recent coupling with Scott Adams' Adventure International company — for the *Questprobe* adventure game series — certainly gives them the machinery (the late Robert E. Howard's estate notwithstanding) I put this to Mike Woodruff of Adventure International's UK appendage, Calisto.

"Conan?" he exclaims, shaking his hopes with a brist, "I think that's unlikely. He's certainly not due to appear in any of the *Questprobe* games. We'll only be using characters from the standard Marvel Comics Universe, like *Spider-Man*, *The Hulk* and the *Fantastic Four*. It's a themed series and I mean, there's no way that *Spider-Man* is likely to meet Conan in there?" he chuckles knowingly.

Of course that's highly possible in Marvel's many team-up titles but his point is clear. *Questprobe* is strictly for the expertise brigade. Closest Clintonesque like myself it seems have been left

not in the cold. Some people clearly have no vision.

As this issue of *320 K* stumbles aimlessly on its way toward the printing press details are sparse on the new Questprobe game, *Spoiler-Wax*. It's only a third complete. "All I can reveal," says Mike "is that the adventure creators Madame Web and the Sandman as well as some of the best graphics yet seen on a home video. 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 addition to the Spectrum, C64/64, Atari (22K/44K), Apple (16K), Dragon 32, T8000 and BBC we aim to produce a version for the Amstrad and possibly MSX. We're a team of two programmers and three artists working in the U.K. conversions." Mysterious. Adventure's chairman, Brian Howard who was originally mooted to convert the games left the project some time ago.

"Initially Scott Adams writes all his adventures in not-only form on his 48K, 512K 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 editing is then done in Florida (Atari), Apple, C64M disc version and the U.K. Incidentally, Scott has actually redesigned the interpreter in his adventure generator for *Spoiler-Wax*, to allow for full sentence input. It's the first time he's offered more than the usual verb-noun format some of his adventures!"

Adams is of course something of a coffee-table name amongst Darklayers. 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 arches in it and me?"

Spectrum, C64/64 and Apple/Atari owners will have enjoyed the best *Hulk* as there are the only versions to feature both first '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 crisscrossed by a network of stylised canals is suddenly made to sprout artificial and then giant sets (some small) each invention more than compensates for Scott's staid, professional prose style.

Initially bound to a chair in the game of gassy Bruce Banner you must beat loose and renounce the Chief Examiner's dodge discussion for glowing gems (hence why). The Chief Examiner by the way is the creator of the entire Questprobe series. Having successfully trained the chair you're well on your way to encountering former super-hero colleague Doctor Savage and Henry Pym a.k.a. the Ant-Man (a role Pym actually gave up some time ago) as well as some grade A villains like Ultron



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

Which 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 told that 'the Hulk that is no ranch'. Clearly an outrage! However Woodruff is adamant that the series is authentic! "We've a big comic collection in the office and our main artist, Thomas Small 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."

This might explain why the game is free of any camp-

tiously silly bugs. A shame as I've always regarded blunders as plus points. I can only advise frustrated Spectrum/Atariers not to beat the ENTERTAINMENT by (with their heads) too often as you'll find yourself locked into a 'I can't do that... yep... yep...'. Even outside brings no release. Keep banging away and the game NEVA ends! If anyone finds a more notable gaff let me know.

While unusual the Marvel Adventure's International collaboration is by no means unique. The project 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 1600 VCS. Titles such as *Bonnet*, *Dynador* and *Star Riders* were all packaged with two half-size comic books. This crossover peaked with the release of the multi-part graphic adventure *Amalgam*, a set of games set under the *Knights* card in style. The comic actually helped *Knights* and the *Amalgam*, adding pink and purple to the first 10-20 episodes. They also contained other, significant as Atari were offering an estimated \$150,000 worth of prizes to those that could solve the script. The challenge never made it across the pond.

Not to be outdone Marvel's Scott Adams are also offering prizes, although they're giving it away at the moment. You know what it is? Well another three years of Questprobe and you'll see it. And what's Scott Adams' name? Well... Scott Adams.



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by A. SHAW
runs on
Sinclair Spectrum



HERE COME THE

SO YOU have saved up your pennies, and you have finally decided that you are going to splash out and get yourself a nice, new modem. The idea of making midnight phone calls to a Swiss bank's central computer, and transferring all the moneys into your account awaits to you, doesn't it? Well, before you put your hard-earned greenbacks, you must decide what sort of modem you require. And also what factor you can afford your phone bill to multiply by.

ACOUSTIC: NEEDS QUIET

Firstly, you must decide whether you want an "acoustic coupler", or a "handset" modem. The former is the simpler of the two, and it consists of two rubber grips, into which you hammer your telephone handset. Inside the grips are 8 microphones, and a speaker, which correspond to the phone's earpiece and mouthpiece respectively. The idea is that the grips and whistles which are sent over the phone to represent the data are physically generated, and transmitted in much the same way as speech. This is fine, unless you have a non-standard phone (Triumpho, Snoopy, etc.), which refuses to fit properly into the rubber grips, or if you live next door to a Wimpey construction site. You see, any background noise is picked up, and if it is loud enough, it will deactivate your screen display, throwing garbage all over the place. You try using an acoustic coupler to print out a Microsoft frame with a nearby dot matrix printer. Forget it! However, on the plus side is portability, and the fact that you can use it on a telephone that is not yet equipped with Uncle Bud's new socket. If you intend to use your modem in a phone box, for example, you would need an acoustic coupler. Alternatively, for those without phone boxes,...

HARDWARE: COSTS MORE

The handset modem is

a much more discreet affair. They come in all shapes and sizes, and they are generally just boxes, with the add switch or LED on the front. The connections with a handset modem are much more reliable. You plug the modem into your computer, and also into your phone socket (if you haven't got one of these, your friendly local British Telecom office will fit you one for around £15). You then plug your phone into the modem. When you want to use your phone for normal purposes, you do so as you would without the modem attached. However, when you want to use the computer with your phone, you switch the link to the telephone out of the circuit, so that you have got a direct link, via a wire, from the computer to the phone jack. Say goodbye to background noise. However, as you might

expect, a handset modem will cost you considerably more than an acoustic coupler, although the prices are falling now, as intra communication becomes more popular, and the competition heats up.

SPEED OF USE

The second thing you must decide on is what you want to use your modem for, as different services use different speeds of data transfer. For most modems users, the most frequently accessed database is Microsoft 800. This is a sub-database on Prestel, British Telecom's videotex

And foremost in their ranks is one DAVID MACHEN. To say that databases and baud rates send him into ecstasy would be understating it. Elec

service, and is operated rather like an electronic computer magazine. In fact, Microsoft is run by Neil Midlands, Allied Files (SMAP) who also publish a couple of "low-technology" paper computer magazines. However, it goes a bit



further than that. Imagine a magazine consisting of around 40,000 pages, which are being updated daily frequently late you listening, letters editor's, with daily news updates, electronic mail facilities so that you can send messages to other users, games, prize competitions you can enter there and then using the two-way facilities of your modem, and 1989 software, that you can download from the database.

Microsoft 800 uses what is known as the videotex standard 1200 baud/75 baud speed. That is to say you can receive around 120 characters a second, and send about 5. Okay for receiving Prestel pages,

HACKERS!

ronic mail and down-line loading turn him on, too. See how it all grabs you, and try . . . **LYING IN THE MODEM WORLD!**

but a bit slow to say the least if you get trying to send a lot of information. For ComTecon, the other common speed is 300/300 baud, or the GDTT V.31 standard. This is used on computers.

"Bulletin boards" which are rather like versions of Prestel in miniature, and are run by home enthusiasts using modems much the same as yours. However, each board has a different style, almost a character of its own, which it usually takes from its compiler, known as the "sysop" (systems operator). These dedicated computer enthusiasts not only compile the systems, but have often built the hardware and written the software themselves. They may also have modems with what is known as an "auto-answer" capability, so that they do not have to

was, you may remember, featured on BBC TV's "Micro, live!" which is designed to help those with less experience (or less time) to start their own bulletin-type system. It is called CommandTe!, and consists of a DADCOM auto-answer, auto-dial modem, which will operate at 1200, 75, 75/1000 and 300/300 baud, plus the software to drive a bulletin board. The price? Around £380. Contact the Morning Gate (file at 180 Preston Road,

got it home?" Unless the modem that you buy has a "BT Approved" sticker on it you are breaking the law by using it on a British Telecom phone system, and could have your phone cut off.

Once you have your

framed off-line. Some of the software is a bit pricey compared to games, but you get what you pay for. As always, shopping around can be very profitable.

WHAT'S THE DAMAGE?

Finally, we come to the inevitable question, how much is it all going to cost? Well, I'm afraid that it doesn't come cheap. A modem can cost you upwards of around £50. Then you have to pay your subscription for both Prestel and Microtel. You can just pay for Prestel, but then you won't be able to



access the Microtel pages, as they are in a Closed User Group. Prestel costs £5 a quarter, and Microtel £3 a quarter. That works out to around £7 a week, not bad if you consider the price of your daily newspaper. Then there are access charges. If you use the system in "office hours" (between 8am and 6pm Monday-Friday, or between 8am and 1pm on Saturday) then it will cost you 5p per minute. However, there is no charge outside these hours. You should contact Microtel 800 on 01-276 3143 for subscription details. And, last but by no means least, are your phone charges. This, of course depends on how much you use your modem. You can normally access Prestel on a local phone call. But let me leave you with a true horror story of a gentleman who accessed a Spesside database in the Olympic City of Los Angeles. He didn't quite put the phone down properly . . . and went on holiday for the weekend. When he returned, he found his phone bill to be £35. . .



answer the phone at one in the morning when some innocent hacker wants a buffer at their board. There is now a system available from the Morning Gate Information Technology Centre (with

London W10 for more details.

LEGAL QUESTION

One of the more subtle problems of buying a modem is the question of "is it legal to use one I've

modem, you will also need some software to make it work. This again depends on what type of communication you want to use your micro for, and very often nowadays, you can pick up a complete package which includes the modem and software. Software can range from the simplest of dumb terminals, to the not-so-dumb systems capable of downloading timeshares, and preparing message

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CBM DPS 1101 Daisy Wheel Printer	389.00	348.00
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Wizard Joystick Interface	14.00	11.99
Speech Upgrade	55.00	40.00
Fortress	8.00	6.00
Optima	6.00	5.00
Football Manager	7.00	5.00
Overdrive	7.00	5.00
Star Trekker	7.00	5.00
Mr. Wiz	7.00	5.00
Fox	6.00	5.00
Zalaga	6.00	5.00
Aviator	14.00	11.99
Blogger	7.00	5.00
Eagle's Wing	7.00	5.00
Chicken Egg	6.00	4.00

ELECTRON

Accom Election	120.00	170.00
Accom Cassette	25.00	20.00
Blogger	7.00	5.00

VIC-20

Vic 1520 Printer/Footer	66.00	65.00
16K Ram Cartridge	26.00	24.00
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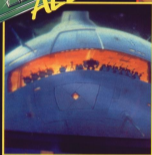
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ARCADE
ALLEY

BIG
K

SPACE
ACE



DR EX'S STARLIGHT RUNNER

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 DADDONO 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 intent: as soon as you drop your loot in the slot that the slight, fair-haired hero loses his boisterously curled female companion. Worse still, he has no time to moan her kidnapping because the asteroid on which he's perched is imminently blasted to bits by an invisible villain with blue skin and an Oriental beard, whose gross guttural and belly to match give him a distinct resemblance to Popeye's old partner, Pat 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

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 movie, who took three attempts before even this first minor obstacle was conquered. From there on in the panic came thick and fast. A leap lands Dee on a handy hillock which is promptly atomized by a lot of hovering saucers. Skip left if you can and you'll reappear (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 Mesoazo-type monstrosity that gleefully burk you into a bottomless pit.

On top of that, there's a vast, weird, "alien" type spaceship 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 surfaces that break up under his very feet, a whole catalogue of monsters — remember-horned woolly things, giant, multi-coloured sawsaws, a pack of werewolves — and sundry confrontations with the aforementioned blue maniac.

At one point he saves his girl only to see her suddenly transformed into a sickly infant on marvellous mother — what else? Another alarming 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 duck of the day for an even bigger fiend, the "Jaws" of space (of course).

And in case you get

bored there are sporadic appearances of the word "EMERGENCY" on the screen. Press the matching word-button and wreek, wreek Dexter is suddenly transformed into a muscle-armed Arnold Schwarzenegger type. When this happens you might think you're laughing if it did but the big peckerish 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 amazing arcade games to have come along since its '81 sibling. If you're a sucker for animation anyway (and this is miles better than your feeble "Ho Man" type cut-out) then look no further. Priority, but well worth it. Make the most of it, borrow a line, lamellar phrase. Go to it!



charts

SP - Spectrum, AC - Acorn, B4 - Commodore 64,

key

W20 - Wz 20, B1 - ZX 81, DR - Dragon 32, DR - DR

TOP 30 GAMES

	SP	AC	B4	WZ	B1	DR	DR	Price
14	DILEY THOMPSON'S DECATRON							£7.99
4	FULL THROTTLE							£5.95
1	SNARE WOLF							£5.95
1	TORNADO LOW LEVEL							£5.95
1	JET SET WILLY							£5.95
14	MATCH POINT							£5.95
14	LORDS OF MIDNIGHT							£5.95
4	BLANCH BEARD							£5.95
16	DECAFLOR							£5.95
3	MORTY MOLE							£5.95
4	INCOLO-OLYMPICS							£5.95
23	PARASCALLION							£5.95
—	OLYMPION							£5.95
8	3-D TANK BUEL							£5.95
—	THE EVIL DEAD							£6.99
—	FIGHTER PILOT							£7.99
—	ARABIAN NIGHTS							£7.99
—	WORLD CUP FOOTBALL							£8.95
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—	B.C. BILL							£5.95
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—	PERCY THE POTTY PIGION							£7.95
16	AUTOMANN							£7.95
—	SPAR TRADER							£5.95
13	BLUE THUNDER							£5.95

Compiled by MMS Computers.

VIDEO GAMES

1	11	FOUL POSITION (Atari)
1	12	SPACE SHUTTLE (Activision)
1	13	SUPER COIN (Parker)
1	14	REXEL 2 (Activision)
1	15	BARON BROTHERS (Atari)
1	16	PORTS (Parker)
1	17	80 PAC MAN (Atari)
1	18	CRIB (Activision)
1	19	SEA TO STAR BATTLE (Parker)
1	20	LOBBY (Parker)
1	21	FOURTEEN (Activision)
1	22	SAUCMAN (Atari)
1	23	PIZZON (Atari)
1	24	BATTLE ZONE (Atari)
1	25	ROGGER (Parker)
1	26	DEATH WING (S&S-Cole)
1	27	SNOOPY VS THE MC-BABER (S&S-Cole)
1	28	DOGDOG (Atari)
1	29	IRON PATROL (Atari)
1	30	PTING (Activision)
1	31	PAC MAN (Atari)
1	32	BIG BRO EGG CATCH (Atari)
1	33	WREN EGG (Activision)
1	34	TETAPACK (Parker)
1	35	COOKE MONSTER MUNCH (Atari)
1	36	SPACE WARRIORS (Atari)
1	37	JUNGLE HUNT (Atari)
1	38	ENTRE (Atari)
1	39	SAURS-C&S (S&S-Cole)
1	40	ROBOT TANK (Activision)

Compiled by MMS Computer

ATAC ATAC
(Ultimate)
BUMPING RUGGERS
(Bubble Bus)
CHUCK-E-EGG
(J&F Software)
COLOITZ
(Phibes Associates)
CYLON ATTACK
(J&F Software)
FIGHTER PILOT
(Digital Integration)

also selling well
in mail order...

FLIGHT PATH
(Anirag)
THE FOREST
(Phibes Associates)
FLYING FEATHERS
(Bubble Bus)

JET PAC
(Ultimate)
KRAKATOA
(Abbas)
MEGARWARZ
(Paramount)

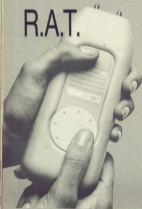
NIGHT RUNNER
(Digital Integration)
OUTBACK
(Paramount)
PILOT 64
(Abbas)
RALLY SPEEDWAY
(Adventure International)
SPACE PILOT
(Anirag)
TEST MATCH
(CRL)

WONDER

WIDGETS



R.A.T.



SAY IT with wands on the '84. Yes, Currah has now converted their highly popular Spectrum newsletter, giving 64 owners the power to produce strangulated verbiage from the speakers of their titles.

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 words collapse rather on "super-califragilisticexpialidocious" (admittedly a cover test), piling up after "fragil" and not pronouncing each subsequent letter individually.

Another small gripe concerns the dreaded ROM update. (These with very long

FAMOUS RATS of history: The "dinky" one Casey spoke of; Manaf's pet in Finality Towers; the early morning TV one called Roland. To this illustrious list may soon be added the one from Cheatsk that controls your Spectrum.

R.A.T. — Remote Action Transmitter — is your actual infra-red controller. Look, ma, no wires! Cheatsk reckons it's put the joystick about level with the Code in terms of mass-appeal. But at nearly £20 a throw I don't think the Code'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 connects jarringly with the functional black box of the

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

The transmitter utilizes two touch-sensitive pads for 2000 owners will feel right at home for all control functions; a long 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 300' away for games playing at this distance. Diodes are a necessary optional extra. The infrared signal operates on a different frequency so TV remote control units so there's no fear of suddenly switching over to Disney just when you've crossed the 50th screen of Jet Set Willy.

In action the R.A.T. works

DATAPEN LIGHTPEN

TRENDSET LIGHT has got to be the lightpen. Budding Leonardos of the video age can be spontaneously The Mona, expressions alone caused by writing within a cartridge of the CRT; the white-tipped pen manipulating numbers key combinations

while drawing. Welcome, then, the Datapen Lightpen, as seen on other screens 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 is necessary.

All electronics are packed inside the pen body itself. A useful feature on the outside switches the computer on the outside monitor to the computer only when you've attached the pen to it 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 free-drawing program. This is capable of producing pictures to great accuracy and includes pre-defined shapes for circle, rectangle and triangle drawing. Freehand drawing is surprisingly not catered for. The makers claim the program contains enough commands to make the "... unnecessary".

In use the Datapen is comfortable to hold and very easy to control. Most programs use a quick scanning bar which can fairly fast and don't require the pen to be held in position for long. A handy sleep mode you all to use when an action is complete. The pen doesn't seem too bothered about variable lighting conditions.

The Datapen Lightpen is a well-thought-out-to-the-Spectrum-which's electronic pen. £29.95 buys you a terrifically creative entertainment. — R.L.

memories will remember this phenomenon on the 2001 romps.) So how anyone can redesign a cartridge for the 64 so that it sits in the video-cartridge socket and STILL wobbles — resulting in a re-setting of the beam — is beyond the ken of us mere hackers.

The speech unit also uses the monitor socket so the probe with dedicated memory 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 "I 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 non-speech programs which use the 4k area of memory (from 4012 onwards) which the unit uses, will run. In general, of course, be used with Simon's basic or any other cartridges.

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



POSHWARE CORNER

DELILAH IS wearing the very latest in off-the-shelf software. Cut in during last year's proof Cambridge these new carrying bags from the House of Inmac are the very epitome of what's "right" for the computer owner of today.

Generous thick, high-density foam padding cradles snugly the smooth form of the Apple II or Apricot computers — the machines that speak of "class". There are even 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 desirable in these troublesome times.

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-order for less than the price of a good meal at Harcourt's. If we can be vulgar for the moment, they cost from between £17.00 to £27.00 each. — R.L.



tír na nòg



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Use keys **Z**, **X**, **;** and **/** for direction
control.



MAZE OF GOLD for VIC 20

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NOTE: This is a TRANSLATED listing. All instructions in "weird" brackets (including the brackets) should NOT be typed in but followed, i.e. CLR RT = cursor right.

by G. Roberts
for any VIC 20

4TH DIMENSION

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Kalah



SCAPELADO



KALAH

Developed by game designer Gregory Edwards, Kalah is a classic board game that has been played for centuries. Now you can play it on your home computer. Kalah is a challenging and addictive board game that is easy to learn and fun to play.

Developer: TALENT
Publisher: TALENT
Release Date: 1992

LASER REFLEX

Laser Reflex is a fast-paced action game that is a challenge for anyone who likes to play. It features a variety of levels and a challenging enemy. Laser Reflex is a fast-paced action game that is a challenge for anyone who likes to play.

Developer: TALENT
Publisher: TALENT
Release Date: 1992

ARCHPELAGO

Archipelago is a strategy game that is a challenge for anyone who likes to play. It features a variety of levels and a challenging enemy. Archipelago is a strategy game that is a challenge for anyone who likes to play.

Developer: TALENT
Publisher: TALENT
Release Date: 1992

WEST

West is a strategy game that is a challenge for anyone who likes to play. It features a variety of levels and a challenging enemy. West is a strategy game that is a challenge for anyone who likes to play.

Developer: TALENT
Publisher: TALENT
Release Date: 1992



PANORAMA (X)

Panorama (X) is a strategy game that is a challenge for anyone who likes to play. It features a variety of levels and a challenging enemy. Panorama (X) is a strategy game that is a challenge for anyone who likes to play.

Developer: TALENT
Publisher: TALENT
Release Date: 1992

TALENT

Corner Building, 101 St James Road
Glasgow G4 0JG, Scotland
Tel: 041 962 2128

The TALENT Computer Games Review (as displayed) QUALCOMM 64 BARS

Please indicate the following bars

Game Title	Genre	Platform	Rating
Kalah	Strategy	Amiga	4.5
Laser Reflex	Action	Amiga	4.5
Archipelago	Strategy	Amiga	4.5
West	Strategy	Amiga	4.5
Panorama (X)	Strategy	Amiga	4.5

How many bars do you have? (0-64)

Game Title: _____

Genre: _____

Platform: _____

Rating: _____

Comments: _____

January
and
investigate
only
MURKIN
50



3D

ROTATION: The Next Move

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 wherever you like it or not, and there's no particularly easy way to change it. Fortunately, the individual to correct this oversight is here in the form of Listing 1. Simply type it in and SAVE, making it a program that's 10. If you don't have a Microdrive, then don't bother with the drive. SAVE and LOAD routines at lines 5000-5040 and 4500-4540 respectively. If you don't have an interface I connected then you'll find that the computer's a bit cagey about accepting some of these lines. Why, well, it's a machine after the modeling of Listing 1, make a copy of the machine-code-format month's 800 k.

The program's sort of 3D designer, allowing you to construct an object, watch it build up on the screen, view it from various different positions and at various scales. There are SAVE/LOAD routines allowing you to save an object on tape or Microdrive and return to it at a moment's notice, assuming it hasn't been accidentally wiped in the meantime. After reading Listing 1 it will automatically load the machine code you've gotten. At this point, you'll either load an object from tape or start off from scratch by creating a new object. The program is driven by single key commands, entered below, and you press the appropriate key on the computer as it is listed.

C—This line lets you change the current IMAGE PAPER and WORD-DIP options. Due to the problems created by the Spectrum's restricted attribute system, it's not possible to make objects in multiple colors.

E—This is the End option. Press this and you'll get the "STOP" message. If you press the key continuously, you'll see the text "STOP" and will see the back of the right hand with no harm done.

O—If you've got a ZX Printer then this should give you a screen copy.

R—This one lets you view your workspace to either the left or the right of the screen. Microdrive users will see a Spectrum with drives, too, I think.

L—Let you LOAD an object back in from tape or disk. "Nothing" is the object you were working on at the time. Do see with care.

M—Allows you to change or

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

Save X, Y and Z—As with last month's editor prog, these keys allow you to rotate the object in the appropriate direction.

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

The first three commands are associated with actually entering the data needed to construct an object. As I mentioned last month, 3D points are represented using a, b and c coordinates. The program uses the method of defining 3D objects as points joined by not, so the way may be less obvious than you find in your possessing a piece of very rare and expensive 3D graph paper. Given the coordinates of a point in the paper, then you could make 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 hardship, 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 and Y coordinates of the first point. The computer will then move its imaginary pen from its old position to the one specified, drawing a line as figures.

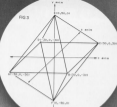
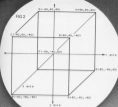
P—Much as the **T** command, except that the machine doesn't bother to actually draw in the line between the old and new points.

D—Press this and the last line of jump [P] line that you entered is (probably) suspended at its a line segment from the last representation of the object.

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

some are easy for computers while others are easier for 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 by using the **D** command before you become too much of a problem.

Now to some real objects. The first simple example of an object is a plain old 3D square as shown in Fig. 1. It has four points on it, so you need to enter four sets of data. "TND", I hear you exclaim. "Why five?" The answer is that to make objects rotate properly the origin must be directly in an object's center. The first set of coordinates simply allows you to move the pen from its resting position at the origin to the first point of the object. From the point T to the first point, the computer doesn't draw a line from the origin since it knows that the line from the origin to the first point is the correct way



method.

You've probably noticed that the four points on the paper have been marked A, B, C and D. To be certain that the four dots were just points composing an object and draw all the necessary lines it's a good idea to draw a picture of your object and write on your tape beforehand, labeling the points you're going to "visit" as you go. It's also useful to write down beside each point its coordinates, thus making the transferring of the object into the computer a simple matter of typing in the coordinates in the right order. The idea for the example given below, simply lists the preceding letter followed by the three coordinates in response to the computer's prompt:

```
A 1.0,0.0,0.0
B 0.0,1.0,0.0
C 0.0,0.0,1.0
D 1.0,0.0,1.0
```

You can rotate the object even if it is in an unrotated state and therefore might want lines being added to any message sent back:

The next example, shown in Figure 4, is a cube. To make matters complicated, there are 12 lines instead of just four — only 4 points, unlike the square, it's not possible to draw it without going over a line twice. The data for the cube is as follows. Read across the page:

```
A 0.0, 0.0, 0.0 1.0, 0.0, 0.0
B 0.0, 0.0, 0.0 0.0, 1.0, 0.0
C 0.0, 0.0, 0.0 0.0, 0.0, 1.0
D 1.0, 0.0, 0.0 1.0, 0.0, 0.0
E 0.0, 1.0, 0.0 1.0, 0.0, 0.0
F 0.0, 1.0, 0.0 0.0, 1.0, 0.0
G 0.0, 0.0, 1.0 0.0, 0.0, 1.0
H 1.0, 0.0, 1.0 1.0, 0.0, 0.0
```

The method I've used to draw the cube consists of two squares placed one on another, with one line joining them, and then go back with the command and draw in the diagonal lines. I'm sure that this method isn't the quickest and most efficient way, perhaps you would like to calculate the four numbers of moves you'd need to draw a cube.

Notice how both the objects are about 80 units in size — in height, width and depth. These

are also the largest dimensions you will allow an object to be — normally only the 17 screens from all graphics package points. If you do find that you've defined an object a shade too large then you can always squish it a bit with the 'm' command. There are definite maximum limits on the size of coordinates: 127 and 128 respectively.

The next object is a sort of crystal, two diamonds (one inverted) on top of each other. The crystal is shown in Fig. 2 and the data is given below:

```
I 0.0, 0.0, 0.0 1.0, 0.0, 0.0
J 0.0, 0.0, 0.0 0.0, 1.0, 0.0
K 1.0, 0.0, 0.0 1.0, 0.0, 1.0
L 0.0, 0.0, 1.0 0.0, 0.0, 1.0
M 1.0, 0.0, 1.0 1.0, 0.0, 0.0
N 0.0, 0.0, 1.0 0.0, 1.0, 0.0
O 1.0, 0.0, 0.0 1.0, 0.0, 1.0
```

This object has a much better "look" to it than the cube, allowing you to draw it completely only using one "G" command. Notice too, in certain circumstances, the object looks rather strange. This effect is a result of the fact that hidden line suppression when drawing the object. As well as allowing to a lack of solidity in the representation, it gives rise to strange situations where it's impossible for the lines to meet and sometimes one line is closer than another, with some weird results. Of course, there are ways and means of preventing hidden lines being drawn, but the method involving mathematics involved and therefore pointedly slow lines in machine code! original methods, such as the 'h' option, but unless you've got access to a mainframe, it's afraid the hidden lines are here to stay. Thankfully, there are a few "cheat" methods — that rely solely on graphical properties of an object to suppress hidden lines — that can usually be employed.

The last 3D object example is a sort of 'L' shape, it is the most complex of the objects — there are 28 lines. The data is shown in Fig. 3. Notice how this object forms a little more study than the others due to its greater complexity.

```
10 REM *****
20 REM # 3D Rotater Program #
30 REM # By Richard Taylor #
40 REM # July, 1984 #
50 REM *****
60 REM
70 BORDER 0: PAPER 0: INC 7
80 CLEAR 50001: LOAD ""CODE
90 CLS : GO SUB 5000: REM Init
1100
1200 GO SUB 1000: REM Rotate obj
1300
1400 IF a$="q" OR a$="Q" THEN GO
1500 2000
1600 IF a$="w" OR a$="W" THEN GO
1700 3000
1800 IF a$="c" OR a$="C" THEN GO
1900 4000
2000 IF a$="e" OR a$="E" THEN GO
2100 5000
2200 IF a$="l" OR a$="L" THEN GO
2300 6000
2400 IF a$="r" OR a$="R" THEN ST
2500 OP
2600 IF a$="n" OR a$="N" THEN GO
2700 7000
2800 IF a$="t" OR a$="T" THEN GO
2900 8000
3000 IF a$="g" OR a$="G" THEN CO
3100 BY
3200 GO TO 100
3300 REM Rotate Object
3400 IF a$="1" THEN RANDOMIZE US
3500 50004
3600 LET a$=INKEY$
3700 IF a$="1" AND a$="9" THEN
3800 LET a$=a$+a$ : BEEP .1,30 : GO
3900 TO 1010
4000 IF a$="2" THEN LET a$=a$:
4100 GO TO 1700
4200 IF a$="3" THEN LET a$=a$:
4300 GO TO 1700
4400 IF a$="4" THEN LET a$=a$:
4500 GO TO 1000
```


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IS THE WORLD'S SECOND BEST COMPUTER MAG BORING?

Comments on having the same "winners" after one month in computing as *Daily Telegraph* has in sport. You've won the 1984 Steven Craig Best Laugh Award for your Rubber Keyboard feature (BIG K, Aug 3, 1983 K isn't even full of boring dilemmas and benchmarks for the disabled).

I recently saw *Quadrant* in a news in Canada, and I'm sending you some pins that weren't available for your "Cultural Feature" (BIG K, Nov 1). Let me tell you, *Quadrant* is a really good month. Wish out for *Quadrant* too.

Can we please have a picture of you? I'm desperate to see what you look like.

Steven Craig,
 Penzance,
 Glasgow.

BELOW THE BELT

Has Tony Blair got some personal reasons for his vendetta against Alan? His latest onslaught on American magazine sites was totally inexcusable. Presumably he based his assump-

tions solely on the latter's refusal covers for reproduction, presumably is covered in one of those issues, complete with being. Other articles include *Storage in Form and Action*.

He obviously didn't find out much in the time he owned an Alan or he would have known that Alan's Commission is the "best" magazine that was used free to all registered owners like Britain's ID. At each, you can't expect to see much in it.

Finally, if these magazines are aimed at the reader how low is the standard your magazine is aimed at?

Neil Ward,
 Letchworth,
 Herts.,
 U.K. writes.

What a "Challenge"! My love for Alan products knows no bounds — it is no exaggeration to say how enthusiastically I've done my life for Alan Corp. — while my ignorance of all this user group stuff thank you for enlightening me. By the way I was amazed solely on the fact that Alan Corp. has where I would like to draw my last ten (maybe 200 million) is why I would enthusiastically buy your magazine, etc. — and that's all I mean get into any subscription list, (Banana, etc.)

So for what sort of level (BIG K is aimed at . . . why, YOUR level).

Yes, you read it, didn't you? P.S. You haven't got a award by any chance, have you?

AMSTAD WRITES . . .

Steve Hester, I read John Cornwell's review of the whole Amstrad and wasn't at all sure what to make of it. It seems to have made some subjective assessments without the benefit of all the facts.

Finally, it was designed by Richard Poley, he won't change his name for anyone — not even BIG K.

Amstrad has certainly taken a hard line with some software houses (why were industry relations particularly poor anyway?) development. When it looked as if the very expensive hard disk prototypes were not actually worthwhile products, we recommended them and gave them to other houses who've proved more expensive.

All the software information necessary to write on the machine has been published well before we started advertising the hardware, so my criticism is clear. The nature also tended to handle as much software as possible (and as you frequently observe, the availability of software is crucial to the success of a machine — and I'm rather pleased we didn't have it

up to those whose Ferraris are valued at £20k. The game are now resting in the hands of someone up and down the land. Firm with intentions to avoid bigger things like Jumbo Jets make us avoid more nervous.

William Paul,
 General Manager,
 Amstrad.

ALL K'D UP AND NOTHING TO LOAD . . . ?

I've just got a 586 Spectrum for son's. Please send me your recommendations for adventure and action type games.

Mark Roberts,
 Buntingford,
 Cambs.

COMPUTER SNOB WMI — EARLY WARNING

Isn't it about time that the sadistic, full-on, bloody battle to break different computer users are stopped? Everywhere I go I hear "Look at the Spectrum keyboard! How uncomfortable it is!" Oh, the BBC has the very best BASIC, eh? I own a C64 and am always being praised for my "primitive BASIC".

But what are they getting the winners in a best about? They don't have to use it. Surely the computer is as good as another in its class. We all have to get to grips with our machine's good and bad points. So do care what computer they have next door!

Trevor O'Grady,
 London SE2.

I recommend the following musical accompaniment to these games:

- *Don't Worry 'Dor House* — Maxwell
- *Big Area* (Thriller) — Michael Jackson
- *Salvo* (Walt In The Jungle) — Tight Fit
- *Miss Olympia* (Gold) — Spanish Ballet
- *Lower Johnson* (War Head) — LA School

Chopped Flag (Driving In My Car) — Maxwell
Jet Set (Walking On The Moon) — The Police
 Simon Curtis,
 Buntingford,
 Cambs.
 Write.
 How about playing "Imagine no possessions . . ." for a year?

Edited by NICKY XIKLUNA

cheap software company! And I've heard it's good music to be...

A question for disassembling folk: Who has an infinite loop PCB for Ocean's Moon? Don't know, I'm sure.

A.G. Gates, Gullford, Surrey
And what do you have for breakfast, A.G.?

It answers to last month's question on how to kill the dragon in the Kingdom Valley. Get the Staff of Power off the altar in one of the other towers.
 David McLeary, Glasgow, Glasgow

SABRE GOOF

Have you spotted the mistake in one of the Sabre Wolf maps? You only showed four possible initial sites, whereas I've found a total of 16. Here's my list:

Use the red, blue and purple identification cards as much as possible. Ignore all small fry units if you can do so and recruit. They may increase your score, but they don't enhance your chances of other finding the hidden prizes or your percentage of game completion. You'll save valuable lives trying to collect these pieces of rubbish.

Collect all the red statues. They give extra lives (three each), but I think enter a room unless it contains a useful item. The statue is probably less of life.

If you don't have all four metal pieces upon entering the Temple — you have no defence

against the Guardian. Always use an arrow before entering the Wolf's corridor. Remember! You have no defence against the Wolf.

No joystick means no chance of getting a good score. Only take your finger off the fire button in emergencies.

You can't kill the statue if it leaves its back more open with your sword (it's with the right arm). That they're buff off in another dimension.

Make full use of power-control whenever you find a piece of the Amulet. Access your position in the room — as the creature will go for you, something terrible!
 David Finn, Washington.

Two and Two
 ©Copyright thousands printed out the Sabre Wolf goal in our map. There was a dead-end where a door should have been. The reports are now safely incorporated in the Form of Goals, one level below the

Power of Power. Thanks for timely corrections, here — Jeremy Brown, Tim Bailey, Andrew Brown, Douglas Mabin, Colin Grahamshaw and Carol Nelson to name but a few.

WULF SABRED

I have discovered a sure-fire way to conquer Sabre Wolf and get to the final screen. I am giving you my theory in response to your request for tips in No. 5. My map is divided into grid squares numbered from D to F on each side in the hexadecimal base, so that each square can be referred to by a four digit number. Do you start at 00.

Random positions can be found in two different places. For example, if you find some first place in square 0E, the other pieces will be in squares 0E, 1E and 2E. Each of the six positions containing the six pieces is shown in the table below.

Rank	1st place	2nd place	3rd place	4th place
1	1A	0E	19	0E
2	0A	2C	0E	0A
3	2C	14	0E	0E
4	0E	1A	0E	0E
5	0A	0E	0E	0E
6	1E	2E	4E	0E

The initial player problem is to find the first piece of the Amulet which will be in the first column. Then it's just a matter of finding the others and passing the location of the Temple. More readers should be able to do this, although it takes some practice.
 P. Weston, West Oxford.

FIRACY BORE

I work in a computer shop and a lot of people notice my attention. Let's face it, it's not the prices are too high, it's just that punters prefer not to pay. Remember — please enlighten the state of affairs of the future!
 P. Lovett, Tadworth, Surrey.

It's that's enough phony for one time.

GULPO

SOMETIMES these things happen. A guy writes something, it's good. You print it. Then comes the trouble. And the guy who wrote gets actually sends the pieces to all the magazines. He's got to be kidding — what doesn't he know — because it was written by the guy he selected it to be written by.

Yes, folks, this is the real story — they took the first issue of the magazine. Looking up, it wasn't written by the editor programme. They found the real story, it was written by the editor programme. The editor programme was the editor.

The other interesting incident in recent times involved the absolutely unconvincing of the PET version of Ocean's Moon. I've had this ongoing conversation, and the only thing I can say is that the editor programme was not the editor. It was written by a freelance writer. This was a worthy job but he didn't do the appropriate job. He didn't do it in the right way. He was not the editor. So... if you can't remember and there are having more than the usual difficulty running the game, just contact us and we'll send you an instant reply.



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