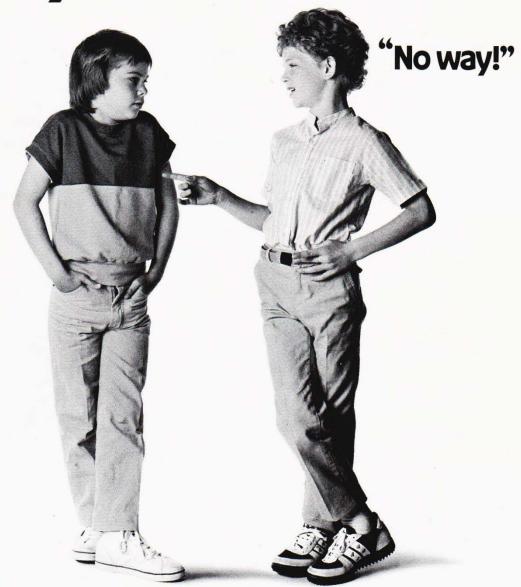


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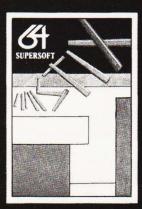
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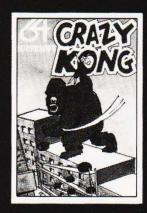
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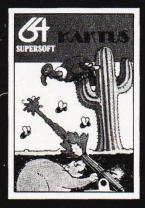
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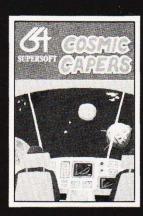
















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#### **Latest Releases**

New software is being released by Mogul Interdisc, and Parker.

Mogul are releasing a game for the Commodore 64 before it even hits the arcades in America. The game, called Zeta 7, is yet to make its US arcade debut but Mogul have acquired the rights to the game and, although the arcade game will not be released in America until the Autumn, the Commodore 64 computer game will be available in August.

The plot behind Zeta 7 is to defend the Zeta class defence sphere 7 armed only with your trusty orbiting defence pod with its solar-powered positron accelerator. With each increasing level more and more enemy starfighters attack you.

Zeta 7 is for the Commodore 64 + joystick and costs £7.95 on cassette, it will be available on disk at a later date.

Interdisc is a new company formed with the backing of Island records and has just launched its first title — Hercules.

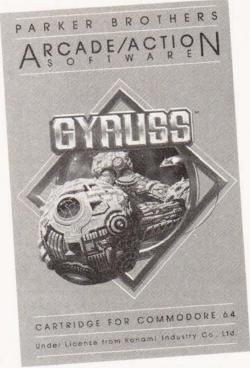
Hercules is a graphic adventure for the Commodore 64 and features fifty different frames.

Hercules is for the Commodore 64 only and is priced at £6.95.

Parker Video Games has changed its name to Parker Software to coincide in the launching of its new titles for the home computer market, and the dropping of some of its video games.

Parker will now only be supporting the CBS Colecovision, Atari HCS, Commodore 64, Spectrum, and Atari VCS. All their new titles for the Atari HCS and Spectrum will be on cartridge whilst the Commodore 64 games will only be on disk.

The first of their new range will be Star Wars the arcade game and Gyruss for the Commodore 64 and Spectrum, and Frogger 3D for the Atari computers. The Star Wars game in the arcades was a big success due to it having three 16 bit microprocessors and an eight colour vec-



torscan screen producing fantastic graphics. Parker have done a great job converting it to the Spectrum and Commodore 64 despite the limitation caused by the lack of the above hardware.

Gyruss is a sort of circular Galaga — if you don't know what I mean then take a look at it - it is very difficult to do the display justice with mere words. The music on the Commodore version of Gyruss is also excellent, Parker say that it took as long to do the music as it did to create the graphics.

Frogger 3D for the Atari is the sequel to the popular Frogger game and has number of added features, one of which is a three dimensional effect.

Commodore 64 disk games will be about £24.95 and Spectrum cartridges will be £14.95.

#### **Amstrad Arrival**

Amstrads are finally appearing on dealers shelves after a relatively short wait compared to most new wonder machines (QLs five months and they still don't work, Elans about a year and all we've seen is the box!).

To coincide with deliveries is Amsoft's and Kuma's first releases. Conversions of existing games by Gem, Romik, Mikro-Gen, Durell and others are being sold under the Amsoft banner. Mikro-Gen's Laserwarp, late of the Spectrum, is implemented complete with all nine levels of evil, ramming, shooting aliens.

Gem Software's Sultan's Maze and Spanner Man have been converted from the

Gem Software's Sultan's Maze and Spanner Man have been converted from the now defunct Lynx. The theme behind Spanner Man is a little man running around the screen, trying to close up leaks in the water supply of his local nuclear power station. As the game progresses mutant rats try to bite him and the water level rises, and rises. . . .

Alien Drop Out, a straight shoot-em-up game by Romik for the BBC, was converted in about ten days for the Amstrad and was finished in time for the original launch some months ago - talk about fast!

Another game finished in time for the launch was Harrier Attack by Durell. Harrier attack is now on four machines and is a very popular game, having been in the top ten a number of times. In Harrier Attack the player has to fly his Hawker Harrier jump jet across deadly enemy territory to try and destroy the enemy air base.

Kuma are converting their range of Sharp utilities and games. Their ZEN editor/assembler package is now ready and enables the user to write, debug and examine Z80 assembler programs.

Amsoft are at Brentwood House, 169 Kings Road, Brentwood, Essex.



#### Arcades in the Sky

United Airlines in America have leapt ahead with a new idea on in flight entertainment.

On one of their internal flights a Douglas DC8 has been modified to take 122 computer/video games. Aptly called 'Airplay' the video games offer Blackjack, Draughts, Backgammon, Poker, and American football. Also first class passengers can use the units as computers, whilst economy class can use their games as calculators.

The reason for the bias on gambling is obvious when you know the flight's final

destination — Las Vagas.

The Airplay games are battery powered and had to be extensively shielded and tested so that they wouldn't interfere with the aeroplane's instruments. The video games were made by the Altus Corporation in America, renouned in the 'big' computer world for making Unix based business machines.

United Airlines are going to test these units over the next few months and then take a decision whether to install more of the games. Virgin are also considering having video games in their new airline.

This is an important step in the evolution of video games and I hope video games get installed in more long distance transportation in the near future. I spend an hour getting to the office via British rail and I would prefer playing Space Invaders for all that time than trying to decipher what the station announcer is saying about delays at Bromley South.

#### Commodore 64 for Micropower

Micropower, makers of BBC and Electron games, are now branching out into the world of Commodore 64 software with the conversion of four of their best selling titles for the BBC onto the Commodore 64.

### **Pascal Progress**

Oxford Computer Systems, a 'serious' Commodore software company renowned for its compilers, cross-compilers, and Interpod Interface, has moved into the lower end of the market with some new releases.

Turbo 64 is a highly advance carracing game for the Commodore 64 featuring full 3D graphics of the car, race track, and surrounding scenery. The view on the screen is just as if you were sitting in the driving seat yourself. The steering wheel is directly ahead of you and can be seen to turn when you go around a corner. The dashboard is fully instrumented, and there is a gear lever indicator.

The car has four gears — these are selected with the joystick using the fire button as a clutch. There is also a practice mode where gear changes can be tested without you crashing into things on the

track.

The game was produced as an 'exercise' by one of OCS' programmers just to see if they could do a graphics game! A flight simulator may be in the pipeline: "it's only another dimension" said Tony Wilkes of OCS.

Also just released is a Pascal compiler for the Commodore 64 on cassette or disk. Pascal is an academic language much used in universities and is full of programming structures for procedures and loops — it's from Pascal that the BBC micro gets its PROC and REPEAT/UNTIL statements from.

There are a few interesting things about this version though. Firstly it is cheap and on cassette — previous compilers of this type were only available on disk. Secondly it has full graphics and sound handling commands including win-

dowing on a hi-res screen, a fill command, and music generates.

When the compiler has finished with the program it will run at least twice as fast as an equivalent Basic program and is totally unlockable as it is in machine code.

Previous uses for Pascal were limited to scientific programs but this new version provides the games writer with a system that can write fast, unbreakable, and highly graphical games.

Pascal on tape is £14.95 and disk

Oxford Computer Systems are at Hensington Rd, Woodstock, Oxford.



# CHEERIFOL SUITING

Ghouls is one of Micropower's latest releases for the BBC and accompanies Cybertron Mission, Swoop and Felix in the Factory onto the CBM 64. Ghouls is a 'Manic Miner' type of game where the player has to navigate a screen avoiding all the traps and ghosts. There are four different screens to cover, each one harder and more complicated than the previous

Swoop is a standard shoot-em-up game with the ever-present laser base at the bottom of the screen and kamikaze aliens bent on earth's destruction (for no apparent reason it seems).

The idea behind Felix in the Factory is to keep the boiler stocked up with oil and defend the factory against gremlins and

rats using only your trusty pitchfork(!) and a bag of poison.

Cybertron Mission is a 64 room maze game complete with nasties out to get you and treasure to retrieve.

All Micropower's Commodore 64 games have a device called 'Power Load' built into them. This technique is becoming increasingly popular on Commodore machines with a number of software houses. It allows the slow Commodore tape system to run at many times normal speed.

Micropower Commodore 64 games are available at £6.95 as is their BBC and Electron Games.

Micropower are at Northwood House, North St, Leeds LS7 2AA.

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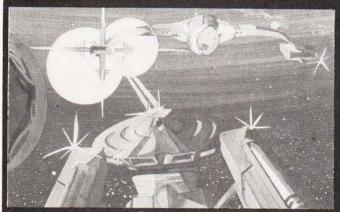
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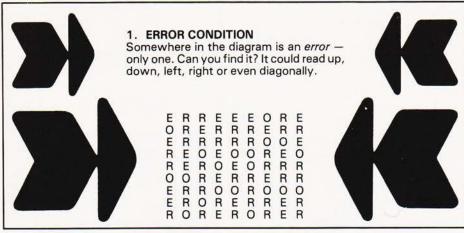




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#### 2. EYE QUEUE II

OK then — Eysenck has his Intelligence Quotient (IQ) — Lou and Les have our own version — the Falkovian Register of Intelligent Gamespersons (FRIG).

You know the score — it's one point for a correct guess; 10 points for giving the reason correctly.

How did you do?

O points ..... You are the Norwegian

entry in the Eurovision Song Contest

3 points ..... Par for the course

20+ ..... Beware - possible

genuis.

30 + ..... You are a computer

55 ..... Hi Lou!

Which are the odd ones out then...

a;

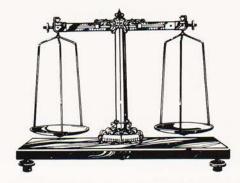


- b; Burlington Delft Armitage Twyfords Doulton
- c; C.L.I.M.B.
- d; SKATE TOILETS ARGY DAFFODIL NONA
- e; What follows in this sequence...

071421283----

#### 3. WEIGHTS AND MEASURES

A Thorngumbald Greengrocer is 5' 11" tall. He sells potatoes, carrots, peas, and beans. His chest measurement is 42". Early closing is on Wednesday. What does this man weigh?



#### 4. WEIGHS AND MEANS

We should have mentioned that the Greengrocer above has been on a diet for some time. But anyway, the other week, someone paid him 90 pence in 10p coins for some leeks. As he was leaving the customer mentioned that one of the coins was counterfeit. It was a perfect copy. The only way to tell it apart was that it was slightly lighter than a real ten pence coin. Using a balancing pair of scales, what is the least number of weighs necessary to locate the fake and give it in change to the next customer.

#### 5. TERMS AND CONDITIONS

Regular readers will remember that last month we printed a monster grid, and promised that it would be the last for some time. Of course we were lying — and by popular demand, here is the latest. Hidden as usual are a lot of the terms computer freaks use to baffle mere mortals. They go in any direction, and there's quite a few. How many can you find? How many have you said in conversation today?





#### 6. DEFY THE FOUL FIEND

We all know that six sixes are thirty six as in  $6 \times 6 = 36$ . But it is quite easy to make six sixes equal one - as in 666

666

Can you make 6 6's equal 2, 3, 4, 5 and so on?

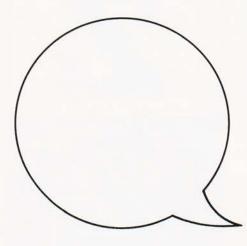
#### 7. IN OTHER WORDS

A man — an Ancient Briton.... A man — from the Black Sea.... A change in the weather.... A yank, but not a pull....

Heard, but not seen ....

A film - in the widest sense of the word.

No, this isn't our feeble attempt at a poem it's a feeble attempt at a quiz. The six lines above are all clues to different answers. But each answer is made up from the same letters... though not necessarily just one word. Can you crack



#### 8. BETTER OFF

You may remember Nick Hyams, the world's worst gambler we met last month, losing twenty five pound coins to Bill Capper — a shrewd operator indeed. What Nick did was to place the 25 coins on a bar counter like this...

00000 00000

00000

00000

00000

...and invited Bill to remove five coins, leaving four in each row - across, down, and from corner to corner, for a bet. Bill won.

The next week the two met again in the same bar, and Nick was out for

revenge, and his coins back.
"Well quite," he said. "Double or quits?" and he placed yet another 25 pound coins on the counter in the same

way.
"You're on." smirked Bill. "What's the

game?"

This time", ventured Nick, who should have known better, "You take away ten coins and leave just three in a row across, down, and from corner to corner.

Now Bill was as bad a winner as Nick was a loser. He pounced on ten coins, scooped them up and said "Will that do, sucker?" And pocketed the rest. Nick lost again. How?

#### 9. GUEST SPOT

B.A. Kidd from Newport Gwent...Come On Down! In this, the first of a regular feature Lou and Les take a back seat while our guest puzzler takes over. Your contributions are welcome; well, without any it would be a fairly puny guest spot. B.A. Kidd wins a prize for his efforts - you can too if we publish yours. By the way, remember to send the answers in as well. Just because we set the puzzles doesn't mean we can do them.



#### **CROSSWORD CLUES**

#### Down

- 2) Computer memory is measured in this (4)
- 4) Command to return the natural exponential of x (3)

Also known as base (5)

- 6) Sequence of instructions repeatedly executed (4)
- What's the missing word? (---FACE, --PRETER, ----ACTIVE) (5)

10) Eight bits (4)

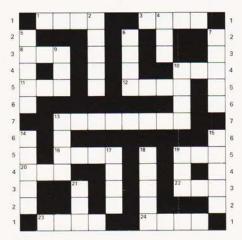
- 13) The computer reads this (4)
- 14) A junior rat for the Lisa maybe? (5)
- 15) Used to connect the computer to the outside world (5)
- 17) Command use in correcting a line (4)

18) Trace off (5)

- 19) The absolute value returned as a bike (anagram) (3)
- 21) Short for computer aided design (3)

#### **ACROSS**

- An alternative to tape storage (4)
- 3) Used in conjunction with POKE (4)
- Call used to return ASCII code (3)
- 10) Contraction of binary digit (3)
- 11) A giant in the business computer industry (3)
- 12) A music command (4)
- 13) A collection of data (8)
- 16) Storage media (4)
- 19) --- T strapping (3)
- 20) A type of integrated circuit(3)
- 22) A fab computer maybe? (3)
- 23) Program commands and instructions (4)
- 24) A collection of information stored outside the computer (4)





# SOFTWARE

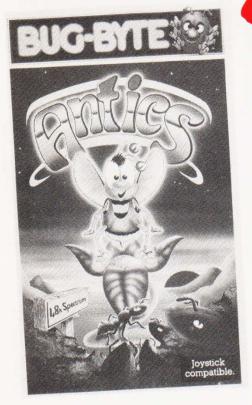
ANTICS

Runs on: ZX Spectrum 48K Made by: Bug Byte Price: £6.95

Antics is the sequel to the Birds and the Bees and is appropriately subtitled the Birds and the Bees II. It stars Barnebee, the cousin of Boris (featured in the Birds and the Bees). After Boris' claim to fame in the Birds and the Bees some ants lock him up in their nest to await a terrible fate. However, help is at hand as you (Barnebee) explore the ants' complex nest to find Boris. On the journey through the nest various creatures like ants and ladybirds are encountered, there are also flowers and thorns. If Barnebee is guided on to a flower he collects pollen, which is shown as a bar, above the stamina bar if this runs out you die. If Barnebee is guided in to a thorn it saps some of his stamina, unless he has some pollen, when it saps some of that.

The graphics are absolutely excellent, drawn in hi-res, with full colour, and the sound is remarkable. It has a continuous playing of Toccata. This can be turned on or off at any time. The game features a hall of fame with 50 places. Antics is very addictive and definitely a good buy.

Highly recommended.





#### DISCO DAN

Runs on: ZX Spectrum 48K Made by: Gem Software Price; £ 4.95

Dan must decontaminate the atomic fuel rods in this 3D machine code game. You control Dan Dan the Atomiser Man and must jump him from disc to disc (hence the name Disco Dan) trying to reduce the ever increasing radiation levels in an atomic pile.

However, Up 'n' ATOM 'Arry and his gang of vagrant particles are thirsting for the energy in your back pack, which makes life a bit awkward at times. Then there's Ron the Rapacious Robot as well! But you haven't heard the start of it yet — you must guide Disco Dan through a huge corridor, avoiding manholes which sap your energy. Also, on the way mutant pacmen (groan) and laser beams must be negotiated. On this screen you may jump mutant pacmen and lasers. On screen 2 Up 'n' ATOM 'Arry and his gang of vagrant particles (groan!) can be shot away from you.

The sound is good and the graphics are adequate without being exciting. I found the game became a bit boring after a while. I managed to clear stage 2 level 2, but that was all. What will they come up with next — a game with space invaders on your side?

GALAXY 5

Runs on: Oric Made by: Durell Price: £6.95

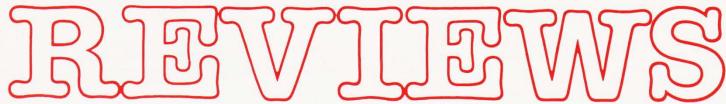
As the title suggests there are five games on this compilation tape — all of which include the traditional space theme.

Asteroids and Lunar Lander are two games that are written in BASIC and provide good versions of the old favourites. Because they are in BASIC, the listings can be examined, and, coupled with the plain English explanations in the program, they are a useful instruction to beginners and experieced programmers alike.

The three machine code games provide better graphics and smoother action, so the games are obviously of a higher standard. Zap the aliens is the object of all these, but each game is unique, so if one program becomes tiresome then another can be easily loaded. There are four skill levels to each game and the option to allow you to change the sound level is an idea that every software house should entertain. The use of sound in all the games is simple, but effective and makes all the games far more enjoyable.

All in all this cassette is value for money and, after all, five for the price of one can't be a bad thing!





# SOFTWARE

UXB

Runs on: Dragon Made by: Virgin Games Price: £ 6.95

UXB will not give you sweaty palms but the idea of defusing a large unknown bomb is a novel idea. The game starts with a menu of things to do, these include examining the bomb from different angles or choosing tools to defuse the bomb. With the six tools you choose, one is essential otherwise the bomb will explode taking you with it.

Good graphics are used which complement the high res text and the instructions are very easy to follow. If you are blown up you can start at the beginning or go back to the last stage. Unfortunately, if you use the wrong tool there is no way of changing it. Once the bomb has been defused there is another obstacle to overcome but you will find out what it is yourself

The game is good but once you have mastered it there is no point in replaying.

have to jump onto a turtle or a log that just happens to be passing, then they can hop to safety onto their lilly pads.

Road Toad is another 'Frogger' type of game for your '64. The more frogs that you guide across the road the harder that it becomes. When you have completed one sheet the going gets really tough, with more cars and lorries and less logs. On another sheet female frogs appear on the logs and sometimes float on the water to fool you (a bug maybe?). A few more sheets and a toad-eating snake appears in the central reservation, logs turn into crocodiles, and those friendly turtles dive under water — and you thought that you could trust them! After that everything just gets faster and faster.

The graphics are reasonable but the game has no music — just beeps here and there. If you are not a 'Frogger' fan this game will not convert you. If you are then you could do better on your '64. Road Toad is cassette based and uses joystick only

one of four modes — Kempston, Sinclair, or Protek joystick interfaces, or keyboard. There is also a demonstration mode which reinforces the cassette box instructions and helps a great deal in understanding which characters to avoid and why. The actual game is divided into two screens, although the second screen becomes increasingly difficult and is effectively several screens.

The object of the first screen is to take ingredients from the right of the screen and transport them to the left avoiding Waldo the burger thief, and the moving manholes. Waldo, who bounces smoothly but unpredictably around the screen, will steal whatever you are carrying if you bump into him - losing you valuable points, but not making you lose a life as the manholes do. If you manage to clear the first screen, by collecting buns, burgers, and cheese, then you enter screen two where you must assemble the ingredients by standing on the buns, burgers, and slices of cheese in their various positions on the screen until they fall into place onto the next ingredient.

You are chased continuously around the screen by the nasties, but if they trap you in a corner of the snakes and ladders like board you can pepper them with one of your three pots of pepper, or make one of the ingredients fall on them. The second screen is much more entertaining than the first. It is a shame that screen one success is necessary to play it.

This is an entertaining piece of software with excellent graphics, neat sound effects — including a rendition of the Wimpy advert theme — and responsive, well positioned, controls which make it deserve a place in any arcade collection.



#### ROAD TOAD

Runs on: Commodore 64 Made by: Audiogenic Price: £5.95

It's the mating season for toads. The time when they are driven by their natural animal instincts to their breeding grounds. To get there they have to have to safely cross a road, avoiding the racing cars, lorries, and police cars that speed along in the middle of the road.

After that little ordeal, our slimey friends are too exhausted to swim and



#### MR WIMPY

Runs on: CBM 64, Spectrum Made by: Ocean Price: £ 6.90 (64) £5.90 (ZX)

Ocean Software have now established a reputation for producing quality Spectrum, Oric, and Commodore software, 'Mr Wimpy — The Hamburger Game' is no exception.

The graphic layout is well thought out, not only in the action parts of the screen, but even down to the cassette label and introductory screen.

The Spectrum game can be played in



### SOFTWARE



Runs on: Commodore 64 Made by: Anirog Price: £7.95

Anirog have done it agan! Another great game for the Commodore 64. The title page makes great use of the Commodore 64's superior graphics capabilities.

You are a beautifully animated little 'clone' who has to run around the 400 chambers to find the 12 different signs of the zodiac. In your path await demons of the chambers who go under the names of Jessor, Jukul, and Jufo. These creatures move in front of you, however a few shots from your blaster and the creatures explode into the void. The game is really electrifying — and so are the walls! One touch and your body self-destructs leaving you wing to float to the ground.

After you have collected the twelve different zodiac signs you have to face Jemon (the demon?), the most powerful dark master of the chamber. He makes the signs that you collected float around the room. You have to retrieve these signs and return them to the centre chamber. Sounds easy doesn't it? The big problem is that you cannot fire at the same time as holding a sign, and you can only hold one object at a time.

This is a brilliant game from Anirog, using well animated graphics, and superb synthysound. When your clone moves it makes a great 'footsteps' sort of sound.

There is a two player option and four levels of play. These determine how fast you can move through the corridors. The higher the level the slower you run.

The game has a turbo loader, this means that it will load in 57 seconds with no extra hardware. The game is cassette based and uses joystick only.

#### GRAVITOR

Runs on: Oric-1 /Atmos 48 K Made by: Severn Software Price: £7.50

After an impressive loading screen is printed in front of you, this game presents you with a specific mission in mind. There are three stages to accomplish before your mission is completed. The first thing you have to do is guide your craft along a tunnel and then, avoiding the enemy spaceship, you have to dock with an oil rich satellite

As the title suggests you are subject to

the force of gravity and this makes control of the craft very difficult indeed. You are able to rotate the craft in either direction and thrust pushes you in the direction you are pointing, This done, you enter the satellite stage whereby you have to manoeuvre your ship to places above four fuel cells. Using your tractor beam you then pick these up - beware the UFO and bunker fire. Having collected these you return to stage one again. If you can do this four times (and with 3 lives that is quite some challenge) you finally enter the reactor stage. Here you have to collect another fuel cell - not easy - and then you move on to the next level.

In higher levels the law of gravity is reversed and at all times you must keep an eye on the fuel guage. Gravitor is unoriginal in concept but very addictive all the same. The control keys are adequate and although the graphics are satisfactory they do not use Oric's potential to the full. Sound is impressive and with easy to follow instructions this game is better than most but is unlikely to become a classic.

#### BEWAREHOUSE

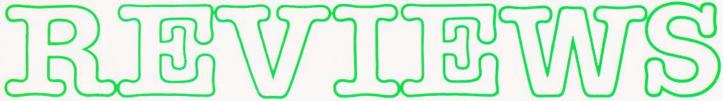
Runs on: Spectrum Made by: Positive Image Price: £5.95

This is a simple and yet surprisingly addictive game — somewhat reminiscent of 'Kong'. The scenario in this instance is to cross a warehouse with as many workers as possible avoiding boxes, barrels, and the ghosts who hurl them at you. Having crossed the warehouse you must climb a ladder to reach the upper reservation and move onto an increasingly difficult level of play.

The controls are well positioned on the keyboard, and can be easily used once their function is understood. Jumping can only be achieved when standing beneath a section of orange pipe, it is this which the workers jump up to hang from while barrels pass beneath, conveniently avoiding them, but also using up energy which is displayed at the top of the screen and must not be exhausted.

Another kind of jump can be performed when beneath a blue pipe. This offers sanctuary but uses up a lot more energy.

Difficulty is provided between levels by increased numbers of falling boxes, ghosts, and a different type of barrel at higher levels. Graphics, sound, and presentation are good with a single misleading instruction — stating the use of keys 'G' and 'O' instead of the correct '9' and '0'. Apart from this, this is both entertaining and good value software.



#### **BLUE THUNDER**

Runs on: 48 K Spectrum Made by: Richard Wilcox Software Price: £6.95

If you have ever fancied yourself as the pilot of a fast-moving helicopter then this program offers you the chance. In this case the machine is a jetcopter, with which you must negotiate such hazards as missiles, electronic storms, and on the higher levels of difficulty, you face armoured barrage balloons, jet fighters, and a missile-firing submarine.

Your aim is to get to an unstable nuclear reactor and destroy it before rescuing your lost comrades — I'm not quite sure why you have to destroy the reactor, if it is unstable I would have thought it would do the job quite well itself.

The controls are pretty simple, being up, down, right, and turn through 90 or 180 degrees, you also have a hold game facility. I found the fire/turn controls a bit awkward though — they all use the same key and, until you become sufficiently gentle with its use (the "C" key; or the fire button if you are using a joystick), you will find yourself rotating when you mean to fire and vice versa.

Your game status display consists of graphic representations of your remaining fuel, your jetcopters, and which mission (ie. stage) you are on. The graphics are good and I find the game appealing — it is a bit like a Skramble type game, and certainly the destruction of the reactor is a challenging task. A game definitely worth having a look at.





#### TWO GUN TURTLE

Runs on: Spectrum Made by: Lothlorien Price: £ 6.95

Two Gun Turtle is heralded by a colourful and graphically startling introductory screen. After this, the comparatively plain game is a slight disappointment, although still of high quality.

You, as a green turtle armed with two guns, must shoot vermin in your garden to protect yourself and your strawberry patch. Once you have mastered the controls — either a Kempston style joystick or your choice of keys for movement in four directions and firing — the game is a matter of manoeuvering yourself into the path of a pest and blasting it before it reaches either you or your strawberries.

Initially your strawberry patch covers a large amount of the screen and so it is difficult to avoid shooting your precious fruit, however the ease of play increases, somewhat ironically, the more strawberries you allow to get eaten as this gives you added mobility.

The vermin include blue, pig-like, creatures which only attack fruit — although they can kill you on collision. There are also red, dog-like, creatures which ruthlessly pursue you and attack your fruit. I quickly named them with an apt obscenity. Thirdly there are yellow skulls with chattering teeth, whose arrival on the screen rapidly resulted in my death.

It's difficult, but worthwhile, watching the calendar, as bonus points are available during snow showers. The game as a whole is reasonably entertaining, but, in my opinion, it doesn't justify the price tag of £6.95.

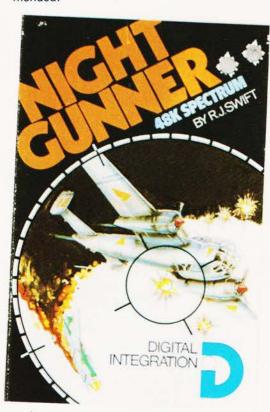
#### **NIGHT GUNNER**

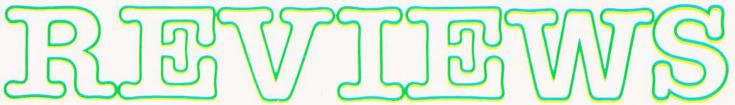
Runs on: 48 K Spectrum Made by: Digital Integration Price: £6.95

Having seen D.I.'s Fighter Pilot I expected something good and I got it.

The scenario has you as a Second World War gunner and bomb aimer. On your way to the target (bombing planes or tanks) you are faced with innumerable fighter planes, enemy bombers and barrage balloons. The fighter planes' graphics are superb as they appear from the sky as dots, growing and shooting, desperate to terminate your plane's mission. Occasionally a superbly animated enemy bomber crosses your path and should be shot if possible. However, the barrage balloons should be avoided as they are only red herrings to give the fighter planes a better chance of hitting you. Once you have reached the bomb run you are given either a dive bombing run or a normal overhead bombing. Once all the bombs have been used up you must fly back, this is like stage 1. In all there are thirty missions, each consisting of the three stages.

The sound is marvellous and so are the graphics. The game can be controlled by AGF (cursors), Kempston, or Sinclair joysticks. Highly addictive and recommended.







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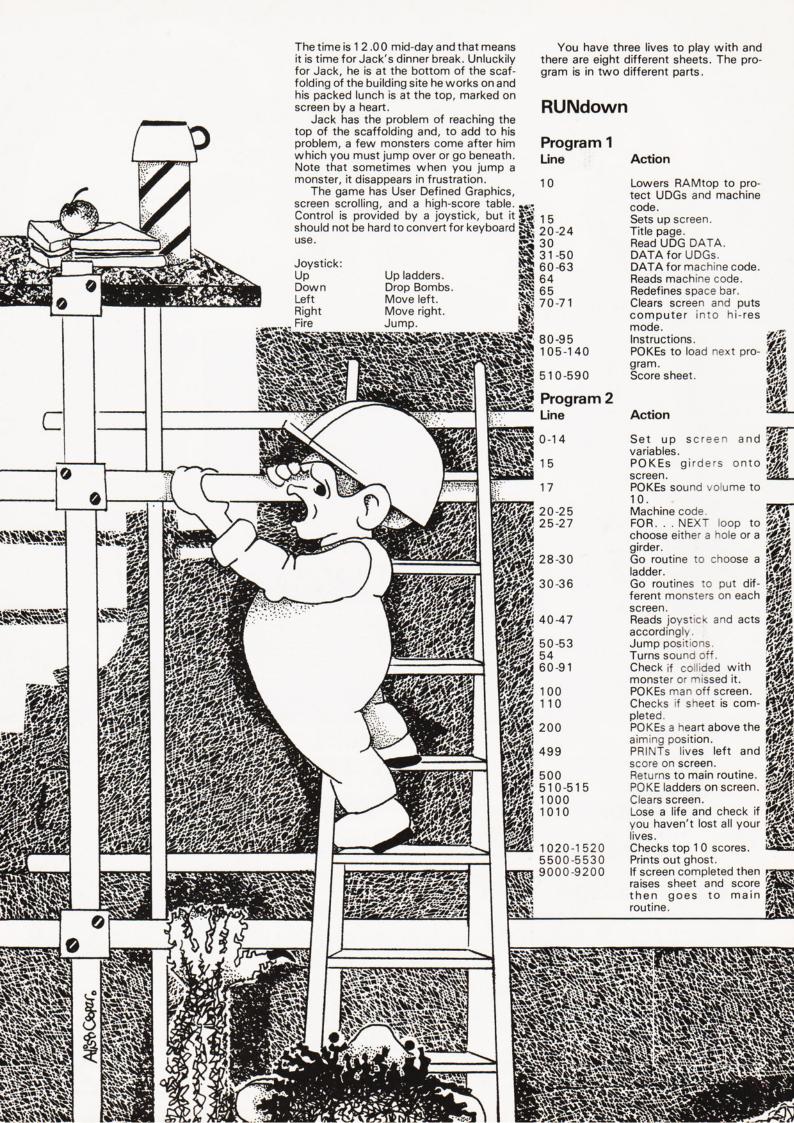
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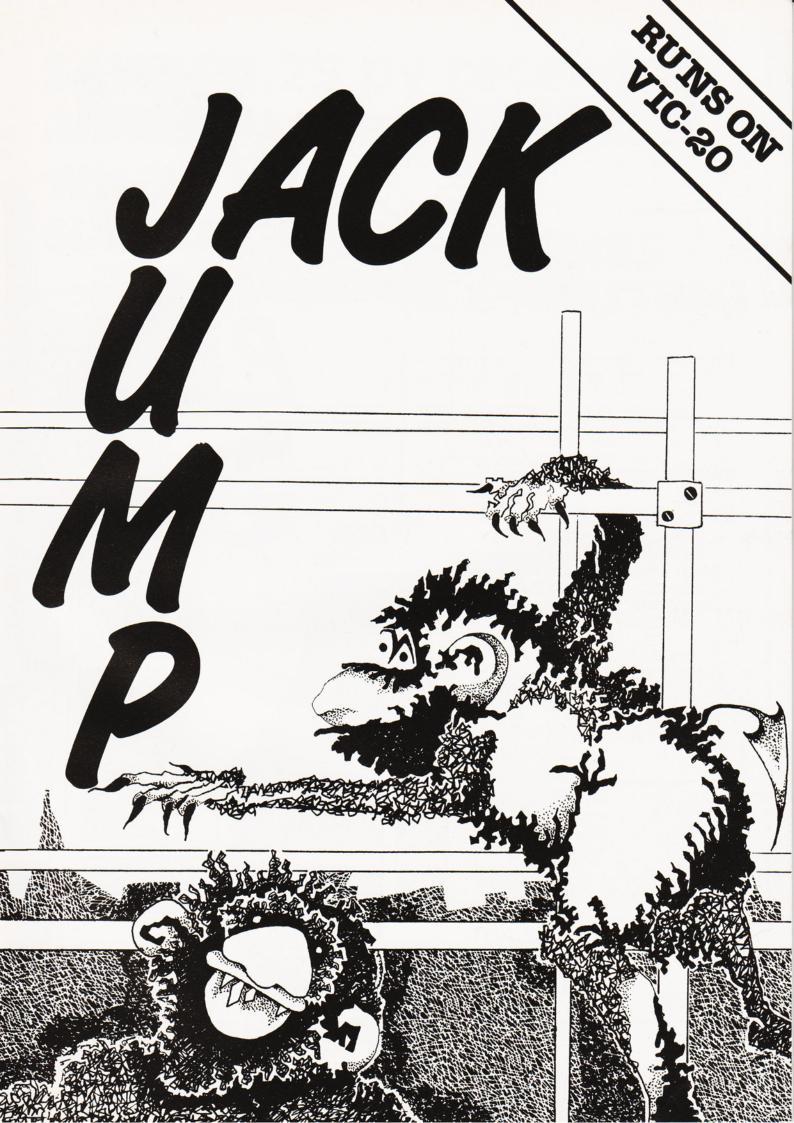
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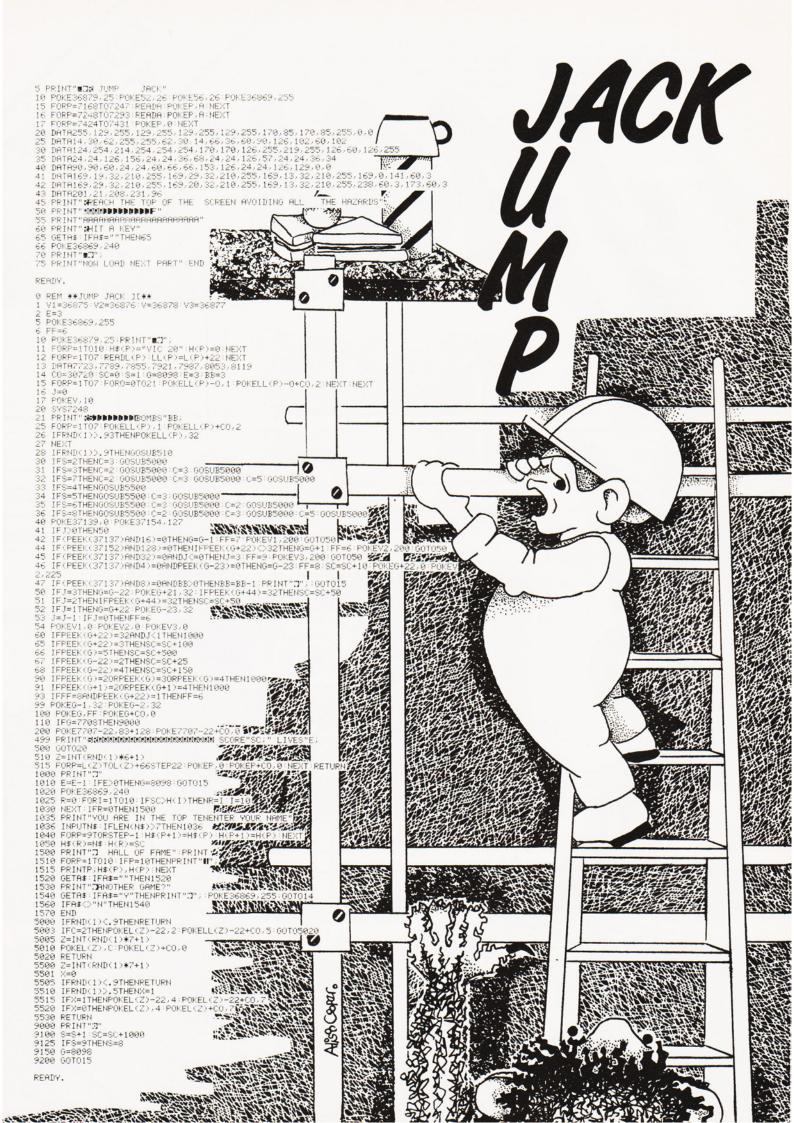
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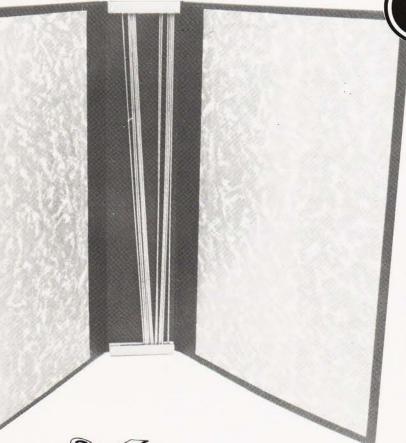








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The scenario of I. Robot is delightfully imaginative, like most good arcade games. What you have to do to beat the system in this new game is to destroy Big Brother's evil eye, but in order to do so you must first thread your way through a multi coloured, three dimensional maze. And all the graphics are just amazing.

You are in control of a robot, the hero of the game, throughout play and at the outset are faced with a green and yellow entrance to the maze. You'll see a bright blue coloured pyramid on top of which rests Big Brother's eye. First of all, work your way through the maze by jumping onto and walking on the paths of the labyrinth which are coloured red. Once stepped upon they turn blue, indicating that they have already been used.

Simon Rockman found this amazing new arcade game hidden in the depths of a Marble Arch games emporium. It's brand new from Atari, the king of stand-alone games and I. Robot is tipped to be an even bigger success than Space Invaders, Asteroids and Defender put together. I. Robot's still on trial but should be in arcades soon. Tipster Bobby McCallister already knows the game inside out and has come up with some great ways to beat the game for you to try when you get to play I. Robot.



But, wait a minute, jumping's not that easy. You can't make I. Robot jump until a pale blue shield appears. At this stage of the game the Evil Eye acts like a set of traffic lights. When the eye is coloured red you must not jump, unless you want to risk being shot by the Eye (I said it was imaginative, didn't I?)

If the eye opens up and is coloured yellow, it means it's warning you not to jump. It will either turn red, and if you're in the middle of a giant leap you automatically lose a life. But if it changes to green you're safe and can jump without fear of reprisal.

At the beginning of the game you are given three lives with which to play and you must clear each sheet of the game within the set time-points limit which is approximately 60 seconds or 4,000

points. This results in a drastic rush of adrenalin to the blood system because you know that if you don't successfully clear sheets within the time limit you lose one of your lives, and believe me they're precious. If you finish within the limit your left-over time is added in points to your score as a bonus.

To help you keep track of how much of the maze you have successfully covered the game's designers have kindly given you an indicator on the left-hand side of the pyramid which tells you how many red squares you still have to clear.

The screen's all-action all the time with bonus points and dangers abounding. The best way to push up your score to record-breaking levels is to keep changing your angle of view of the sheet you are playing. There is a choice of four angles and you

are awarded less points if your robot is looking directly down onto the screen. This is because you are then able to view the entire screen at the same time allowing you to see what dangers lurk and is therefore the easiest option.

therefore the easiest option.

You score most points if you are looking straight at the screen, so that the objects are shown horizontally. From this viewpoint dangers are hidden behind all sorts of objects and making it difficult to see where red spaces appear.

What do you look out for? Well, on sheets one, two, four and twelve you must keep a wary eye out for the birds (sounds like something out of an Alfred Hitchcock thriller, and these ones are just as horrible). The fly very low over your robot's head so when one of them is doing so you must not jump — remember to constantly check the birds flight path, either just behind of just in front of I. robot. The birds only fly, towards you, giving a 3D effect. These birds can be shot, and it's adviseable to do so. Bear in mind that the nearer you are to a bird when you shoot it the more points you will score.

You can only shoot in one direction, effectively from the front of the machine to the back of the screen. The number of points you can score range from 25 to 500, for instance you only score 25 if you shoot a bird from a long distance away.

which are spat out from the deadly discs which are spat out from the pyramid at the top of the screen. Your best bet is to keep I. Robot on the move and firing simultaneously because the discs then cannot kill you. If you stay in one place the discs will eventually land on I. Robot and you will automatically lose a life.

On sheet five there are giant balls which roll thunderously through the screen. They fly in much the same way as



the birds, i.e. directly towards the robot. These balls cannot be destroyed, so be warned. It gets a little easier on the twelth sheet because you are then confronted with smaller balls which shoot across the screen in all directions. Bonus points are up for grabs if you manage to shoot any of them. You get 50 for each ball shot.

Come the ninth sheet and things change yet again. This time the dangers take the form of six mines which are located in three sections of the maze, two mines in each. They can move vertically, in opposite directions within their sections and cannot be destroyed. But if you can run into a mine it will disappear for the rest of the game affording you a little more safety although a life is automatically lost. And you don't score any extra points either.

On sheets eight and thirteen of the maze the game gets a bit more of a bite as three sharp-toothed sharks appear. All you can do to avoid them is keep I. Robot on the move and out of their way as these sharks cannot be destroyed on either of the sheets. Here's a quick run-down of the sharks movements as far as we can

Sheet number eight: shark one moves down lane one from left to right and returns down lane two in a continuous cycle. Shark two moves down lane three, from left to right, and returns down lane four, again in a continuous cycle. Shark three moves down lane five, from left to right and returns down lane six in the same manner as the others. Just to add to your troubles they all move simultaneously. You must cover the whole of the grid avoiding collisions with sharks and once done the eye will explode and you can move on to the next sheet.

To wet your shoot-em-up appetite for what's to come later are a lot of stars on sheet seven. These stars zap all over the screen in every direction possible and can be shot for 75 bonus points per destroyed star. You'll also be confronted with moving walls that block off the red squares making it harder to reach the red path.

After you have completed each maze

(or sheet as they have also been referred to here) the following happens.
You know when you've completed a screen (or sheet as I've called them here) because the evil eye automatically explodes. Once that's done you get the chance to fly through space in order to further your mission. In space, as all good gamesters know, there are hazards galore and there's no exception here. There are things called tetras which you must shoot



down as well as giant rocks which have to be shattered and fragmented in order to get rid of them á la asteroids.

It's well worth wiping out the tetras because if you get rid of the whole lot you reap the benefits of 999 extra points. The giant rocks must be shot 10 times before they explode and for that you receive an extra 100 points to boost your score. The ultimate number of points you score for attacking the rocks depends on the number of successful hits you have made upon each rock. i.e. one hit = one point, two hits = three points (because +2=3), and so on.

Once all the tetras have been shot, flying saucers will appear on the screen. You can take a swipe at these and a successful hit will score you 50 points. Another extra hazard to be aware of are the stars. These are extremely misleading because they float seemingly harmlessly towards your robot. You must not shoot them, for if you do they will instantly and without fail destroy you and you lose a life. If you don't attempt to shoot them they will merely continue floating past you in

If you are clever enough to stay alive throughout space you get a crack at landing on a special yellow docking pad. If you don't land correctly on the pad, you will, again, lose a life and to make matters worse, the higher the level the smaller the landing pad!

A special feature of I. Robot is the

transporter which works in a similar way to pressing a hyper-space button on other games — you are instantly transported onto a higher level of play. However, you are only allowed to use the transporter once throughout each game and if you decide to warp you will be given a choice of levels to try your luck, and skill on. You also receive bonus points if you succeed in clearing the sheet to which you have transported, again the higher the level you choose the higher the points you can

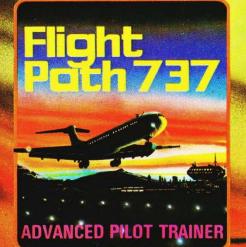
There are also things called cutters which are circular saw shaped objects whose functions we are not quite sure of! Any offers from any vidiots out there? All hints are welcomed.

So that's the long and short of this great game. What makes it a cut above the rest is primarily its variety of play. There's always some new element or other which you are suddenly confronted with and must work out its function faster than the speed of light (well, certainly faster than the speed of the machine!). The graphics too are high-class, as you can see in the super colour photos our photographer took. And finally the mixture of a difficult, strategic maze game with a fast-moving, zap-em-down space game makes for one of the best arcade games to come from Atari in a long time. is is definitely one not to be missed.

Our thanks go to all at Marbles arcade at London's Marble Arch for all their help.

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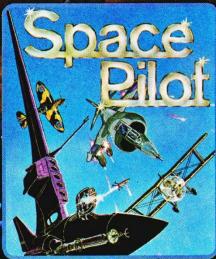
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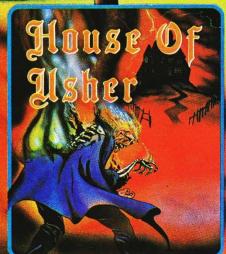
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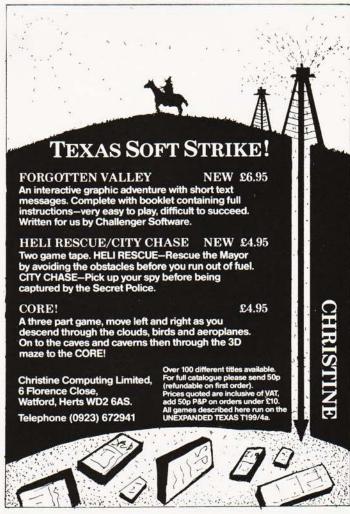
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Circuit 20 is a motor racing game which just fits on the unexpanded VIC 20. It takes full advantage of sound and user defined multi-coloured graphics. The game requires skill, co-ordination and a good deal of patience.

Points are given for successfully manoeuvering your car around the circuit. A generous bonus is given for each lap completed, the size of the bonus depends on the average lap time.

The faster you complete the circuit the better the lap time. The car has a top speed of 150 mph and can accelerate from 0 to 150 in about eight seconds on a straight stretch of track.

Your fuel tank only has a capacity of 200 units of fuel, so after approximately every two laps it is essential to refuel. Refuelling is achieved by driving past the petrol pump (at the top of the screen) at a speed of 30 mph or less. Any faster and you won't be able to stop. If you are low on fuel the computer helpfully warns you.

The game has a high score facility and a good score is about 500. I realise that the motor racing beginner may find Circuit 20 a difficult track to complete but one of the beauties of the game is that it is easy for the reader to design his own circuits by changing lines 400-430.

Please remember that it is in no sense intended to be a simulation game, but should be played purely for enjoyment.

#### **RUNdown**

Line

130

Subroutines 350-360

400-440

500-530

550-557

580-590

450

460

540

#### Set-up Lowers memory top, sets variables. 30 Copies character matrix. 40-82 Creates new character set.

Action

100 Sets variables. Char matrix to 7168, set 110 border colour. 120 Set multi-colour

> characters. GOSUB to draw circuit.

Main Loop GOSUB check keyboard. 160-190 Decide direction to move

Check for refuelling. 210 220 Check for crash. 230 Move car. Check for passing post. 240 Check for out of fuel. 250 270 Update dashboard.

Control Check for steer left. 300 310 Check for steer right. 320 Check for accelerator. 330

Check for brake. Print dashboard. Print circuit.

Refuel. Check for going past post the wrong way. Award bonus points. Crash subroutine. Exit, set sound.

Instructions

#### Variables Used

V C1 CA

V,31,34	Jouriu.
SC SC	Score.
HS	Hi score.
LP	Laps.
TI\$	Time.
FU	Fuel.
R	Direction of car.
U	Screen code of user defined char.
Z	Position of car.

#### Conversion Clues

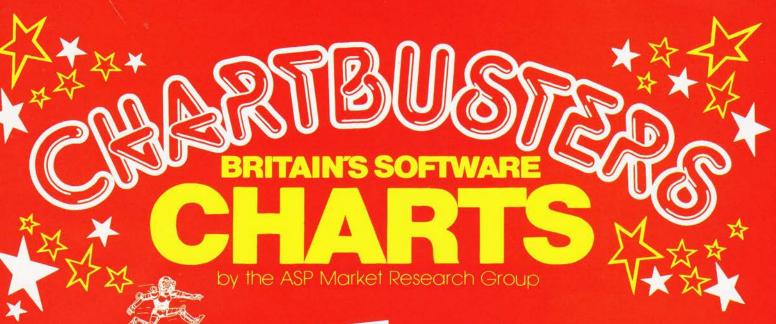
Converison to other machines will be difficult because of the extensive use of UDGs.

The VIC screen starts at 7680 and is 22 rows by 21 columns. A reversed heart means CLS. A reversed 'S' means HOME. A reversed 'Q' means line feed, and a reversed ' 'moves the cursor along one. Other reversed symbols refer to colour











Spectrum (一)







Moon Alert

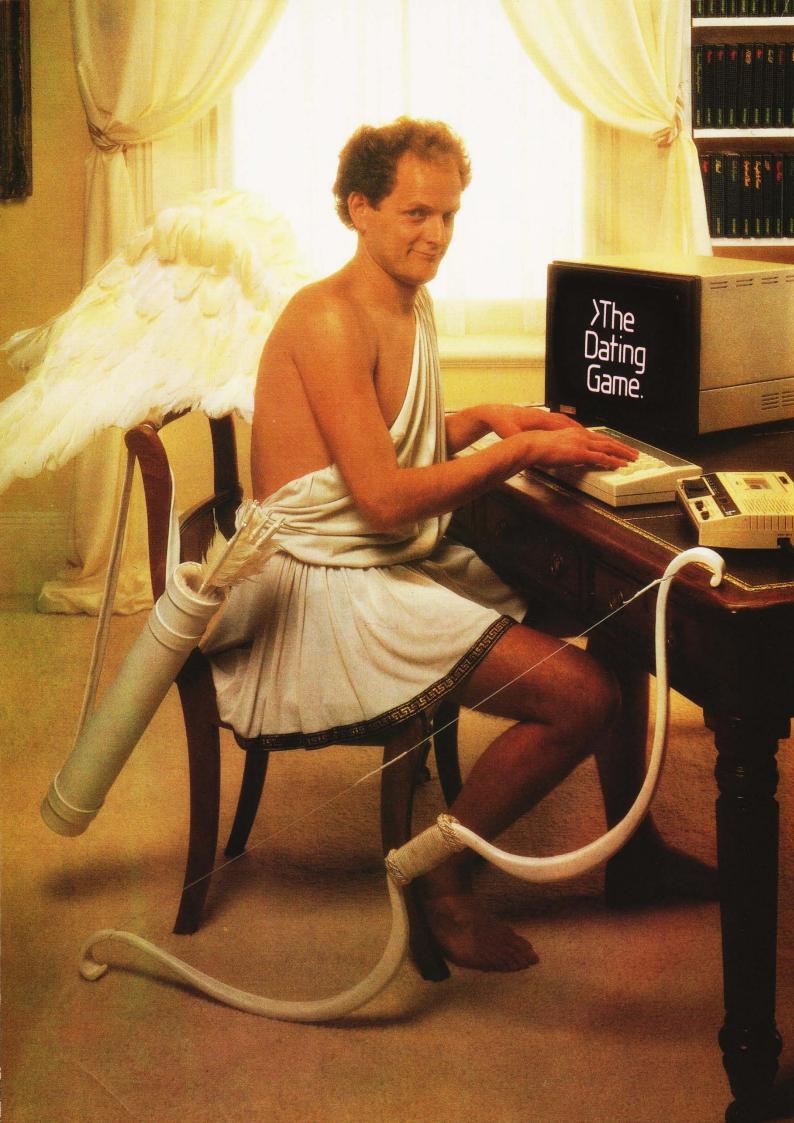


Colossus Chess

Golf



Spectrum (-)



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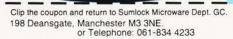
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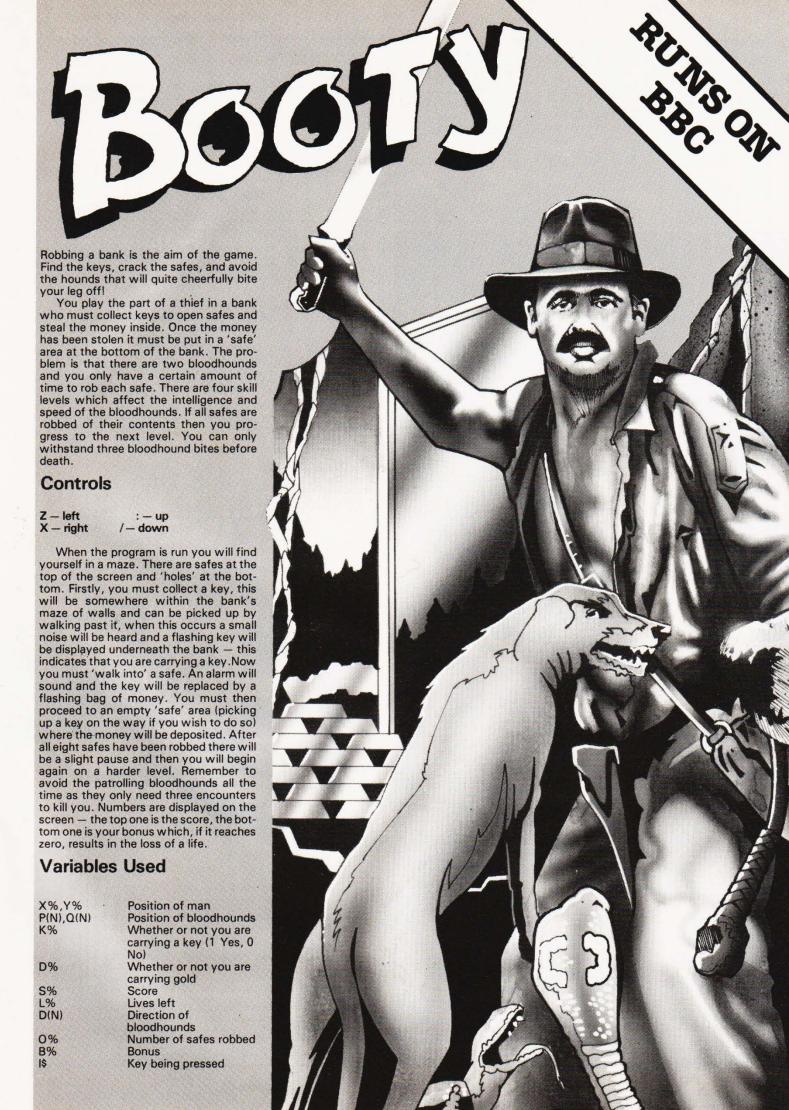
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RUNdow	n	PROCscore	Updates score and bonus		bloodhound is at the same position as the
		PROCmanmove	Moves the robber (you)	PROCdead	robber Flashes the maze,
Procedure PROCintro	Action Print instructions	PROCguardmove		11100000	makes a noise and knocks a life off
PROCinit	Initialises variables, sets up the sound and	PROCky	Checks to see if you have passed a key	PROCmenleft	Prints the number of lives left
22201	graphics	BB00 1 11	and if so picks it up	PROCdropgold	If you are carrying
PROCboard PROCplay	Draws the maze The main game	PROCckeckkey	Checks to see if the key to a safe is held		gold and are in a safe area then drops the
PROCend	Sounds the alarm and gives the option of	PROCdropkey	Drops the key if a safe is opened	PROCcentre	gold Centralises the
	another game	PROCcheckdead	Checks to see if a		instructions



3 MODE7 5 PROCintro 7 S%=0:L%=3 5%=0:L%=3 9 MODE 2 10 CLEAR:DIM P(2),Q(2),D(2),A(2),B(2) 11 SOUND1,4,100,1 12 PROCinit 14 SOUND1,4,100,1 15 COLOUR 128:COLOUR7:VDU4:CLS:VDU19,7,7,0,0,0 20 PROCboard 25 PROCdropkey 30 PROCplay 40 PROCend 50 END 60 DEFPROCPLAY 61 PROCscore 65 VDU 5 70 REPEAT 73 IF IX=10 THEN PROCSCORE
74 ZX=ZX+1
75 PROCmanmove 80 IF RND(4) >V%THEN PROCquardmove ELSE TIME=0:REPEAT UNTIL TIME>8 82 PROCcheckdead 100 UNTIL FALSE 110 DEFPROCmanmove 120\*FX21,0 140 I\$=INKEY\$(5)



147 GCOL Ø, Ø: MOVEX%, Y%: VDU224
15Ø IF I\$="X" AND POINT(X%+64,Y%)=Ø THEN X%=X%+64

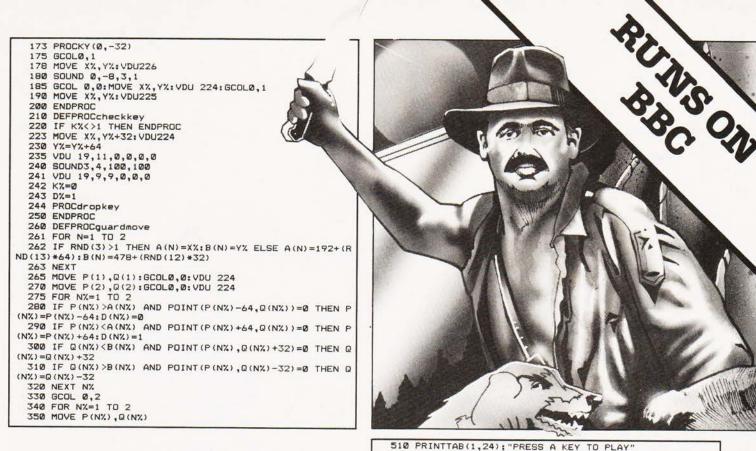
151 PROCKY(64,Ø)
153 IF I\$="Z" AND POINT(X%-64,Y%)=Ø THEN X%=X%-64

154 PROCKY(-64,Ø)
155 IF I\$=":" AND DX=Ø AND POINT(X%,Y%+32)=5 THEN PRO
Ccheckkey: GOTO 17Ø
16Ø IF I\$=":" AND POINT(X%,Y%+32)=Ø THEN Y%=Y%+32

165 PROCKY(Ø,32)
170 IF I\$="/" AND POINT(X%,Y%-32)=Ø THEN Y%=Y%-32

171 IF Y%=414 AND D%=1 THEN PROCdropgold

145 IF I =" THEN ENDPROC





```
360 IF D(N%)=1 THEN VDU 228 ELSE VDU 227
   370 NEXT N%
   380 ENDPROC
   390 DEFPROCcheckdead
   400 FOR NX=1 TO 2
   410 IF P(N%)=X% AND Q(N%)=Y% THEN PROCdead
   420 NEXT N%
   430 ENDPROC
   440 DEFPROCHead
   450 VDU 19.7,9.0,0,0
460 SOUND 1,1,17,18
  470 SOUND1,4,100,0
471 FOR T=1 TO 200
   472 L%=L%-1
473 PROCmenleft
474 IF L%>0 THEN VDU 19,7,7,0,0,0:x%=576:Y%=478:MOVEX
%,Y%:GCOL 0,1:VDU225:ENDPROC
  475 SOUND 1,1,17,36
480 FOR N=1 TO 8000:NEXT N
       SOUND1,2,136,50
  500 FOR T=1 TO 2000
505 VDU4
   507 COLOUR 15
```

```
515 COLOUR 15
   530 *FX21,0
   540 G=GET
   550 RUN
  600 DEFPROCKY(C,V)
610 IF POINT(XX+C,YX+V)=3 THEN GCOL 0,7:MOVE XX+C,YX+
V: VDU224: SOUND1,3,100,5: K%=1: VDU19,11,11,0,0,0
  620ENDPROC
   630 DEFPROCdropgold
  530 DEFFROUGHORGOID
640 0%=0%+1
645 VDU 19,9,0,0,0,0
650 GCOL 0,1:GCOL 0,132
660 MOVE XX,YX:VDU231
670 SOUND1,3,4,32
671SOUND1,4,100,1
  675 S%=S%+250+B%
  676 B%=500
  680 FOR T=1T0300
  685 IF 0%=7 THEN GOTO 945
  687 PROCecore
       GCOL0,1:GCOL0,128
  700 Y%=Y%+32
  710 MOVE X%, Y%
  715 D%=Ø
  720 VDU 225
  75Ø ENDPROC
  760 DEFPROCmenleft
  770 GCOL 0,1
  775 MOVE 1024.32
  780 FOR N=1TO L%
  790 VDU 225
  800 NEXT N
  810 GCOL 0,0
  820 FOR N=1 TO L%-3
  825 VDU 8
  830 VDU 224
  840 NEXT N
  850 ENDPROC
  855 DEFPROCScore
  856 VDU 4
  860 COLOUR 6
  870 PRINTTAB (5,23);5%
  880 B%=B%-10
  890 COLOUR 14
900 PRINTTAB(5,28); B%;
  910 COLOURO: PRINT"
  925 Z%=0
  927 VDU 5
  928 IF B%=0 THEN MOVE X%, Y%: GCOL 0.0: VDU224: PROCdead:
B%=500
  930 ENDPROC
  945 VDU 19,7,12,0,0,0
950 FOR N=1 TO 150 STEP 10
  960 SOUND 2,-13,N,4
  970 NEXT N
  980 FOR T=1 TO 4000:NEXT T
  985 V%=V%-1
  990 GOTO 10
 1000 END
 8000 DEFPROCIATIO
 8010 PRINTCHR$(141); CHR$(130); CHR$(136);"
```



```
8020 PRINTCHR$(141); CHR$(130); CHR$(136);"
 BOOTY
 8030 PRINT''
8040 PRINT" Guide Bontza the robber around the "'maz e to help him rob the bank" "He must collect the yellow key hidden in "'"the wall and then proceed to a safe and "'"remove the contents, taking them to a "'"safe area a
the bottom of the ";

8050 PRINT"scren."'"The problem is that guarding the safe are 2 of the largest hungry bloodhounds" "he has ever seen!!!""The object(s) Bontza is carrying is "'"
shown below the bank, as is your score if reaches zero "
8060 PRINT"leads to Bontzas death."'
                                                         and bonus which
 8070 PROCcenter ("Press any key to continue")
 8075 G=GET
 8080 CLS
 8090 PRINTCHR$ (141); CHR$ (130); "KEYS: "
 8095 PRINTCHR$ (141); CHR$ (130); "KEYS: "
 8100 PRINT
 8110 PROCcenter (CHR$(129)+":
                                                     LIP"Y
 8120 PROCcenter (CHR$(131)+"/
8130 PROCcenter (CHR$(132)+"X
                                                  DOWN")
                                                RIGHT")
                                                  LEFT")
 8140 PROCcenter (CHR$ (149) +"Z
 BIAT PRINT
 8145 PROCcenter ("Enter your skill level (1-4)")
  8146 G$=GET$
 8147 G=VAL (G$)
 8148 IF G<1 OR G>4 THEN GOTO 8146
  8149 V%=4-G
  8150 PROCcenter (G$)
  8155 PRINT
  8160 PROCcenter (CHR$(130)+CHR$(136)+"PRESS ANY KEY TO
START
  817Ø G=GET
  8172 *FX12,1
  8173 *FX11
  8180 ENDPROC
  8700 DEFPROCcenter (A$)
  8710 A=LEN(A$)
  8715 LET S= (39-A) /2
  8725 PRINTSPC(S)+A$
  8900 ENDPROC
  9000 DEEPROChoard
  9005 RESTORE
  9006 CLS
9010 FOR N=1 TO 154
  9020 READ A,B
  9025 A=A+1:B=B+2
  9040 PRINTTAB(A.B)CHR$(224)
  9050 NEXT N
  9060 FOR N=1 TO 7
  9075 READ A.B
  9080 A=A+1:B=B+2
  9083 COLOUR 3: COLOUR 129
  9085 PRINTTAB(A,B)CHR$(231)
9090 COLOUR 132:COLOUR 5
  9100 PRINTTAB(A,B+1)CHR$(229)
  9110 NEXT N
  9115 COLOUR128: COLOUR1
  9120 PRINTTAB (9,17) CHR$ (225)
  9125 VDU 5
9130 LET P(1)=192+(RND(13)*64):LET Q(1)=478+(RND(12)*3
 2)
  9140 IF POINT(P(1),Q(1))<>0 THEN GOTO 9130
9150 GCOL 0,2:MOVEP(1),Q(1):VDU228
9160 LET P(2)=192+(RND(13)*64):LET Q(2)=478+(RND(12)*3
 2)
  9170 IF POINT (P(2),Q(2)) <>0 THEN GOTO 9160
   9180 GCOL 0,2:MOVEP(2),Q(2):VDU227
  9200 REM ***SET UP BDARD***
9210 MOVE 1024,224:GCOL 0,11:VDU 230
9220 MDVE 1024,128:GCOL 0,9:VDU 231
```

9230 VDU 19,9,0,0,0,0:VDU 19,11,0,0,0,0

```
9500 DEFPROCINIT
 9510 VDU 23,224,255,255,255,255,255,255,255,9520 VDU 23,225,56,56,16,56,16,56,40,100:REM MAN1 9525 VDU 23,226,56,56,16,56,16,16,16,16:REM MAN2
 9530 VDU 23,227,35,226,162,254,190,62,34,102:REM DOG L
EFT
 9535 VDU 23,228,196,71,69,127,125,124,68,102:REM DOG R
IGHT
 9540 VDU 23,229,255,227,193,227,247,247,247,247;REM KE
  HOLE
 9545 VDU 23,230,128,197,165,191,160,192,0,0:REM KEY 9550 VDU 23,231,152,36,110,199,239,98,128,124:REM MONE
Y BAG
 9560 ENVELOPE 1,1,43,0,0,100,0,0,126,0,0,-126,126,126
:REM GULP SOUND1,1,17,18
9565 ENVELOPE 2,1,-7,7,0,10,10,0,126,0,0,-126,126,126: REM POLICE SOUND 1,1,36,50
 9570 ENVELOPE 3,2,6,0,0,255,0,0,126,0,0,-126,126,126;R
EM MONEY SAFE SO. 1, 3, 4, 15
9575 ENVELOPE 4,1,70,16,2,2,0,0,126,0,0,-126,126,126:R
EM BELL SO.1,4,100,25
 9580 X%=576:Y%=478:K%=0:D%=0:0%=0::B%=250:Z%=99
 9590 VDU 23,1,0;0;0;0;
9610 *FX11,2
 9620 *FX12
 9700 ENDEROC
 9710 DEFPROCdropkey
 9720 LET F%=192+(RND(13)*64):LET G%=478+(RND(12)*32)
  9725 IF POINT (F%,G%) <>7 THEN GOTO 9720
 9730 GCOL 0,3
9740 MOVE F%,G%:VDU230
  9760 ENDPROC
10000 DATA 1,0,2,0,3,0,4,0,5,0,6,0,7,0,8,0,9,0,10,0,11,
0,12,0,13,0,14,0,16,0,1,1,3,1,5,1,7,1,9,1,11,1,13,1,15,1,12,3,2,5,2,7,2,9,2,11,2,13,2,15,2,1,3,11,3,1,4,3,4,4
  4,6,4,7,4,8,4,11,4,12,4,13,4,14,4,1,5,3,5,11,5,14,5,1,
6,3,6,6,6
10010 DATA 7,6,8,6,14,6,1,7,14,7,1,8,2,8,3,8,5,8,5
8,8,8,7,8,10,8,1,7,8,7,12,7,13,7,14,7,1,10,2,10,3,10,5,10,8,10,10,10,10,14,10,1,11,5,11,6,11,10,11,11,11,12,11,14
,11,15,11,1,12,3,12,6,12,8,12,12,12,1,13,4,13,5,13,6,13
16,4,16,6,16,8,16,10,16,12,16,14,16

10030 DATA 16,0,16,1,16,2,16,3,16,4,16,5,16,6,16,7,16,8

16,9,16,10,16,11,16,12,16,13,16,14,16,15,16,16,16,7,16,8

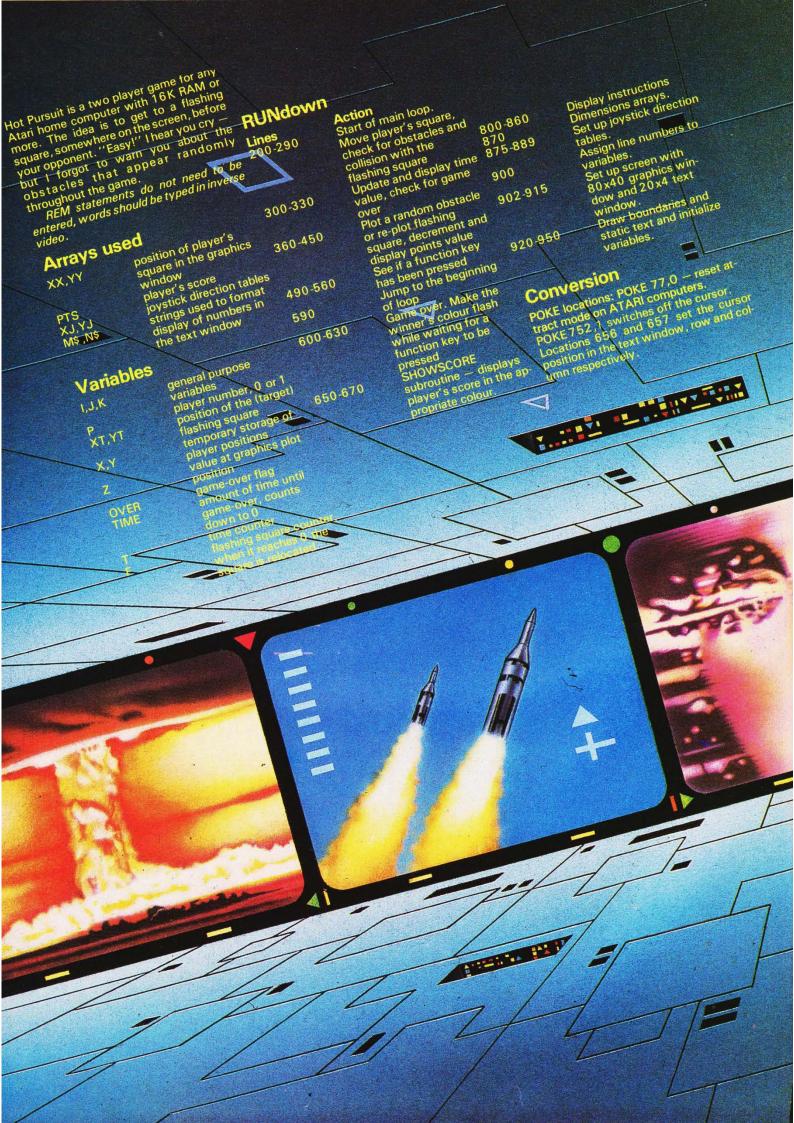
14,1,15,1,16
10020 DATA 8,13,12,13,14,13,4,14,7,14,8,14,9,14,12,14,2
1,17,2,17,4,17,10,17,10,17,12,17,14,17,16,17,18,17,10,17,12,17,14,17,16,17,1,18,2,18,3,18,4,18,5,18,6,18,7,18,8,18,9,18,10,18,11,18,12,18,13,18,14,18,15,18,16,18
```

10050 DATA 2,1,4,1,6,1,8,1,10,1,12,1,14,1

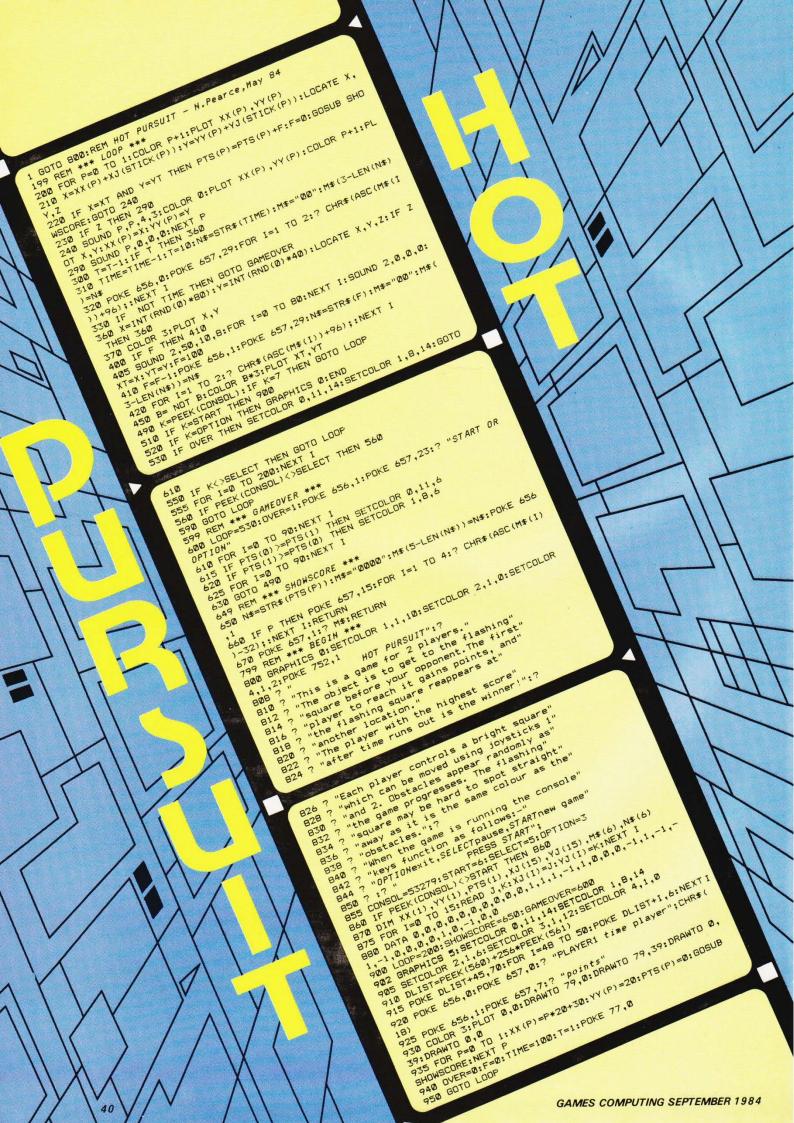
9240 PROCmenleft

9300 ENDPROC









#### IDEO YING

**HERO** 

Runs on: Atari 2600 Made by: Activision Price: £24.95

Volcanic avtivity has trapped miners in mineshafts in Mount Leone. Roderick Hero needs your help and his special equipment to rescue the miners.

The game has five difficulty levels, the higher the number the deeper within the mine you begin and the more advanced the challenge.

The game starts with five lives - one R. Hero (ho! ho!) and four in reserve. An additional life is gained for every 20,000 points earned.

The power gauge can be seen on screen. If power runs out, a reserve life has to be used. The game ends when all lives are used up.

On the backs of your men is a proppack. This propeller pack allows you to fly up, down a shaft, go left or right, and hover. The helmets of your men come equipped with a microlaser beam. It can be used to blast vermin and slice through walls.

Your men begin each game and every mineshaft level with six sticks of dynamite. These can be used to demolish a small wall.

A heat-resistant raft floats on some stretches of the lava river to help you along in the adventure. Lanterns light the murky mineshafts. Touch or shoot one and that section of the mine will go dark.

All the time you are in the maze dangers are lurking, including springing

PITFALL 2

Runs on: Atari 2600 Made by: Activision Price: £24.95

This is the sequel to Pitfall and in this game you join Harry in his adventures in the lost caverns of Machu Picchu.

Included with the game is not the usual 'Rules of the Game' booklet but the diary of Pitfall Harry. This diary explains the objectives of the game.

Harry has been sent ot the underground cavern in Peru along with his niece Rhonda and Quickclaw the cat. The cavern, we are told in the diary, is a complex maze and Rhonda and Quickclaw have disappeared.

A plea is sent out from Harry to you to come and join him to try and find missing friends. Subterranean creatures are in the maze because the Raj diamond was stolen a century ago and hidden in the ancient labyrinth.

In your travels you have to try and find this, as well as a stone-age rat - a large university wants it for research - and bars of stolen U.S. gold.

Harry's contract only requires the recovery of Rhonda, Quickclaw and the diamond, but extra points are earned if you also help him find and gather together spiders, shaft bats, mine moths and nesting snakes.

You must locate a miner on each level before moving lower down the mine. Points are awarded for, for example, shooting a creature and bringing down a wall. Also, the more units of power remaining when a minor is rescured the more points are gained.

After the rescue operation is completed the instruction booklet implies something else happens. I have not reach-

ed this far yet so I am still waiting to find out what it actually is!

Hero is a rather comical game because, for example, of the prop-pack and the strange looking snakes, but because of these factors it is very enter-

Explosion sounds can be heard and the graphics are excellent, especially the dynamite explosions and Hero himself, and also some of the labyrinth walls are of gorgeous colours.



the other objects.

Dangers in the maze include green poisonous frogs, mauve coloured bats, condors, electric eels, albino scorpions and dark voids of fathomless depths.

Red crosses are useful as they help you along your adventure. You can read Harry's theory on these crosses in his diary.

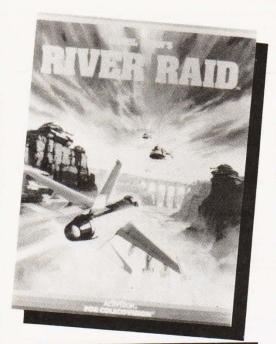
Balloons, or specimen bags that Rhonda has steam filled, act as cross-cavern transport. You can hang onto these and float above the ledge and then when a bat bursts the balloon you gently fall to the ground.

You and Harry are given an advance of 4000 points as soon as you begin the adventure. Extra points are rewarded for capturing objects and points are lost when you succumb to a hazard or unintentionally fall.

I liked the idea of the diary. It was well laid out and adds to the game. The graphics are very good, I especially liked the frogs, and fast, exciting music can be heard

I always find you need a lot of patience for maze and adventure games — if you do have this virtue I would recommend you to buy Pitfall 2.

# IDEO YING



### RIVER RAID Runs on: Colecovision Made by: Activision Price: £24.95

Your mission in this game is to score as many points as possible by destroying enemy battleships, helicopters, fuel depots, jets, land tanks, hot air balloons and bridges before your jet runs out of fuel or crashes.

The river is divided into sections with a bridge at the end of each section. Islands, narrow channels, bays, and enemy air and water craft moving in to block your path will be encountered. The further down the river you fly, the more difficult it becomes.

Your jet fighter can accelerate or slow down, bank to the left or right and fire missiles, either continuously or intermit-

You have four jets in your squadron—one active, three on reserve. With each 10,000 point increase you are awarded an additional jet. You lose a plane if it runs out of fuel or touches anything except a fuel depot.

A fuel gauge can be seen on the screen and a warning siren can be heard if the fuel drops below a quarter full. To refuel you have to fly over a fuel depot — the slower you move over it the more fuel you will receive.

There are eight different game variations, four for one player and four for two players. Advanced pilots may start the game at later bridges, bypassing easier sections of the game.

If you reach a score of 25,000 points or more, you are eligible for the official rank of River Raider — if you write to Activision you will receive an official River Raider emblem!

This game is quite exciting and colour-

ful. It has a slightly different concept in relation to other games because of the river. There is no music in River Raid, but there are lots of firing noises.

River Raid is all about killing the enemy. It needs a fair amount of skill, but there are better games available that have the same objective.

#### PITFALL

Runs on: Colecovision Made by: Activision Price: £24.95

In this game you have to guide Harry through a treacherous jungle maze. He must leap over obstacles and dodge dangers while grabbing all the treasure he can find.

You start each adventure with 2000 points. If you fall down a hole you lose 100 points and hitting rolling logs also causes point loss.

Finding treasure earns points. There are eight types of each treasure, 32 in all, including money bags, silver and gold bars, and diamond rings.

You have 20 minutes to complete each adventure and Harry has three lives. The objects that can kill you include scorpions, fires, cobras, crocodiles, quicksand, swamps and tar pits.

Included with the game is a 'Guide to Jungle Journeys'. In this booklet, among other things, it tells you the rules of how to use the joystick, for example, to release

a vine the control stick has to be pulled towards you, an article about real jungle explorers is included, plus tips on how to play the game from the designer of Pitfall.

Pitfall starts with a good opening sequence — Harry swinging on a rope — but after a while it gets rather tiring as you have to watch it every time your three lives are lost.

The graphics are good, even though the trees have bright red trunks! Although there is music all the way through, it is not a very exciting tune.

Cuthbert in the jungle, even though it is a rip-off of this game is more exciting and has better graphics. I also preferred Pitfall 2 to this original game.



#### **SOLAR FOX**

Runs on: Atari 2600 Made by: CBS Electronics Price: £29.95

The object of Solar Fox is to successfully manoeuvre your Starship through a series of colourful, pulsating solar cell matrixes, or matrices, whichever you prefer! Points are scored for each solar cell you capture and for how fast you clear each astromaze.

You begin each game with a squadron of three starships. The number you have remaining are shown in the right hand side of the screen. They can travel at two speeds, depending on the difficulty level you have chosen, and can also be speeded up by holding down the fire button.

There are 20 different solar cell mazes. each maze varies in shape, composition, complexity and in some cases colour. Racks one to six are composed of single solar cells. Racks seven to twenty are made up of double solar cells. Each cell must be passed over twice to be cleared from the screen if they are of double composition.

All the matrixes are guarded by two sentinels. Each sentinel continually oscillates along the perimeter shooting a pattern of deadly fireballs across the play field. As you advance into more complex mazes, the frequency of fireballs in-

creases and their patterns become more erratic.

Each of the matrixes are equipped with a Skip-A-Rack timer. If you manage to clear a matrix before the letters of 'Skip-A-Rack' disappear you will automatically skip the next matrix and earn all the points available from it.

After every fifth matrix of Solar Fox a Challenge Rack appears. There are six different challenge racks making the total number of astromazes 26. These special racks are much more difficult than the ordinary ones — you need expert manoeuvrability and precise timing. You must clear these racks of all their solar cells before all the letters of 'challenge' disappear. Bonus points will be rewarded for doing this.

When you complete the Challenge Rack a code letter will briefly appear on the screen. This letter is part of a mystery word that has been programmed into your cartridge. To get all six letters you must successfully complete all six Challenge Racks. "The mystery word is your key to exciting new surprises from CBS Electronics", it reads in the instruction booklet!

Solar Fox is not exactly riveting — the whole object of the game is to shoot at things and avoid fireballs. The graphics are not particularly wonderful either. Overall it is just space-age version of Pacman.



Dear Editor

Please could you tell me if BBC software is compatible with the Acorn Electron as I have heard many different versions of this answer. I would be very grateful.

Yours Faithfully

R Corke Barnsley

As you might have guessed there is no easy answer to this question. Acorn would like to have everybody believe that the Electron can run all BBC software, this is not so. The Electron differs from the BBC in quite a lot of ways (otherwise why would it be £200 cheaper?). The three main differences software wise are speed, graphics, and the ROM.

The ROM is the part of the computer that holds the BASIC language and other things that a computer needs to do called Operating System routines. Some of these routines, like print a character on the screen, are used in a games program. So that the programmer doesn't have to re-invent the wheel he will use some of these routines. If the routines are changed the program will not run. The Acorn Electron's ROM is different to the BBC micro's

The BBC has a mode called Teletext mode. This is used for displaying coloured text like Ceefax, Oracle or Prestel. It has the advantage of not taking up much memory so adventure games use it a lot, it is also used for title pages and instruction pages in other games. The Electron does not have this mode.

That just about sums it up. Very few commercial BBC games will run. Some magazine type games will run.



Dear Editor When reading your July 1984 issue, I was interested in the letter from Mr B Kidd

As Mr Kidd has a 48K Oric he should use the command HIMEM 9800 and not HIMEM 1800 as published in your magazine. This command (HIMEM 1800) is used for the 16K Oric.

Yours Sincerely G S Adkins Wimbledon



Dear Editor

Thanks for the Android Antics (Roving Robot) listing for the Electron in the June issue of Games Computing.

This game is by far the best program that I have typed in from any magazine, more like this please!

My highest score so far is 103380. I am looking forward to Ambling Android (Roving Robot 2) in your July issue.

Yours Gratefully Mrs Jill Knight Bracknell

should have completed Ambling Android, so send in your high score for that. It will give all the other Electron/BBC owners out there something to aim for.



**Dear Games Computing** 

In June's Forest Trek for the Oric 1/Atmos the following program will make it joystick compatible.

I am not 100% sure that it will run on an Atmos, but it works on a straight Oric.

I would like to see some games for the TRS 80 model 1. Anyone wanting games or help for the TRS 80 model 1 should write to me at the following address. Yours Faithfully

Bond **Bond Software** 39 Tetbury Drive Warndon Worcester WR4 9LG

1 GOSUB 10050

162 CALL 1026

164 A=PEEK(1024)

165 IF AA\$="2" DR A=190 THEN X=X-1: IF X<3 THEN X=3

170 IF AA\$="X" OR A=189 THEN X=X+1: IF X>34 THEN X=34

180 IF AA\$="." DR A=183 THEN Y=Y+1: IF Y>23 THEN Y=23

190 IF AA\$=";" OR A=175 THEN Y=Y-1: IF Y<2 THEN Y=2

10050 FDR A=1026 TD 1060

10060 READ B: POKE A, B: NEXT

10070 DATA 72,173,1,3,72,173,3,3,72,169

10080 DATA 192,141,3,3,169,128,141,15,3

10090 DATA 173,15,3,141,0,4,104,141,3,3

10100 DATA 104,141,15,3,104,96

10105 RETURN

Have you got any opinions to air, has someone somewhere upset you and you want to grizzle and gripe? Or maybe you're full of the joys of spring

and feel like telling a happy story?

Whatever you want to say, be it good, bad or indifferent drop us a line here at Games Computing and get it off your shoulders.

Send your letters to: 'Postman Pat', Games Computing, 1 Golden Square, London W1.

# PROGRAM

## STBIMISSIONS



Does brilliance reside in your RAM? Do your friends gasp at your own programs with envy in their eyes? Would you like to see your name in *Games Computing!* 

If you have written a program to take the software world by storm and want to show your fellow readers just what you can do on a keyboard, cut out or photocopy the form below and send it to the Editor, Games Computing, (clearly marked PROGRAM SUB-MISSIONS) at 145 Charing Cross Road, London WC2H 0EE (until 16 December 1983) and after that to 1 Golden Square, London W1.

Please send with your tape recording of the program a thorough explanation of the game, a line by line listing of how the program works along with a list of relevant variables etc. Also include any clues which you can think of to help owners of other computers other than the one which the program was written for, convert it for use on their computer.

We will look at games programs on tape for all the popular home micros and disc versions for the Commodore machines, Atari and BBC (40 track and Hitachi format). Whenever possible use CHR\$ rather than command codes and please avoid making programs autorun. If you can let us have a printout of the program it helps and the same goes for screen dumps.

P.S. They'll be paid for too!



Your Name	Age	
Program Name		
Computer/memory size it runs on		
Amount of memory program occupies		
Other computers/memory size which your program runs on		
Does your game need joysticks?	Yes	No
Any known bugs? If so, what are they?		
Have you sent your game to another magazine	Yes	No
Is it original/or a variation on a theme?		
Your Address		
Telephone Number		
Times to contact you		

# A VITAL PIECE OF SOFTWARE FOR ATARI 400 OWNERS.



#### A RUBBER KEYBOARD.

The flat keyboard of the Atari 400 isn't very satisfactory to use.

It simply doesn't put you in touch with the computer in the same way as a push button one.

Our keyboard fits snugly over your present Atari 400 keyboard and does exactly the same job.

Only it does it better.

It makes programming and game playing so much easier because you

know instantly which keys you've depressed.

And by raising the keys it raises the standard of your machine.

To set it up all you have to do is to peel off the adhesive backing and stick it on top of your existing keyboard.

And we're sticking a price on it of only £19.95.

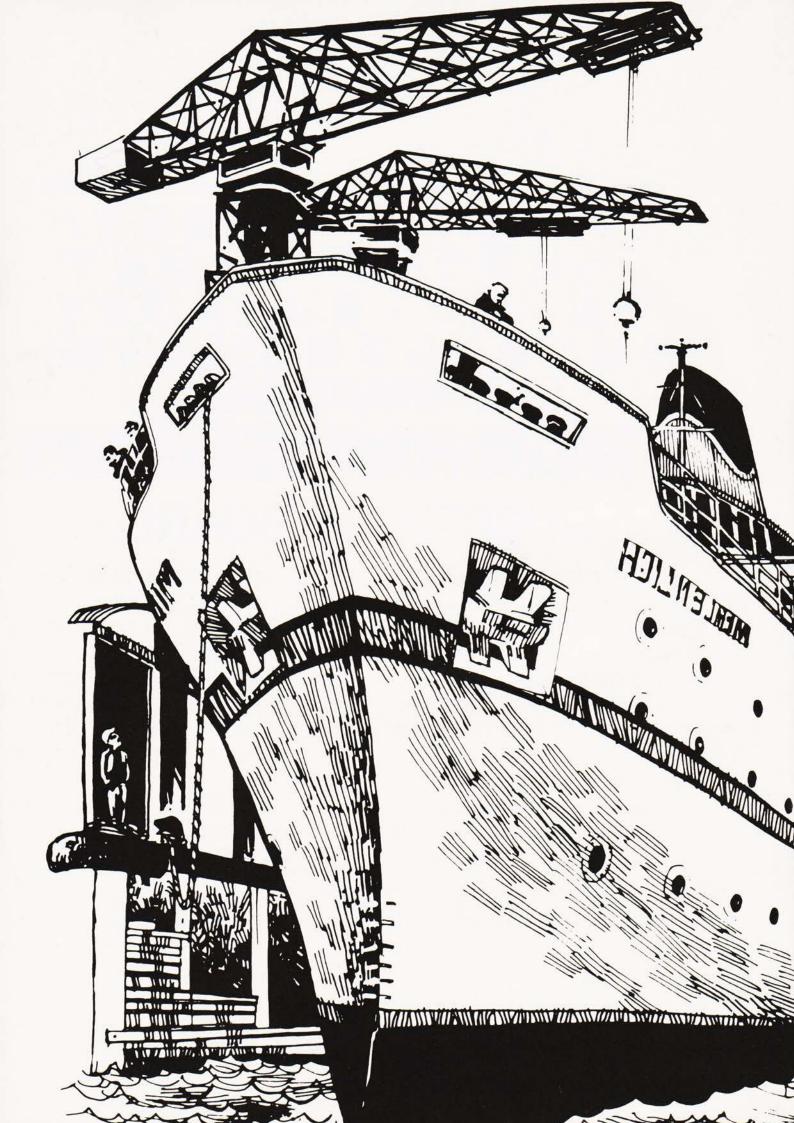
So, whichever way you look at it, it's a keyboard that really stands out.

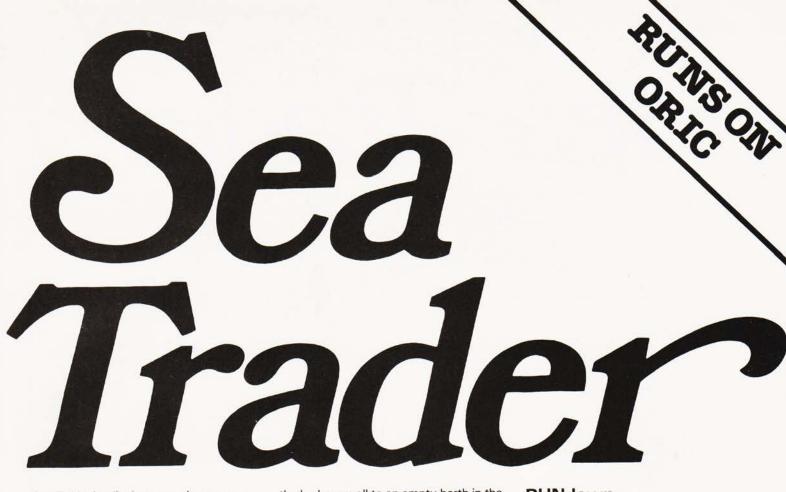
Filesixty Ltd., 25 Chippenham Mews, London W9 2AN, England. Tel: 01-289 3059.

 Please send	(qty) Keyboards at £19.95 each (including VAT and P&P).	РВ
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Name	Expir y date	
Address		
Telephone	Signature	

#### **FILESIXTY**

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Sea Trader is a lively game where you can sail the good ship Oric into a harbour and trade goods for a fat profit.

The game consists of steering sailing ships around rocks and through a gap in the harbour wall to an empty berth in the harbour. Strong currents will move a ship in two areas on the approach to the harbour wall so it is important to steer a corrected course to avoid the rocks.

Any part of the hull coming into contact with a rock, or hitting the harbour wall and berth fronts will cause the ship to

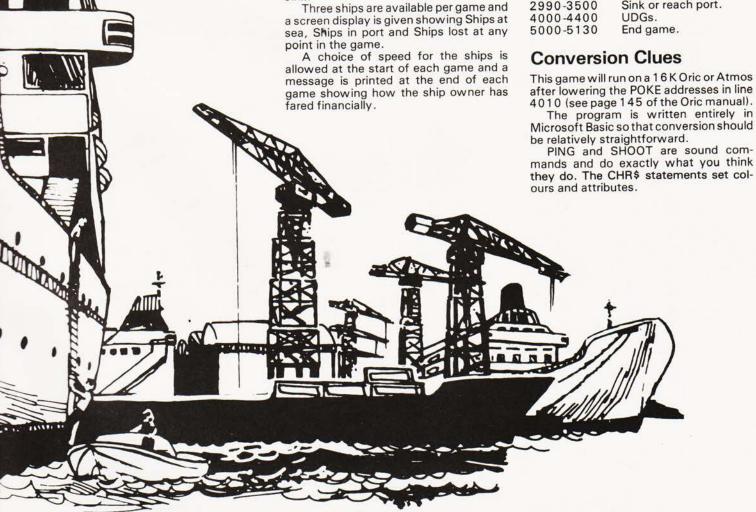
#### RUNdown

Lines	Action
10	Clear the screen.
15	Initialize variables.
80-500	Main loop.
1000-1220	Title and instructions
1500-1530	Choice of speed.
2000-2800	Set scene.
2990-3500	Sink or reach port.
4000-4400	UDGs.
5000-5130	End game.

This game will run on a 16 K Oric or Atmos after lowering the POKE addresses in line

Microsoft Basic so that conversion should

PING and SHOOT are sound commands and do exactly what you think they do. The CHR\$ statements set col-



# Sea Trader

```
CLS:PRINT CHR$(17):PRINT CHR$(20)
                                    S=3:P=0:L=0
           30 GOSUB 1000
35 INK 2
40 GOSUB 2000
50 GOSUB 4000
60 GOSUB 1500
80 X=2:Y=20
85 PLOT X,Y,"abcde"
86 PLOT X,Y+1,"fghij"
87 PLOT X,Y+2;"klmno"
80 PLOT 2,5,"PRESS ANY KEY TO COMMENCE APPROACH"
90 GET A$: IF A$<>" "THEN PLOT2,5,"
                30 GOSUB 1000
     90 GET A$: IF A$<>" "THEN PLOT2,5,"

95 IF A$<>" "THEN GOTO 100
100 IF SCRN(X+4,Y+2)=60 THEN 2990
101 IF SCRN(X+4,Y+2)=112 THEN 2990
102 IF SCRN(X+3,Y+2)=112OR SCRN(X+2,Y+2)=112 THEN 3000
103 IF SCRN(X+1,Y+2)=112 OR SCRN(X,Y+2)=112 THEN 3000
110 X=X+1:PLOT X,Y,"abcde":PLOT X,Y+1,"fghij":PLOT X,Y+2,"klmno"
111 IF SCRN(X+2,Y)=112 THEN PLOT X+2,Y,"p"
113 IF SCRN(X+2,Y)=112 THEN PLOT X+2,Y,"p"
114 IF SCRN(X+2,Y)=112 THEN PLOT X-2,Y,"p"
120 WAIT W
135 IF X+4=11 THENPLOT X,Y+2, ":PLOT X,Y+1," ":Y=Y-2
137 IF X+4=19 THEN PLOT X,Y+2, ":PLOT X,Y+1," ":Y=Y-2
141 IF X=11 THENPLOT X,Y," ":PLOT X,Y+1," ":Y=Y+2
140 IF X=9 THEN PLOT 10,22,"p"
141 IF X=11 THEN PLOT 14,21,"p":PLOT12,17,"p"
143 IF X=15 THEN PLOT 14,21,"p":PLOT14,25,"p"
144 IF X=17 THEN PLOT 16,20,"p"
145 IF X=21 THEN PLOT 12,21,"p"
146 IF X=21 THEN PLOT 24,18,"p"
147 IF X=23 THEN PLOT 24,18,"p"
148 IF X=25 THEN PLOT 24,18,"p"
150 K$=KEY$
    150 K$=KEY$
160 IF K$=CHR$(10) THEN Y=Y+1
161 PLOT X+4,Y-1,"
165 IF K$=CHR$(11) THEN Y=Y-1
166 IF Y:24 THEN PLOT X+4,Y+3,"
167 IF Y:24 THEN PLOT X+4,Y+3,"
167 IF Y:24 THEN Y=13
170 X=X+1
180 IF X=28 THEN PLOT 26,16,"<"+CHR$(133):PLOT 26,17,"<"+CHR$(133)
190 IF X=28 THEN PLOT 26,18,"<"+CHR$(133):PLOT 26,20,"<"+CHR$(133)
200 IF X=28 THEN PLOT 26,21,"<"+CHR$(133):PLOT 26,22,"<"+CHR$(133)
210 IF X=28 THEN PLOT 26,23,"<"+CHR$(133):PLOT 26,22,"<"+CHR$(133)
220 IF X=438 THEN PLOT X,Y,"abcde":PLOT X,Y+1,"fght]:PLOT X,Y+2,"klmno"
225 IF X+4=38 THEN PLOT X,Y,"abcde":PLOT X,Y+1,"fght]:PLOT X,Y+2,"
       klmno"
225 IF X+4=38 THEN PLOT X+3,Y-1,19:PLOT X+2,Y-1,"<"
226 IF X+4=38 AND Y=16 THEN PLOT 37,Y+3,19:PLOT 36,Y+3,"
227 IF X+4=38 AND Y=20 THEN PLOT 37,Y+3,19:PLOT 36,Y+3,"<"
250 IF X+4=38 THEN PING:GOTO 3300
    250 IF X+4=38 THEN PING:GOTO 3300

500 GOTO 100

1000 REM TITLE AND INSTRUCTION

1010 PAPER 1: INK 3

1020 FOR Y=0 TO 9

1030 PRINT: NEXT Y

1035 PRINT"

1040 PRINT CHR$(138)" — S E A T R A D E R

1050 PRINT CHR$(138)" — S E A T R A D E R

1060 PRINT"

1070 WAIT 500

1080 CLS

1085 PRINT CHR$(132)"

1090 PRINT CHR$(132)"

1090 PRINT CHR$(132)"

1090 PRINT CHR$(132)"

1090 PRINT CHR$(132)"

1100 PRINT"

1100 PRINT" YOU HAVE THREE SHIPS AT SEA WHICH"

1110 PRINT" YOUR CAPTAINS ARE TO SAIL INTO PORT"
                                                                                                                                                                                                                                                                      TRADER-"
       1110 PRINT" YOUR CAPTAINS ARE TO SAIL INTO PORT"
     1115 PRINT
1120 PRINT" AVOIDING THE ROCKS AND THE HARBOUR"
1125 PRINT
1130 PRINT" WALL."
    1135 PRINT" WALL."
1140 PRINT" EACH SHIP CAN BE GUIDED USING THE
1145 PRINT
1150 PRINT" UP AND DOWN CURSOR KEYS AND SHOULD"
                                                                                                     EACH SHIP CAN BE GUIDED USING THE"
     1155 PRINT
    1155 PRINT
1160 PRINT" BE PILOTED INTO AN EMPTY BERTH."
1165 PRINT
1170 PRINT" BEWARE OF CROSS CURRENTS ON THE"
  1175 PRINT
1180 PRINT" HARBOUR APPROACHES."
1185 PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT:PRINT
                                                                                                                        PRESS ANY KEY TO START"
 1190 PRINT" PRESS ANY KEY TO STAR:
1210 GET A$
1220 IF A$<> " " THEN CLS:RETURN
1500 PLOT 6.5, "CHOOSE SPEED LEVEL 1 TO 3"
1510 GET A$
1520 IF A$="1"THEN W=40:GOTO 1530
1521 IF A$="2"THEN W=20:GOTO 1530
1522 IF A$="3"THEN W=5:GOTO 1530
1525 IF ASC(A$)>S1 THEN 1510
1530 PLOT 6.5," "
1550 RETURN
2000 REM SET SCENE
    1190 PRINT"
1350 RETURN
2000 REM SET SCENE
2010 PAPERØ
2020 FOR Y=3 TO 15
2030 PLOT X,Y,22
2040 NEXT Y
```

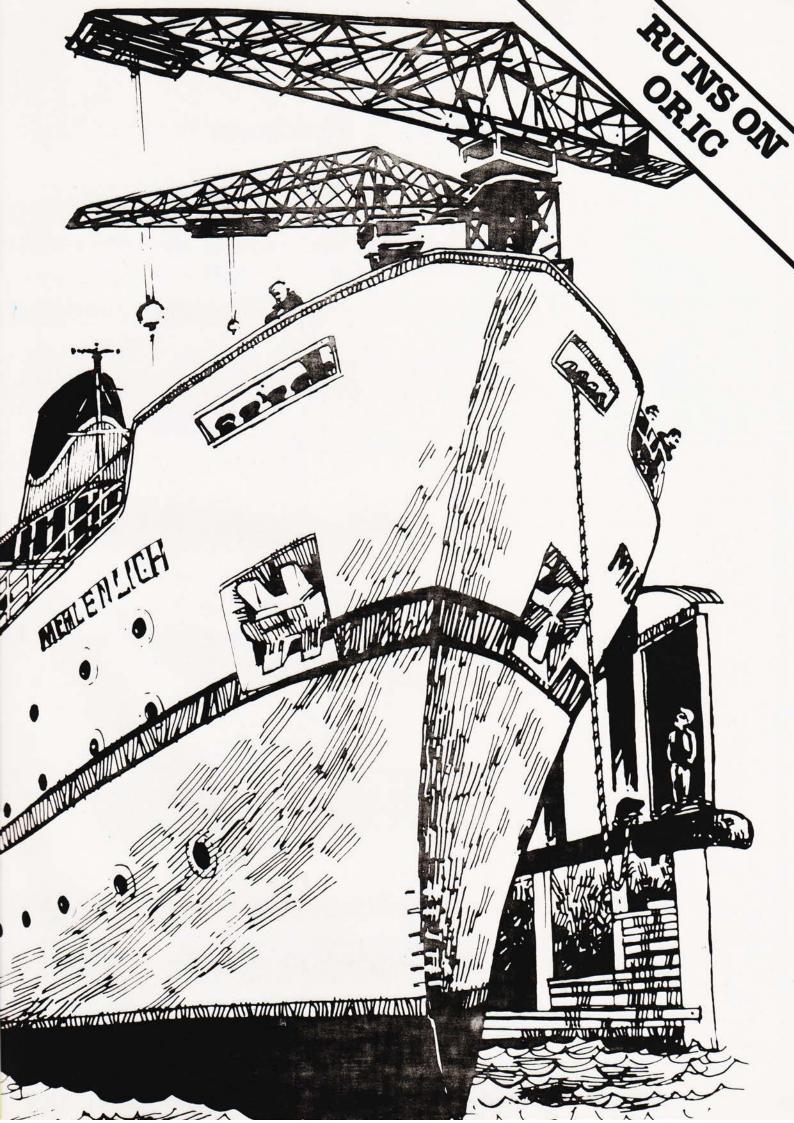
FOR Y=16 TO 26

```
2060 PLOT X,Y,20
2070 NEXT Y
2105 FOR Y=15 TO 26:PLOT 26,Y,"<"+CHR$(134):NEXT Y
2110 FOR Y=15 TO 26:PLOT 28,Y,20:NEXT Y
2110 PLOT 28,15,22
2130 PLOT 26,19," ":PLOT 26,24," "
2135 PLOT 27,19,20:PLOT 27,24,20
2140 FOR Y=15 TO 26
2150 PLOT 37,Y,19
2160 NEXT Y
2170 PLOT 37,18,20:PLOT 37,22,20:PLOT 37,26,20
2185 FOR Y=15 TO 26:PLOT 36,Y,"<":NEXT Y
2190 PLOT 36,18," ":PLOT 36,22," ":PLOT 36,26," "
2200 FOR Y=0 TO 10:PRINT CHR$(132):NEXT Y
2204 PRINT CHR$(129)
2205 PRINT
                 2204 PRINT CHR*(129)
2205 PRINT
2210 PRINT CHR*(133):PRINT CHR*(133):PRINT CHR*(128)
2220 PRINT CHR*(133):PRINT CHR*(133):PRINT CHR*(128)
2230 PRINT CHR*(133):PRINT CHR*(133):PRINT CHR*(128)
2240 PRINT CHR*(133):PRINT CHR*(133):PRINT CHR*(128)
2250 PRINT CHR*(133):PRINT CHR*(128)
2250 PRINT CHR*(133):PRINT CHR*(128)
2250 PRINT CHR*(133):PRINT CHR*(128)
2250 PRINT CHR*(133):PRINT CHR*(128)
2250 PLOT 1,1,"AT SEA: "
2270 PLOT 19,1,"IN PORT: "
2275 PLOT 31,1,"LOST: "
2280 PLOT 35,1,STR*(S)
2285 PLOT 27,1,STR*(S)
2285 PLOT 27,1,STR*(C)
2300 PLOT12,15,"p":PLOT20,15,"p":PLOT8,16,"p":PLOT12,17,"p":PLOT22,17,"p"
2310 PLOT24,18,"p":PLOT16,20,"p":PLOT14,21,"p":PLOT10,22,"p"
                 17,"p"
2310 PLOT24,18,"p":PLOT16,20,"p":PLOT14,21,"p":PLOT10,22,"p"
2320 PLOT18,24,"p":PLOT14,25,"p":PLOT6,26,"p"
2330 PLOT22,26,"p"
2800 RETURN
               2800 RETURN
2990 X=X-1
2990 X=X-1
3000 PLOT X,Y,"abcde":PLOTX,Y+1,"fghij":PLOTX,Y+2,"klmno":SHOOT
3005 WAIT 200
3010 PLOT X,Y," ":PLOT X,Y+1,"abcde":PLOT X,Y+2,"fghij"
3020 WAIT 200
3030 PLOT X,Y+i," ":PLOT X,Y+2,"abcde"
3040 WAIT 200
3050 PLOT X,Y+2," "
3060 S=S-1:PLOT 15,1,STR$(S):L=L+1:PLOT 36,1,STR$(L)
3070 WAIT 300
3080 IF S=0 OR L=3 THEN GOTO 5000
3085 IF L+P=3 THEN 50000
3086 IF P=3 THEN 50000
3086 IF P=3 THEN 50000
3080 WAIT 300
3090 GOTO 80
3090 WAIT 300
              3300 WAIT 300

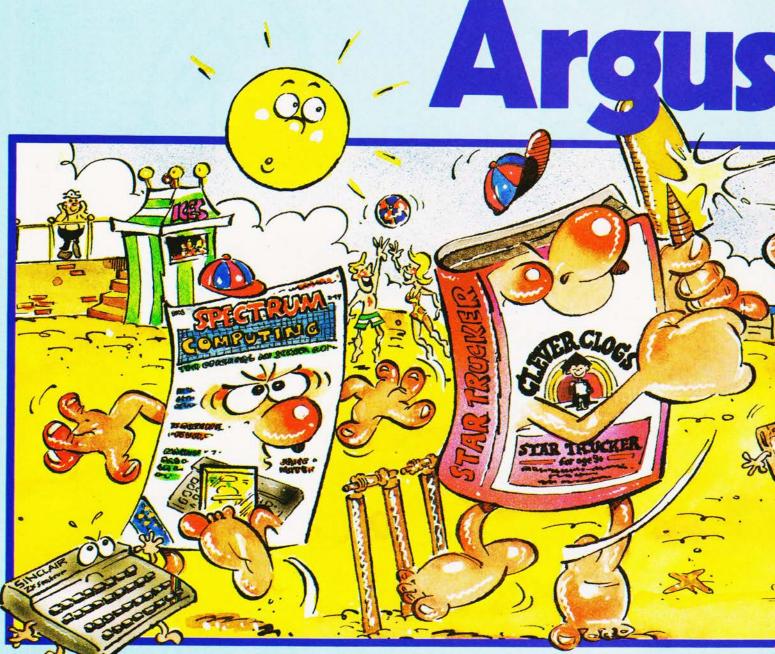
3310 P=P+1:PLOT 27,1,STR$(P)

3320 S=5-1:PLOT 15,1,STR$(S):IF S=0 THEN 5000

3330 IF P+L=3 THEN 5000
       3330 IF P=13 THEN 5000
3340 IF P+13 THEN 5000
3500 GOTO 80
4000 REM UDG'S
4010 FOR U=46656 TO 46983
4020 READ G:POKE U,G:NEXT U
4030 DATA 0,3,1,0,0,1,3,0
4040 DATA 8,60,62,63,63,62,60,8
4050 DATA 0,0,7,3,3,3,3,7
4060 DATA 0,0,0,0,0,32,48
4080 DATA 3,1,0,0,0,1,3
4090 DATA 4,32,48,56,60,60,59,49
4070 DATA 62,63,63,63,63,63,63,63
4100 DATA 0,15,39,35,35,35,7,7
4110 DATA 0,15,39,35,35,35,7,7
4110 DATA 3,60,62,63,63,63,63,63
4120 DATA 62,63,63,63,63,63,63
4150 DATA 15,00,2,63,63,63,63,63
4150 DATA 15,00,2,63,63,53,63,63
4150 DATA 15,00,42,63,45,63,63
4150 DATA 15,00,42,63,45,63,63
4150 DATA 1,163,48,32,0,0,0
4180 DATA 8,12,28,30,30,62,59,35
4300 RESTORE
4400 RETURN
4300 RESTORE
4400 RETURN
5020 IF L=3 THEN PLOT 2,6, "ALL DF YOUR SHIPS ARE LOST AND YOU"
5020 REM END GAME
5020 IF L=3 THEN PLOT 2,7, "ARE BROKE....."
5040 IF L=2 THEN PLOT 2,6, "ONLY ONE SHIP HOME AND YOU HAVE JUST"
5050 IF L=2 THEN PLOT 2,6, "NITH TWO SHIPS IN PORT YOU HAVE MADE "
5070 IF L=1 THEN PLOT 2,6, "ALL SHIPS IN PORT YOU HAVE MADE "
5080 IF L=0 THEN PLOT 2,6, "ALL SHIPS HOME AND YOU ARE ROLLING"
5090 IF L=0 THEN PLOT 2,7, "A PROFIT...."
5100 PLOT 5,11, "ANOTHER SEA VOYAGE (Y/N)"
5110 GET A$
5111 IF A$="\n" THEN 5115
5112 IF A$=\n" THEN 5130
5115 PLOT 2,6,"
5116 PLOT 2,7,"
5116 PLOT 2,7,"
5117 PLOT 5,11,"
5119 PLOT 34,20," ":PLOT 34,17," ":PLOT 34,18," "
5110 PLOT 34,24," ":PLOT 34,21," ":PLOT 34,22," "
5120 PLOT 34,24," ":PLOT 34,21," ":PLOT 34,22," "
5121 PLOT 36,16," ":PLOT 36,17," ":PLOT 37,16,19;PLOT 37,17,19
5122 PLOT 36,24," ":PLOT 36,25," ":PLOT 37,24,19;PLOT 37,25,19
5125 S=3;P=0;L=0
5126 PLOT 15,1,STR$(S):PLOT 27,1,STR$(P):PLOT 36,1,STR$(L)
5130 IF A$<)"y" THENCLS:PAPER7:INK0:PRINT CHR$(17):PRINT CHR$(20):E
            4400 RETURN
```



# 9 Out of 10 said they



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Ever since the launch of the Atari VCS many years ago a programmable video game has been a computer without a keyboard or a language. The VCS has a 6507 microprocessor in it, similar to the one used in the BBC micro and the Commodore 64. The Colecovision has a Z80A, the same as the Sinclair ZX Spectrum and countless CP/M business machines.

All these video games can be computers — it just takes somebody to make the additional hardware and software. Mike Roberts takes a look at three computer converters for the three most popular video game consoles.

INTELLIVISION COMPUTER MODULE

Fits: Intellivision Made by: Mattel Price: £89.95

The Mattel Intellivision video game arrived on the scene mid-way between the Atari and the Colecovision consoles and, as a result, its capabilities are slightly better than the Atari but less than the Colecovision. The popularity of the console has been quite low and this is reflected in the amount of available cartridges and Mattel's decision to stop selling it in America.

Right from the start Mattel said that it would be expandable into a full sized computer. Many people bought the system for that reason, and waited, and waited... A few years later Mattel launched the computer. It looks nothing like the announced machine and its specifications are below what was expected.

All said though, the resulting machine is not bad. The computer is a compromise between the over simplicity of the Compumate and the all singing all dancing (and very expensive) Adam.

The system comes as three separate parts — the computer, the detachable keyboard, and the separate power supply. The computer hardware slots into the cartridge socket and has a duplicate slot for cartridges opposite to where it plugs in. The computer box adds a number of new features. There is an extra three

sound channels to augument the existing three, a cassette interface for saving and loading programs, and a printer interface that can drive the Mattel Aquarius printer. Mattel has stopped dealing in the Aquarius, so the availability of printers is doubtful. Whether the actual printer is available or not, there being a facility for one at all is surprising in a device of this type.

The keyboard connector is concealed under a hatch-like arrangement. The socket for the keyboard is two nine pin 'D' connectors similar to Atari joystick sockets, this socket will also take the musical keyboard (reviewed in July). The keyboard is a 49 key 'calculator' type of unit on a fairly long cable. It has a full sized space bar and a very nice feel.

ours for the foreground in each cell. The same 16 colours can be used to colour the sprites. Another feature of the screen is full screen editing similar to the Commodore and Atari range of machines, this is an excellent method of editing programs and more computers should have it. There are four dedicated cursor control keys to move the cursor around. On the Compumate there is no editor at all, a feature necessary on any computer — big or small.

Sound is fully available with six channels, this means that six note chords can be played. Commands dealing with sound are very powerful including full envelope control on all channels, noise generation,

and 4096 playable tones.

The structure of the BASIC is rather strange. All commands and instructions are four letters long, PRINT gets changed to 'PRIN'. Functions are two letters in length, so colour is 'CO' and current picture is 'PC'. Special commands to deal with sprites and sound need to have 'CALL' in front of them, in a similar manner to the TI-99/4A, to display a sprite the command is 'CALL SHOW'.

Internally the machine has 12K of ROM holding the BASIC and 2K of user RAM. 2K of RAM should be enough for most people as not very complicated programs will be written for the computer and no commercial cassette software is,

or will be, available.

This is a very well put together unit at a very good price. It has all the features of a mid range computer system, joysticks, sound, colour, sprites, and a printer interface. The BASIC is non standard, but a good introduction to computers. The manual is informative and useful. And the



The BASIC language has 59 keywords and has some very good sprite control and animation commands. One odd thing happens with the sprites, you can't define what they look like themselves so their shapes are taken from whatever cartridge you have plugged in. Plugging in the Soccer cartridge results in footballers being displayed on the screen whenever you use the sprite commands. The sprite commands range from displaying them on the screen to setting velocities and tagging sprites together, altogether a set of very useful commands that wouldn't shame a dedicated home computer.

No graphics are available but text is used on a 20 by 12 screen with 16 colours selectable for background and eight col-

whole thing is at a reasonable price. I would recommend this unit to anybody with an Intellivision who just wanted a gentle introduction to computing and nothing more.

#### COMPUMATE

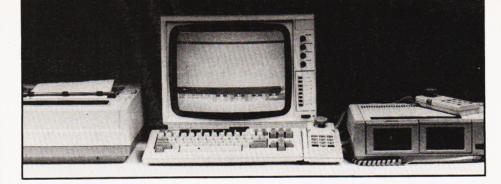
Fits: Atari VCS/2600 Made by: Spectravideo Price: £51.38

The Atari VCS/2600 is the most popular dedicated video game in the world. When it was introduced in 1978 it was the

world's first programmable colour video game to be generally available. Six years later, after the onslaught of the computer industry, it is still the most popular video game with over 700,000 units in British homes. The range of games and cartridges is unparalleled, all that was needed was a computer keyboard. The VCS already has a competent computer inside it, you just need to get at it — Atari made one, so did Spectravideo. Currently the Spectravideo Compumate is the only computer add-on for the VCS available in Britain, Atari will not be marketing their own system.

The Compumate consists of a flat keyboard connected to an oversized cartridge and two joystick plugs. The joystick plugs fit into the left and right joystick sockets in the back of the VCS. The keyboard fits snugly onto the top of the VCS and is a 42 key, multi-function, membrane type similar to the ZX81 but

with more response.



There are four example tunes already predefined.

A cassette interface is provided that allows the saving and loading of pictures, tunes, and BASIC programs. All the cables and connectors are supplied.

The manual is a slim volume of 40 pages that explains the operation of the device from the ground up in a very simple manner, perhaps too simple. The manual is clearly designed for the American

The two units then fit into a sub frame that takes the weight of both devices and prevents them separating at crucial moments, losing your precious program, and possibly destroying both machines.

The system is divided into three sections, the main 'memory console' that plugs into the Colecovision and houses the main processor, integral high-speed tape drive, and 64K RAM of memory. Also supplied is a high quality daisywheel printer, and a detached 76 key, word processing quality, keyboard.

If there is no tape in the tape drive when the computer is switched on it will default to the in-built software, in this case the word processor. The word processor is very easy to use, well suited to home environment, and would easily replace the usual manual typewriter that most homes have for the occasional 'official' letter.

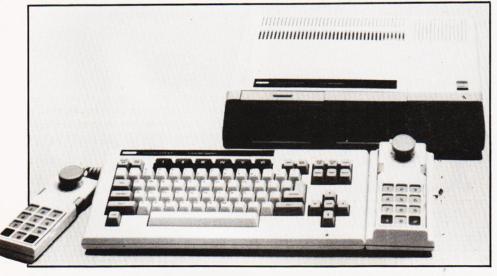
There are three tapes supplied with the computer, one is blank for the users' programs, one is a game, and the other is the BASIC language itself. To use BASIC the tape is placed in the tape drive and the 'reset' button pushed. Thirty seconds later the screen proclaims 'Coleco Smart BASIC V1.0' this is a version of Applesoft BASIC as used in the evergreen Apple][ computer. The Apple is used in America as a home and educational computer having a similar status to the BBC micro. This is why it makes sense for an American computer to have a certain amount of compatibility with it. In Britain the Apple is used primarily as a business computer and thus the compatibility is not so important, although there are some advantages most of the programs published in our sister magazine 'Orchard Computing' will run with minor modifications.

As a language Applesoft is not bad, it has its limitations — no structuring or advanced graphics instructions — but it is good at producing moving graphic objects and simple graphic shapes. The error handling system is a sight for sore eyes. If you make a programming error the computer will tell you what it is, where it is, and what it thinks it should be! That's

what I call helpful.
The graphics are

The graphics are reasonable — 256 by 192 graphics resolution in 16 colours, 256 by 159 and four lines of text, 40 by 48 block graphics in 16 colours, 40 by 40 with four lines of text, or 40 by 24 black and white text with upper and lower case, flashing, and inverse printing. The computer is also capable of producing user defined graphics, sprites, and very good sound, the games make good use of these features, but BASIC does not support them at all.

All in all this is the only 'computer adaptor' that can turn a video game into a real computer, this is because the Colecovision was designed with this kind of expansion in mind from the start. The price is quite high, but you do get a lot for your money.



The cartridge contains 2K of RAM and 16K of ROM. The ROM can be divided up into three distinct parts — the BASIC language, the graphics editor, and the

music composer.

The BASIC is strange and non standard, but most of the old faithfuls are in evidence. The similarity to the ZX81 goes even further with the entry of BASIC programs. Each instruction or command has its own key, pressing this in conjunction with the 'FUNC' key produces a key word. The text display is 12 by 10 characters in black and white. No graphics or sounds are available from BASIC. The keywords get printed up in a compressed format to suit the small screen. The BASIC instruction 'PRINT' is converted to 'Prt' where the 'rt' is compressed into one character cell. In total the Compumate's BASIC has around 19 instructions, commands, and functions compare this to a BBC that has around 150.

The graphics editor allows simple shapes to be drawn in two colours selected from a palette of 10. The drawing can then be saved in any of six 'buffers'. In addition, there are two other buffers that already have example pictures in them. When you have drawn your six pictures the computer can then flick through them at a predefined speed giving an animated effect.

The music composer allows the composition of tunes. Tunes can be saved in 'buffers' similar to the graphics editor.

market and this could be confusing to the British user, especially the T.V. connection details and troubleshooting instructions.

Overall this device is good if you have a VCS and want to find out what a computer is without taking it up seriously.

#### **ADAM**

Fits: Colecovision
Made by: CBS Electronics

Price: £499.00

The CBS Colecovision video game is the most recent console to be released in Britain and since then has sold about 150,000 units. When it was first introduced about a year ago one of its most interesting features was a big slot marked 'expansion'. There was the promise of an option to convert it into a 'real' computer system that could rival, or even better, those that were currently on the market.

Twelve months later the Coleco Adam was launched. Far from being the cheap keyboard add-on that could only be used as an introduction to computing, the Adam surprised many people with its impressive specifications, high price, and the all in one package that it was supplied

The Colecovision plugs into the Adam via that strange looking expansion slot.

In many Sci-Fi films over the past few years, computers have either been very simple with flashing lights all over them, or able to talk and receive human speech. Talking and being talked to are two of the most recent developments in the computing world.

Mike Roberts examines the sort of products that are on the market to make

your computer talk or to talk to your computer.



because there isn't much software support for any of the available speech synthesis systems including Sweet Talker.

The haphazard way in which games often get into software house's catalogues means that any off-beat computer systems are simply not catered for. I would like to see Cheetah commissioning a really ace game or three just to get the ball rolling. We will have to wait and see. Perhaps it is in the hands of *Games Computing* programmers to come up with the goods.

Cheetah's Sweet Talker speech synthesis is good value, employing an easy to use and infinitely flexible means of programming speech and a compact solution to installing the hardware. Sweet Talker comes with fair documentation on paper and tape although there should be more advice on installation. Programmers can get down to work. Those who like to buy in their software may have to wait a while to take full advantage of their Cheetah in the chip.

#### MICRO COMMAND

Works on: Spectrum Made by: Orion Data Price: £49.95

Micro Command is not a speech synthesizer — rather the opposite as it

## COMPUTER SPEECH

#### SWEET TALKER SPEECH SYNTHESIZER

Works on: BBC or Spectrum Made by: Cheetah Marketing Price: £24.95

The new Cheetah speech synthesis system for the BBC Micro is a unique product for this particular computer. Unlike the other 'installed' speech synthesis system, that of Acorn itself, it is based upon the use of allophones. It is a tried and tested technique involving the use of a dictionary of sounds found in human speech, coded numerically for the sake of the number-crunching computer.

Sounds and pauses are grouped together as DATA and sent serially to the chip — yes, there is just one chip on the Cheetah board — for processing. There are a variety of sounds and silences with varying duration and it is an educational exercise sorting them all out.

There are other such systems available for the BBC but they are 'plug-in' devices involving a black box/speaker housing and ribbon cable. Individual owners can argue the merits and demerits of having speech synthesis permanently installed beneath the lid but I personally prefer this tidier option. It leaves an I/O port free and makes use of the internal speaker — no black boxes to cart around. However, some would say, a better quality speaker would not be a bad thing. The Cheetah system leaves you free to install such a speaker rather than imposing a similarly tinny one.

As with all such products, the manufacturers make installation sound easier than it really is. On the issue 3 BBC,

an early type of socket would not hold the pins of the Sweet Talker board firmly in place. It wobbled about and no good connection would be made. On the latest issue 7 boards, there is a particularly rigid connector to the keyboard which makes it a tight squeeze for the matchbox-sized Sweet Talker. Another issue 7 board I tried it on proved hardly any problem. It is difficult to give advice on installation because of the differences between individual BBCs but it is a shame that Cheetah have shied away from the problem in their documentation.

There is also a slight software anomaly with issue 3 and earlier which Cheetah have taken into account in their demonstration programs, on tape and in the general instructions. The demo program 'Beebtalk' gives a fair idea of what can be achieved and when studied in conjuction with the supplied allophone set, forms the basis for your future programming.

It is very straightforward and great fun stringing together combinations of sounds to form words and sentences. There is no point pretending it sounds anything like human speech — if anyone does sound like this they ought to report to the nearest doctor's surgery — but it adds another dimension to any program you might be writing.

Try making an adventure sound scathing as it comes back "I do not understand that word". Text only games can come alive. There is a limited amount of room for speech amongst the zap, pow, bang of arcade games but a fanfare followed by a run-down of the top ten

high scores makes a dull screen an exciting event. At the moment you will have to write all these games youreself enables the computer to understand human speech. The cigarette packet sized unit plugs into the back of the Spectrum and has a 3mm jack socket at the top. Into this is plugged the supplied microphone — then the fun begins.

Orion Data supply a demo tape that has exercises to practice talking to the computer and a game adapted from a Virgin Games piece of software. The practice sessions are necessary due to the amount of care you need to use when talking to the compuer. You need to speak to it in the same way that you taught it to speak in the first place.

The documentation is very concise,



comprising of two manuals. An introductory manual explains the supplied software and an additional information book that gives a lot of technical information and full listings of the operating system and driver software. Extra technical details are available from Orion Data on request.

The insides of the unit are very complex and comprise of an extra Z80 processor with its own ROM nad RAM. This second processor architecture allows very complex and fast analysis of speech to be performed. There has been a lot of work put into that interface and for the price it seems very good value.

The software that comes with it comprises of the teaching software mentioned above and the Virgin Games 'Sheep Walk' program. This has been re-named 'Sheep Talk'. The idea behind the game is to maneouvre your sheepdog around the screen herding up the sheep into their

Overall this is a very workable system. It is very well explained and comes with enough documentation to build up very complex programs using the unit. The disadvantages are the need to keep a steady voice and to remember the voice you use when first talking to the computer — though your ability to do this improves with practice. Also the unit can only store 16 words or phrases — not really enough for an adventure. Otherwise I like it very much — we are really getting into the realms of scince fiction and all singing all dancing computers.

Elsewhere in this issue we are giving away 12 of these interfaces in a fantastic *Games Computing competition*.

#### ACORN SPEECH SYSTEM

Works on: BBC Made by: Acorn Price: £55 including fitting.

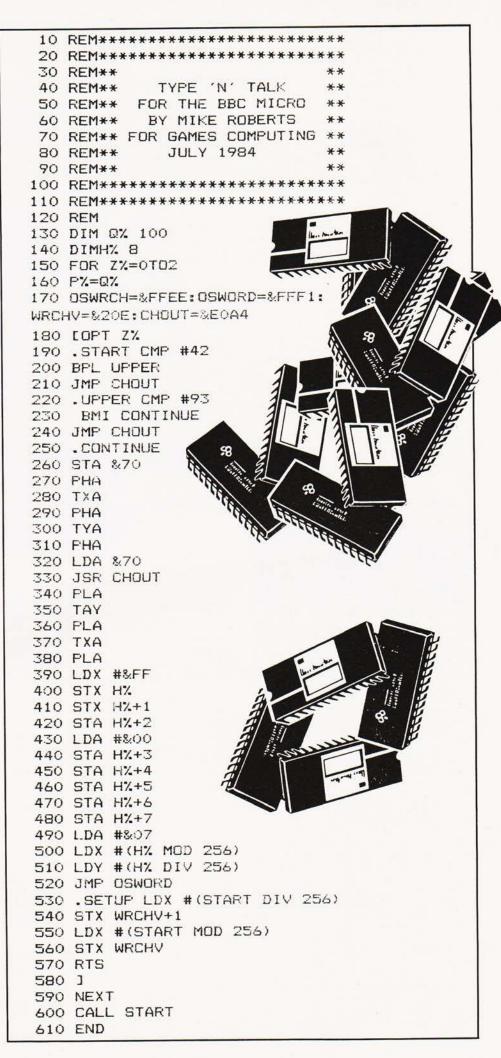
From the outset of the BBC Micro, Acorn promised a sophisticated speech synthesis system for the machine. Indeed, even the earliest machines had two interesting sockets in them earmarked for speech.

The Acorn speech unit needs to be fitted by a qualified person as it is quite a tricky job on earlier machines. On the latest issue 7 board it is quite easy, but I still wouldn't recommend it to an inexpreienced user.

When all the bits are in place you can forget it is even there as all the parts are internal and fit into predefined slots on the board.

The mystery of the slot on the left hand side of the keyboard is solved as the speech system comes with the necessary components to turn it into a cartridge port. No cartridges are as yet available, but the launch fo the Plus-1 for the Electron, and the subsequent release of cartridge software for it, could start the ball rolling.

The Acorn speech synthesizer uses the 'whole word' system for producing speech. A ROM containing the data for 165 words is included in the package. This ROM is called Word PHROM A (from PHrase ROM). Extra PHROMs should be available at some stage with other words to those supplied, they will plug into the cartridge slot mentioned above, but at the moment we are stuck with Kenneth Kenneth Kenneth Kenneth words to the stage of the st



dall's dalek sounding voice.

The method to use the speech system is via the SOUND command, each word or part of a word is given a number from 32 to 291. To speak any of these phrases you just need to put in 'SOUND -1,X,0,0' where X is the number of the word required.

The manual is very comprehensive and goes into the fine details of programming the unit. It is possible (with a lot of hard work) to drive the speech processor directly from RAM and an example is given along with the necessary assembler routines to do the job. This feature is unique among the speech generaters that I have seen.

In the BBC program printed on this page is an example of how to program the synthesizer in machine code to speak any key that is pressed.

At present there are no games that use the system (except JCB Digger which says 'JCB' at the start of the game) but some educational programs are able to use it.

All the advantages of an internally installed unit like the Cheetah apply. Although it uses the 'competing' speech synthesizing system it is very easy to use and the disadvantage of not being able to say exactly what you want is offset by the ease of use and improved quality of sound. The biggest overriding benefit is, of course, that is is the official system for the BBC and if any software will support a talk box then it will be this one. A well documented, well put together system. Worth buying if you want a unit like this for your Beeb.

#### **SPEAKEASY**

Works on: Commordore 64, VIC, any computer with a Centronics port.

Made by: Jamar

Price: £29.95 + price of cable.

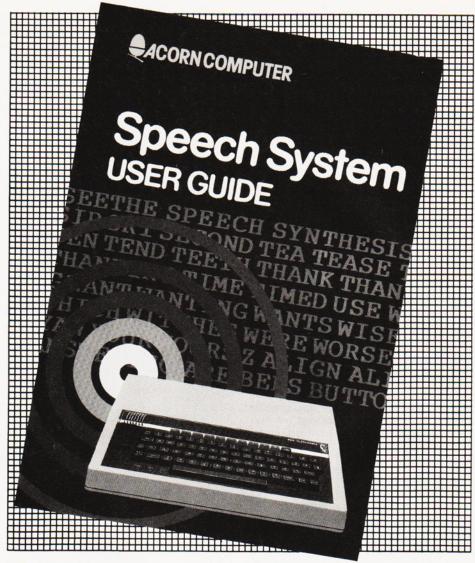
The concept behind this system is rather novel. Instead of making a unit that would only work on one computer, Jamar have devised a system that could work with most machines on the market. The method of doing this is via a printer port.

Most computers have a parallel printer port of the Centronics standard. The talk box is connected to the machine by a cable. It is only this cable that needs to be different for each machine. To communicate with the synthesizer the user 'prints' character codes down the printer line. The computer thinks that it is talking to a printer, and the speech sunthesizer reacts to the computer's communications as if it was a printer.

Specific instructions for your particular computer come with the cable (which is separately wrapped). One difference to this system is the Commodore 64 and VIC. These computers use serial interfaces and so cannot use the Centronics system. Jamar solve this problem by re-configuring the parallel user port as a Centronics interface and including extra instructions and programs to drive it. It should be possible to drive a printer off the Jamar cable, although I haven't tried it (yet!).

The instructions at all stages are clear and concise, even the extra Commodore information meshes in well with the normal manual.

The Speakeasy speech synthesizer works using the allophone system. This



means that the unit can pronounce each different sound in the English language. All you have to do to speak a word is to work out what sounds go where to make up a word. The user manual details what the sounds are, their relevant code numbers, and gives examples of words that they are contained in, eg. the number 5 refers to the sound 'OY' as in the word 'bOY'.

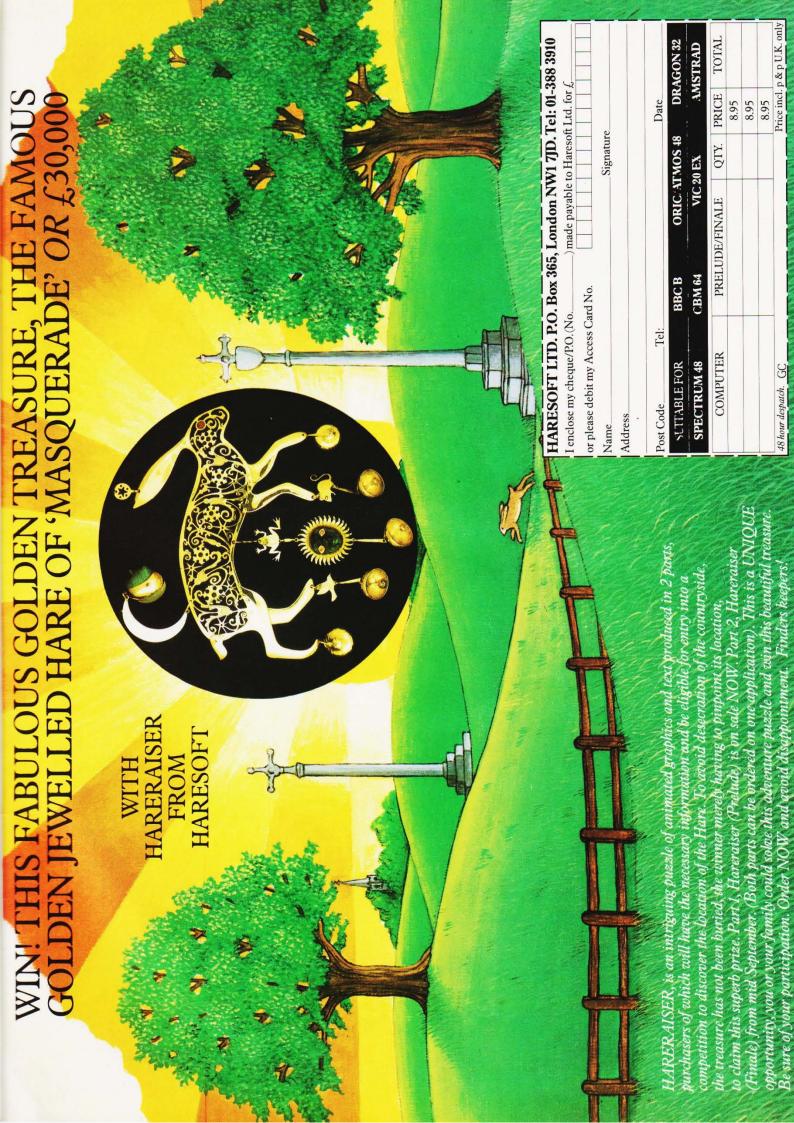
The chip employed in the box is the same as the one that Cheetah, Currah and Adman use in their speech synthesizers so if any software for them gets published in a magazine it shouldn't take a programming genius to convert them.

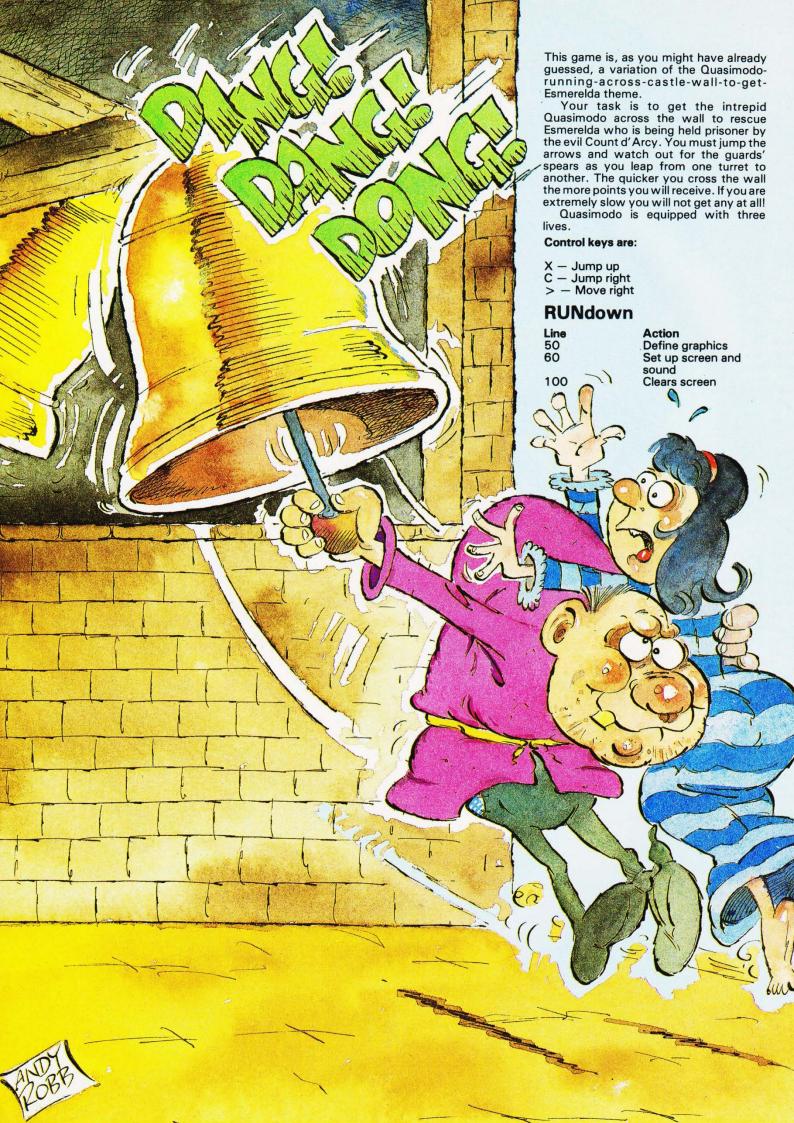
One problem I found with the

Speakeasy was the volume control — there wasn't one. Whilst enjoying my first foray into computer speech at 2am one morning I nearly woke up all the neighbours!

All in all this is not worse than any other speech synthesizer. Its disadvantage is that it comes with no driver software, but that could be an advantage as it interferes with no other software of peripherals except the printer. The Commodore 64 and VIC versions need software loaded in to drive them. As the code is loaded into a commonly used area of memory there may be some clashes. The programming example shows a Commodore 64 saying 'THE END'.

```
10 REM****************
20 REM****************
30 REM**
40 REM**
              "THE END"
50 REM**
          ON JAMAR SPEAKEASY
70 REM**
80 REM**
                             * *
90 REM**
         COMMODORE 64 VERSION
100 REM**
110 REM*****************
120 REM****************
130 REM
140 SYS49152,29,4,7,11,33,4
150 END
```





# OUMSI COLON

110	Draws wall
130-170	Draw guards
180	Draws Esmerelda
190	Randomly choose
	arrow position
195	Display remaining
	lives
197	Print up score and hi-
	score
200	Handle death of
	Quasimodo
202	Re-draw spear if
	arrow has passed
203	Draws arrow
204	Draws Quasimodo
205	If Quasimodo has
	reached Esmerelda
	then go to 600
206	Decrease bonus score
207-208	If Quasimodo is in the
	air then go 400 or
Encountry No.	450
210-270	Randomly rises and
	lowers the guards'
STORES TO SECOND	spears
300-340	Read keys and make
	appropriate
	movement
400-470	Move or jump
	Quasimodo
500-540	Produce sound effect,
	decrements lives left,
	and if all the lives are
	lost goes to 550
550-595	Produces sound ef-
	fect, congratulates
	the player and returns
	to the main program
1000-1050	Data for graphics
Variables	lleed

#### Variables Used

HP Hunchback's position AP Arrow's position SA Score addition S2,S3 Positions of spears 1, 2 and 3 Current score HI Hi score 11 Lives JF Jump flag LF Leap flag

```
REM * * * * REM * BY D.SMITH *
   30 REM * BY D.SMIH *
40 REM ****************************
50 POKE52,29:POKE56,29:CLR:FORT=7432T07519:READV:POKET,V:NEXT
60 POKE36869,255:POKE36879.8:POKE36878.15:S1=7991:S2=7997:S3=8003:LI=3
100 PRINTCHR$(147):HP=7966:SA=100:FORT=7680T08009:POKET,160:NEXT
110 FORT=8010T08185:POKET,33:POKET,30720,2:NEXT
130 POKES1,38:POKES2,38:POKES3,38:POKES1+22,34:POKES2+22,34:POKES3+22,34
140 POKES1+23,35:POKES2+23,35:POKES3+23,35:POKES1+44,36:POKES2+44,36:POKES2+44,36:POKES3+44,3
     0
150 POKES1+45,37:POKES2+45,37:POKES3+45,37
160 FORT=7988T08054:IFPEEK(T)>33ANDPEEK(T)<160THENPOKET+30720,6
     170 NEXT
180 POKE7987,41 POKE8009,42
    190 AP=INT(RND(1)*3)+8005
195 FORT=7717T07722STEP2:POKET,39:POKET+22.40:NEXT:POKE38443-LI*2,2:POKE38465-LI
   #2,2
197 PRINT"#### SCORE=";SC:PRINT"## HI=";HI
200 IFPEEK(HP+22)<>160ANIPEEK(HP+22)<>40THEN500
201 POKEAP,160:POKEAP+30720.1:AP=AP-1:IFAP=7987THENAP=8008
202 IFPEEK(AP+23)=34THENPOKEAP+1,38:POKEAP+30721,6:IFPEEK(AP-21)=38THENPOKEAP+1,
282 IFPEEK(AP+23)=34THENPOKEAP+1,38:POKEAP+30721,6:IFPEEK(AP-21)=38THENPOKEAP+1
194
283 POKEAP,43:POKEAP+30720.6:IFPEEK(HP+22)<>160ANDPEEK(HP+22)<>40THEN500
284 POKEHP,39:POKEHP+22.40
285 IFHP=7986DRHP=7964THEN600
286 SA=SA-1:IFSA=-1THENSA=0
287 IFLD:OTHEN450
288 IFJ:DOTHEN450
288 IFJ:DOTHEN450
288 IFJ:DOTHEN450
288 IFFN=2THENPOKE31,194:POKES1-22,38:POKES1+30698,6
280 IFRN=2THENPOKES2,194:POKES2-22,38:POKES2+30698,6
280 IFRN=2THENPOKES3,194:POKES3-22,38:POKES3+30698,6
280 IFRN=3THENPOKES3,194:POKES3-22,38:POKES1+30698,1
280 IFRN=5THENPOKES3,38:POKES3-22,160:POKES1+30698,1
280 IFRN=5THENPOKES3,38:POKES3-22,160:POKES3+30698,1
280 IFRN=5THENPOKES3,38:POKES3-22,160:POKES3+30698,1
280 IFRS-5THENPOKES3,38:POKES3-22,160:POKES3+30698,1
380 IFG=3TTHENHP=HP+1:POKE36876,241
380 IFG=3TTHENHP=HP+1:POKE36876,241
380 IFG=3THENHP=HP+2:JF=1:POKE36875,200
380 IFG=34THENHP=HP+21:JF=1:POKE36876,135
380 IFG=35THENHP=HP+21:JF=1:POKE36876,135
380 IFG=35THENHP=HP+21:JF=0:IFPEEK(HP+44)</br>
380 IFG=35THENHP=HP+21:JF=0:IFPEEK(HP+44)</br>
380 IFG=35THENHP=HP+21:JF=0:IFPEEK(HP+44)</br>
380 IFG=36TATO36876:POKEHP+22,160:JF=LF+1:IFJ=2THENHP=HP+1
460 IFJ=3THENHP=HP+23:JF=0:IFPEEK(HP+44)</br>
380 POKEHP,39:POKEHP+23:JF=0:IFPEEK(HP+40)</br>
380 POKEHP,39:POKEHP+23:JF=0:IFPEEK(HP+40)</br>
380 POKEHP3:PS:POKEHP+20:JF=15TO0STEP-1:POKE36878,T
380 POKEHP3:PS:POKE36878,T
380 POKEHP3:PS:POKE36878,T
380 POKEHP3:PS:PS:PS:PS:IFPEE(BOKES6878,T)
380 POKEHP3:PS:PS:PS:IFPEE(BOKES6878,T)
380 POKEHP3:PS:PS:PS:IFPEE(BOKES6878,T)
380 POKEHP3:PS:PS:PS:PS:IFPEE(BOKES6878,T)
     194
    520 FORM=1T0300:NEXTM

530 NEXTT

540 POKE36877,0:POKE36878,15:LF=0:GOT0100

550 POKE36877,220:FORT=15T00STEP-1:POKE36878,T

560 FORM=1T0300:NEXTM:NEXTT

570 POKE36877,0:POKE36878,15:LF=0:IFSC)HITHENHI=SC

580 PRINT"SHAMMUNIAMMUNIAMMUNIAMMUNIAMOTHER GAME(Y/N)?"

590 IFPEEK(197)=11THENSC=0:LI=3:GOT0100

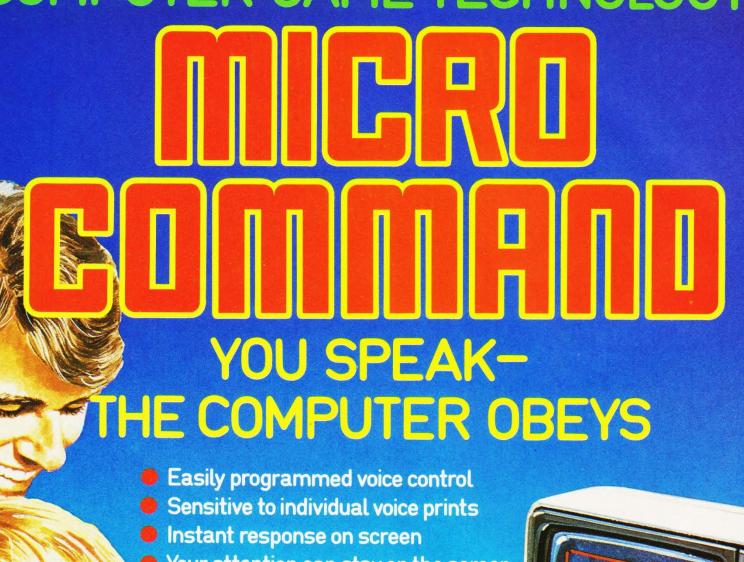
592 IFPEEK(197)=28THENPRINTCHR#(147):POKE36869,240:END

595 GOT0590

600 IEPP=7964THENBONKEWP422.39:POKEMP444.40:POKEMP.160
```







Your attention can stay on the screen - not on the controls

FOR USE SIME INC. **ZX Spectrum** HOME COMPUTER UNITS

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Boo the goodies and cheer the baddies in this novel game for the 16 K or 48 K ZX Spectrum.

You are in charge of the E.D.A's (Evil Doers Association) missiles. Recently the E.D.A. has captured Super-Man. Unfortunately he has escaped and is flying through the Grand Canyon. You have him on the detector screen and it is your task to shoot him down.

To shoot, move the sights to the position that you want and press fire. The only way to kill him is to get a direct hit on his head. You have ten missiles, and if Super-Man gets to the right hand side of the screen, or you run out of missiles before you shoot him down, he will escape and you will be shot for your failure by the E.D.A.

If you do shoot him down then a promotion will be in order.

Control keys are:

 $\mathbf{Q} - \mathbf{up}$   $\mathbf{A} - \mathbf{down}$   $\mathbf{I} - \mathbf{left}$   $\mathbf{P} - \mathbf{right}$  $\mathbf{O} - \mathbf{fire}$ 

Strategy: put the sights into an area that you think Super-Man will move into. Wait until his head just touches the sights and press fire. Remember to put the computer into CAPS mode when prompted.

The M in the listing is a graphics "M".

#### **RUNdown**

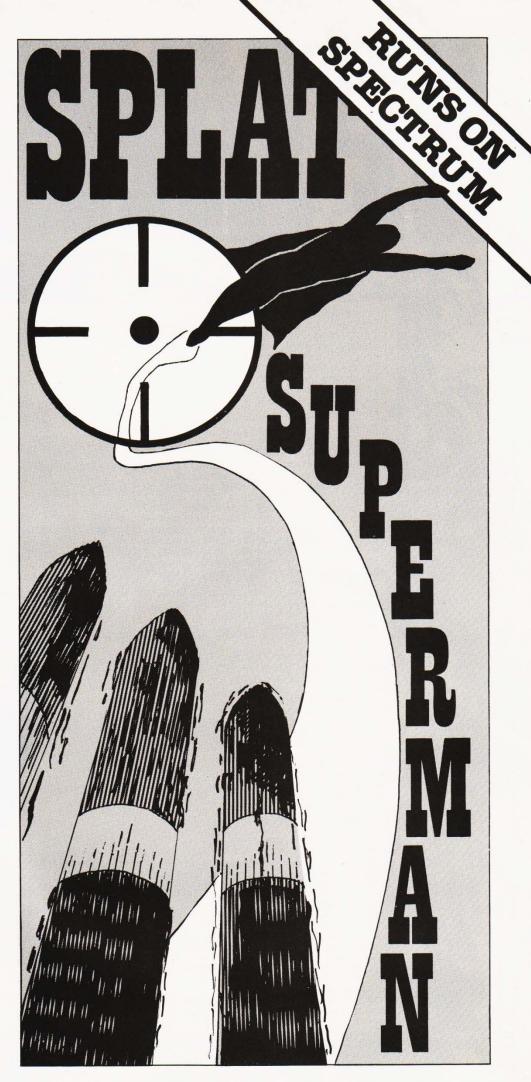
Action
Print the instructions, set up the graphics, and
initialize some variable.
Set up the screen and
initialize the rest of the
variables.
Move Super-Man and
sights.
Check for end of game.
Set up graphics and
screen.
Move Super-Man and
sights.
Losers and winners.
Graphics and sound
handler.
Instructions.
Useful bit for rotating
displays.

#### Variables Used

Missiles

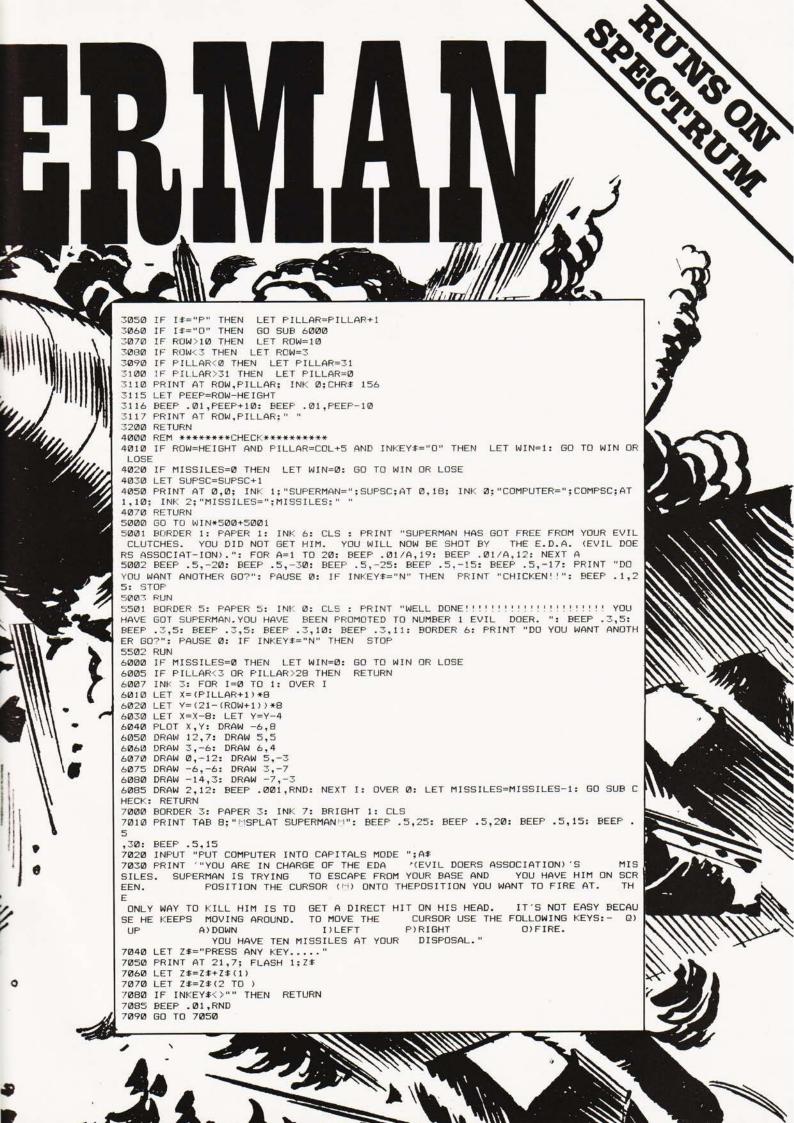
Column number for Col Super-Man. Pillar Column number for sights. Super-Man's score. Supsc Player's score. Compsc Line number for check Check routine = 4000. Win or lose Line number of ending screens = 5000.Key press. Peep Sound value for sight's move. Win Flag used to indicate whether the player has won or not. Co-ordinate used in HRG X for firing graphic. Y Co-ordinate used in HRG for firing graphic. Used for CAPS mode A\$ prompt. Used to rotate the 'Press Z\$ any key' message.

Number of missiles.



# SPLATSUP SPLATSUP





As you can see in our feature this month, on talking computers, computer speech is going to be a big thing. Making a computer talk is fairly easy. There are ready made chips on the market that will do it and it is a simple interfacing job to set them up. The computer is supplied with speech and it just plays it like a digitised recording.

But what of computer speech recognition? Almost everybody must have seen the film '2001 — A Space Odyssey' where the vast controlling computer HAL is programmed and responds in human speech. Have you ever wanted to talk to your computer and have it respond to your every (well almost every) whim?

Orion Data of Brighton have done just that. Orion Data is a spin off of a much larger company — Open Computer Security — who work on computer aided security devices. One of their projects dealt with using voice prints to identify people. Instead of a combination safe that can be 'cracked' the person will say a secret message into the computer. This system would be impossible to get past without a person that was recorded into the device co-operating.

Some way through their development programme the company realised that they could produce a cheap usable product for the home computer market.

Orion Data's Micro Command system for the ZX Spectrum, and shortly for the Commodore 64, contains its own Z80 microprocessor, ROM, RAM, and sophisticated electronics to analize and store human speech — no mean feat for a humble Spectrum — so that's why the second dedicated computer is used to control everything. The system is also supplied with a microphone, two manuals, and a tape of games and other programs.

#### What Can You Win

Orion Data with Games Computing are giving away, as a first prize, a Micro Command speech recognition system along with £100 in hard cash. Just think what you could spend it on — a printer interface, lots of games, a 16K Spectrum to connect your new Micro Command unit to, or even slightly over 12 years of subscriptions to Games Computing.

The second prize is a Micro Command system with £25 in cash (that would buy you about two years of Games Computing).

In addition there are 10 Micro Command units to the next 10 best entries. The total value of prizes is about £725.

As well as all of this there is a special bonus prize which I will come to later....

#### How To Enter

The way to win is very simple. All you have to do is think up an original or good application that uses speech recognition as its base. So if you think that having a television that could change channels just by being shouted at is a good idea then write it down on a piece of paper, attach it to the entry coupon, and send it in.

Now comes the bonus prize — any idea submitted as an entry that is successfully published by Orion Data using their Micro Command system will qualify for 5% royalty on sales — that could mount up to a great deal of money.

Because the Micro Command system has certain limitations and most people do



not know a lot about speech recognition, Orion Data are making their Micro Command manuals available to anybody who writes in to the address below on the coupon provided:

Competition Manual Orion Data 3 Cavendish Street Brighton East Sussex BN2 1RN

Remember this is the address to request a manual from — NOT the address to send entries. The address to send entries is:

Orion Data/Games Computer Competition

1 Golden Square London W1R 3AB

Competition Rules

1. This competition is open to all UK readers of Games Computing, except employees of Argus Specialist Publications Ltd, their printers and distributors, employees of Orion Data or anyone connected with them.

2. As long as the correct coupon is used for each entry there is no limit to the

number of entries per person, photocopies will not be accepted.

3. All entries must be postmarked before 31st October.

The prizes will be awarded to the first
 entries judged to be correct by the editor.

5. No correspondence will be entered into with regard to the competition results and it is a condition of entry that the editor's decision is final.

6. The winners will be notified by post and the results will be published in a future issue of Games Computing.

or each entry there is no limit to the	issue of Games Computing.
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Affix entries on a separate piece of paper.	0
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#### ADVENTURE into PROGRAMMING

If you're the sort of person who just loves gaming with goblins, tangling with terantulas, rescuing damsels in distress, and finding the hidden treasures then this brand new series is right up your street. Steve Lucas, adventurer extraordinaire, will be showing you how to tackle the traumas of programming your very own adventure games. . .

His series wil be split into several sections covering all aspects of programming adventure games on home micros. Steve himself has written some great adventure games including several which have been published in issues of *Games Computing*, for a variety of machines including the BBC, Spectrum, Oric and CBM 64.

Steve's fascinating series kicks off with the planning and preparation that goes into developing an adventure game. So read on and glean what you can from his words of wisdom. . .

#### Part 1... The Plot

Once you have decided to create an adventure game, your first task is to decide upon a plot. This is in fact the most difficult part of the whole process. When adventures first appeared on microcomputers, they usually involved searching for and collecting items of treasure in a strange and mystical world and even now this type of game is still very popular. *Colossal Cave* is perhaps the best known example of this type of adventure, where the descriptions of locations and items conjures up vivid pictures in the imagination.

More recent adventures have tended to move away from this approach and have tried to follow a theme or plot. Over the next few months, I intend to show how we can develop a program out of this basic plot. The plot I am going to use is summarised below.

#### THE PLOT: REVENGE OF THE TOOTHLESS VAMPIRE

Once upon a time in a small village in a remote and mountainous area of Transylvania, there lived a vampire called CEDRIC. His castle was on a hillside overlooking a small village where the villagers, determined to rid the village of the vampires, organised a daring raid on the castle. They waited until midday when the sun was high in the sky and then forced their way into the castle.

Now this raid was the inspiration of two men. Arthur, the village dentist, suggested that it was possible to humanise the vampires by extracting their fangs but the village priest was not convinced and said to Arthur that he would only allow him to try this technique on one vampire.

On entering the castle, the villagers rushed into the crypt, opened all the coffins and hammered stakes into all the vampires except poor CEDRIC. The dentist

walked to Cedric's coffin and with a quick pull extracted his fangs.

When Cedric awoke, he was furious and determined to recover his teeth for without them he would starve...

#### Starting the program

Having written the plot, it is necessary for the player to take on the role of one of the characters. This could be Cedric (the vampire) or Arthur (the dentist). This decision can be left until later for the next stage is to develop the map. It is worth while spending some time creating this carefully on paper before sitting down at the computer.

#### The Map

Before writing the map, we must decide how many locations we want. As a rough guide, for a text only game written in BASIC, we can have about 50 locations in a 16K machine, 120 locations in a 32K machine and about 190 locations in 48K. It may seem a little strange that we can't get a few more locations in 16K, but this is because the space taken up by GO, GET, DROP routines will be roughly the same regardless of the memory size of your machine.

Diagram 1 illustrates how I like to create the map. In this game I shall keep to a 2 dimensional map with just N,S,E and W. Up and Down will be added later. Each location is given a number and a brief description. If you look carefully you will see that I have put an arrow between locations where we can't pass until we solve a problem.

#### Injecting Excitement

Plots which involve finding treasure and bringing it back to the start location become dull after a while and it is much better to try to develop a plot which involves the adventurer in solving a series of problems which follow a main these. When you attempt to write your very first adventure, you will probably find it helpful to base it upon your favourite book. You can, in this way, place the adventurer in the roll of James Bond, Doctor Who, The Pied Piper of Hamelyn or Sherlock Holmes.

Once the player takes on the roll of a well known character, it becomes much easier to develop tasks for them to complete which are in line with the character being played. As an example of this, Sherlock Holmes could be set problems involving chemicals, whereas James Bond would be involved with new technologies and Doctor Who with Daleks and Time Lords. The game will then begin to develop an underlying theme rather than present the player with a series of seemingly unrelated problems to solve.

Anyone who has played one of the adventure games produced by Level 9 will find the descriptions of locations and ob-

ON ISLAND

IN VILLAGE SQUARE

1

ON ROAD

OUTSIDE CASTLE

IN CRYPT

ON CASTLE

BY A LAKE

BY COFFINS

jects given in adventure games produced by some of the other companies dull and uninspiring. When writing games in BASIC, you will usually be short of memory space and trying to include such vivid descriptions will inevitably limit the number of locations your game can hold. You should try to keep a sensible balance between these conflicting demands and then when you gain confidence, you should be able to develop programs which use data files and/or compression techniques to save space.

Your first attempt at writing an adventure will inevitably seem to be a very daunting task, but if you try to break the pro-

gram down into smaller sections and limit the number of locations to a maximum of about 45, then you will soon find your game developing into someting of a masterpiece.

Next month I shall look at how we can code this map into DATA statements and how to write the main control section of this program.



BY DOOR

# BrainWare

#### PSI-SPY

Runs on: Spectrum Made by: Postern Price: £7.95

Psi-Spy is a complete mixture of arcade game and adventure strategies. The menu-driven controls consist of 17 different keys although only five are in use at any one time.

Play is started in the approaches to the labyrinth, where your skill in collecting rigs and trapping the guards, who pursue you from phase two onwards, will be converted into your intelligence, psi-power, and stamina for your adventure in the labyrinth where you must collect the five keys of Zar in order to escape. On your way you will pass through many rooms, most of which are protected by guards. You can buy any objects that you see from the guards, or you can fight for them. To fight effectively, you must have some weapons — spells, a tachyon gun, tax returns (!), or brain bugs, which are activated by pressing a key. You can fight until these or any of your attributes are exhausted.



Of the other objects that you collect, nectar and bread give you stamina, scrolls give you psi-power, Zen crystals give intelligence, and gold contributes to your final score — whether you succeed or die. Guards can be wizards, skulls, dragons, spidermen, monkey things, or trolls. You can kill these to get their possessions. If you reduce one of their attributes to zero they die. The Mocon character changes colour — if he is purple then catching him will gain you strength, any other colour and strength, and possibly gold, will be lost.

Psi-Spy also drives the Currah microspeech unit, however, I was unable to test this aspect.

#### **PACIFIC WAR**

Runs on: Spectrum
Made by: Cases Computer

Simulations Price: £5.95

Pacific War is a simulation of the Battle of Guadalcanal, in the eastern Solomon Islands, in August 1942. The forces involved are American and Japanese, the player controls the American forces. He can set courses for the American task forces, assign numbers of fighters, torpedo planes, and dive bombers on search missions, air strikes, or combat air patrols to prevent the Japanese from reinforcing their troops on Guadalcanal.

The on-screen map shows you the positions of all the American forces throughout the simulation, but you must rely on the feedback from search missions for information on Japanese movements. You are safe from any enemy attack until



you get an 'Enemy Aircraft Sighted' report. This aircraft must be destroyed by your combat air patrols or it will tell the Japanese task force of your whereabouts.

All positions and co-ordinates are set by a rather laborious cursor key method and checked, with military precision, by repeating them again. This may be considered necessary by the purist wargamer, but for the uninitiated it makes the simulation incredibly tedious along with a poor graphics and unresponsive controls.

On the whole, Pacific War will be welcomed by the wargamer entering the computer field but despised by the computer user attempting his first wargame — I suggest that the latter begins with the traditional board wargame until he has developed a taste for the 'art' of wargaming.

#### STOCKMARKET

Runs on: Various Micros Made by: APS Software

Price: £6.99

This is a straight forward, no frills game for up to six players. As a member of the stockmarket, you are given £1,000 to invest in mining companies trading in four commodities — gold, tin, zinc and lead. Each player then buys and sells according to the prices of the commodities and the amount of money in his or her bank. Like, presumably, the real stockmarket, prices constantly fluctuate and are subject to sudden, dramatic falls which can lead to equally sudden bankruptcy for anyone who invests too heavily in a single stock.

The aim of the game is quite simply to make more money than your opponents until you reach the magic figure of a million pounds and are declared the winner. Although you can play by yourself, it's much more fun when somebody else gets landed with an unexpected bill for capital tax gains or suffers some similar penalty. In fact, it is this element of competition which, for me gave the game its interest. I mean, what's the point of making all that money if you can't flaunt it at somebody?

The displays are adequate, if unspectacular, and the instructions are easy to follow. Also there is a 'degree of difficulty' scale of one to four — which determines how many tax investigators and the like are on your tail.

If you're the sort of person who has always dreamt of making a million (and who hasn't?) then you will probably enjoy this game. If you aren't, then you won't.

#### LOST CITY

Runs on: BBC B

Made by: Superior Software

Price: £7.95

Lost City is the first real adventure game that I got for the Beeb and I was pleased that it loaded without a hitch. I plunged straight into the adventure and died several times before I discovered that you need the boots before you can climb the mountainside. After several hours I had gone some way into the adventure and from then on the progress was slow.

At every different location you are told what you can see and any exits that exist and sometimes even a teletext picture, which makes a colourful change. Sentences can be made up from a great choice of words and can be a decent length, abbreviations may not be used. One huge fault is that the computer has no 'save game' facility and an hour or more of moves can be lost through one mistake.

Despite one or two faults, 'Lost City' is a well thought out adventure.

# BrainWare



#### PLANETFALL

Runs on: Various micros Made by: APS Software Price: £6.99

First things first. If, like me, you have trouble making sense of a bank statement, you would be well advised to read the instructions very carefully before loading. For, although we are in familiar 'Star Wars' territory (far-flung galaxies, ageing star fighter pilots, etc.) this is most definitely not one for the 'zap the aliens before they zap you' brigade.

The aim here is to make money, not war. The way to do this is by trading with various star systems, buying and selling six commodities: uranium, iron ore, machinery, medical supplies, computers and gems. To begin, you are asked to choose the number of ships you want in your fleet and the number of planets you want to visit — up to a maximum of fifteen. At each stop, you buy what goods you want at a price lower than you think you can sell them for at the next planet, and sell what goods you have on board accordingly.

Easy money? Well, the problem is that, as this is game for between two and twelve players, your opponents are trying to do exactly the same thing, only a few light years before you. Also, the Universe being what it is, there are sundry local difficulties to contend with, magnetic storms, pirates and the like. And, as if this wasn't enough, the inhabitants of each planet actually haggle with you over the price of goods, so one false bid and you're left with an unwanted load of iron ore to shift.

Clearly this is quite a complicated game and it won't appeal to everyone. But I found it engrossing and worth recommending to those who like to stretch their minds rather than their trigger fingers.

#### COLDITZ

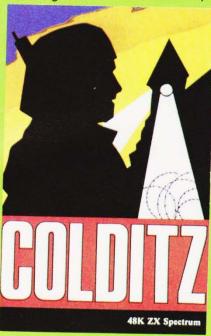
Runs on: Spectrum

Made by: Phipps Associates

Price: £6.95

This is the classic wartime strategy adventure in which the player (adventurer) attempts to rescue a fellow prisoner from solitary confinement and then escape from Colditz castle without being caught by the guards.

Clear, concise, instructions are given on loading which make up for almost total lack of support literature. These then give way to an austere introductory illustration of Colditz castle which sets the scene superbly. The Adventure uses 'The Famous Phipps Split Screen Graphics and Scrolling Text Window Technique',



which works very well and is easy to use unless the intrepid prisoner of war types in a sentence of over 30 characters in length, in which case the program irrevocably crashes.

The adventure is entertaining, but rarely mind taxing as the main object seems to be to avoid making too much noise — do not, for instance, pull on a bell rope or cross a room with creaky floor-boards twice. The only thing really lacking is an on screen scoring system which would be invaluable in gauging the relative effectiveness of various strategies.

There is one more fortunate inconsistency in the program. If you find the sharpening stone, for instance, you can pick it up by either typing "get sharpening stone" or "get stone", this is fair enough, but it can be annoying if after typing "get stone" you try to "drop sharpening stone" and cannot even though it features on your inventory. It is necessary to always refer to each object by the same name.

Despite these minor grievances the

adventure as a whole is good quality, challenging, and unusually addictive for an adventure game in the same price range.

#### 1984

Runs on: Spectrum, BBC

Made by: ISL Price: £5.50

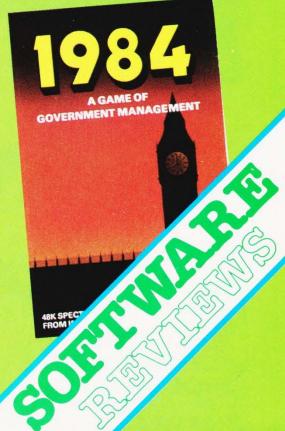
If you have ever fancied being the person in the hot seat running the country then this is your chance.

This is a game where you choose what benefits to be paid out and what taxes to levy. This version of an old theme comes with adequate documentation (a 12 page guide to running the country) and reasonable loading instructions.

The object is, of course, to last in office

The object is, of course, to last in office as long as possible. You start with the figure balanced (an unlikely story!) and that's the way to keep them. Can you keep unemployment and inflation down! You have to negotiate wages, taxes, benefits and just about everything else to survive.

Could you survive a general election or two? Full graphic displays, histograms, and annual performance rating make this a good game to buy. A word of warning: don't increase or decrease anything by too much or your resignation will be accepted.





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## SOFTWARE

one or two joysticks connected to a

#### AD ASTRA

Runs on: Spectrum 48 K Made by: Gargoyle Games

Price: £5.95

Ad Astra, meaning to the stars, is the motto of the legendary Deep Space Patrol. You are a member of the Deep Space Patrol and as a deep space pilot you must exhibit all the qualities that pilots are chosen for. In other words you must be courageous, possess lightning reactions, and above all have a total lack of discipline. Your job is to protect and maintain the shipping lanes between the Way Stations that mark the edges of colonised space.

In this arcade style game you must dodge planetary debris that constantly bombards you from all directions, combat the pirate battle cruisers and their robot scoutships, while avoiding their phasors, and destroy the Capellan Anti-Terran League while keeping a watchful eye out for their bombs and mines. On top of all this you have to remember your security code which will enable you to pass the stations safely as one of their defenders.

A fast moving action packed game for one or two players. It can be operated using the keyboard, a Kempston joystick, or

RK-ZX SPECTRUM

Sinclair interface 2. The keyboard keys are well chosen for ease of use, or alternatively you can choose to use the cursor keys if you prefer.

The graphics are quite good and the game is very addictive. The further you get each time, the further you want to go.

An ideal arcade type game.

quent difficulty. You score twenty points for each nuclear tracer which you shoot down, one hundred points for each spy satellite, and a ten point bonus for each missile left at the end of a screen, when you have managed to dispose of all tracers. Generally the use of sound is quite good, but the use of graphics is somewhere between mediocre and poor.

Armageddon is heavily based on the old arcade favourite Missile Command and as such I think that probably the most entertaining part of Armageddon is the copyright notice on the cassette inlay. The designer has achieved the right sort of sound in the game which is not unimpressive given the limitations of the Spectrum, but otherwise it is a very pale and uninteresting imitation of the original.



#### ARMAGEDDON

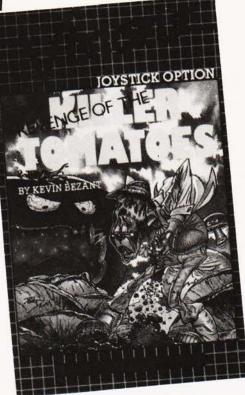
Runs on: 16 or 48 K Spectrum Made by: Ocean Software

Price: £5.90

If anyone is giving away prizes for game titles in the best possible taste then this one should certainly make the grade.

The idea of the game is to shoot down 'nuclear tracers', which are moving down towards your cities, using the missile bat-teries at your disposal. There is also an armed spy satellite which must be vaporised on sight. The control keys are simply laid out and are up, down, right, left moving your cross-hair sight, restart game, and hold game. The program also works with a Kempston compatible joystick.

As you progress through the screens the action increases in speed and conse-



#### REVENGE OF THE KILLER TOMATOES

Runs on: ZX Spectrum Made by: Visions Price: £5.95

You play the part of Smiffy, who has volunteered to weed the cabbage patch; sounds easy? However, in the cabbage patch the cabbages moves and there are



# SOFTWARE

killer tomatoes chasing you. You must run around weeding the cabbage patch and avoiding the killer tomatoes. Once you have survived long enough, mutant fruit and veg will appear replacing two of the four tomatoes. Further on, a mutant mushroom will replace one of the fruit or yea.

The game has ten skill levels, very smooth graphics and a hall of fame. It is fairly addictive and has reasonable sound. A reasonably good game to add to your library.

#### KNIGHT DRIVER

Runs on: ZX Spectrum 48K Made by: Hewson Consultants

Price: £6.50

Once loaded you must choose to play professional, learner or to watch the auto demo. Once you have chosen, the appropriate key must be pressed. If professional mode is chosen you are given five cars and if one is crashed you lose one life. On learner you are given a limited amount of fuel, and on auto demo you see the car driving around the circuit. At certain times your skill score is added to. When you have crashed five times or run out of fuel a message is displayed according to the skill score. This message becomes very monotonous and can be by-passed by pressing Caps Shift O.

The graphics are good with houses and trees around the track. The sound is reasonable. The game is very addictive

orthe48K

X Spectrum

HEWSON CONSULTANTS

and a good buy.

# fuel a to the s very sed by nouses and is dictive FOR THE SPECTRUMARS tack — this means that difficulty in-

tack — this means that difficulty increases with inept play. You will become very frustrated if you do not learn by your mistakes.

This is a game that should retain its addictive qualities longer than most. A wide choice of different joystick interfaces, a combination of joystick and keyboard, or the keyboard alone can be used. There is also a choice of different defending spacecraft and the attacking aliens can be armed or unarmed — armed aliens greatly increase the difficulty whilst adding a pleasant variation to the standard format.

#### SPACE COMMAND

Runs on: Spectrum Made by: Virgin Price: £5.95

Virgin, the record company who, last year, branched out into games software are now gaining a reputation for quality software. The Space Command package is no exception. Although this is basically a shoot-'em-up game, along the Defender/Scramble format, the attractive graphics, good sound, and quality packaging make this an attractive product at £5.95.

The task is to defend a doomed city on an asteroid against very colourful marauding aliens. If they penetrate the city's force field you, as the sole defending rocket ship, lose a life. The force field lowers with each hit to conserve energy—leaving high buildings vulnerable to at-



#### CHOCABLOC

Runs on: Vic 20 +8 K Made by: Paramount Price: £6.50

In Chocabloc for the 8 K expanded Vic 20, you must move about the screen avoiding the chocbeez and trying to line up the three chocbars. The ice blocks make a maze wall, so you may think it is a bit like Pacman, but you can move any block that is free on one or more sides, this will keep on moving until it hits a chocbee or another chocabloc (confusing isn't it)?

The way to get on to the next stage is to kill all the chocbeez. You get a bonus for completing a stage, and a very big bonus for lining up all three chocbars. You can push your way through iceblocks covered on three sides, but it takes time. Each stage, or "act" as it is called, gives a different maze with faster chocbeez.

It has good instructions and a highscore table to five places. All in all a very, very good game, but a bit hard to get used

#### DANGER RANGER

Runs on: All Atari models Made by: Microdeal Software

Price: £8.95

In this one or two-player game, you are a Danger Ranger with a red ranger-suit and a single-shot gun. Your mission: to collect various treasures, avoiding, or if possible eliminating, obstacles in the process.

No loading problems with this one! When loaded it displayed the usual copyright notices, followed by a select prompt, but it uses the 'keyboard-entry system' rather than the usual and more convenient 'option' and 'select' keys. The fire-button begins the game.

Once started you find your ranger on the top storey of the Chamber of Pasha. Below him are several other storeys, each with holes in, so that you can drop to the storey below. Your first objective is to collect the keys on each storey to get points. To make your task more difficult there are two 'floating urns' which move up and down the sides of the screen. When they reach the storey you are on they shoot at you. To avoid their fire you can duck, jump, or drop down through the hole. However, this will mean that you can't collect the key, so you have to jump the hole with an awkward diagonal movement, which is easier with some joysticks than others.

Other obstacles you encounter on this level are roving eyes and radioactive bats, which move around and kill you on contact.

If you have missed out a key you can be transported to the top storey for another try. This is done by stepping on a flashing block on the ground floor, although as you are flying through the air it's likely that you will be killed by a perfectly co-ordinated shot from the urns.

Once all the keys have been collected you progress to the next level, the Acid Chamber.

On this level you are positioned at the top left of the screen, with your target be-

ATARITUS PAROLIMENTO

ing to reach the bottom right of the screen, gathering the treasure chests on the way. To get there you have to move across each row, whilst steering clear of yellow 'zig-zags', which represent acid drops, coming from above and below you. There are also four demons which hang from the row above and block your path, so they have to be killed.

Upon completing this screen you return to the Chamber of Pasha, but on the next level.

Danger Ranger is an exciting game which uses colour well. A nice touch was the Hall of Fame, which allowed you to enter your initials using your joystick to select the letters. Overall a good game.



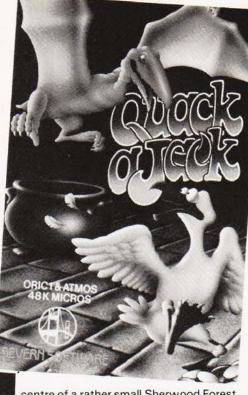
### THE ADVENTURES OF ROBIN HOOD

Runs on: All Atari models Made by: English Software Price: £9.95

In this one player game you take the part of Robin Hood whose aim is to find the villagers' bags of taxes in Sherwood Forest, while avoiding the evil Sheriff's men. To help him he has an inexhaustible supply of arrows.

Initially, I had trouble loading the game, as the instructions tell you to wind an inch past the leader tape. After fiddling about with a ruler for a while, I discovered it would load when cued exactly to the first tone.

Upon loading, the screen displays the



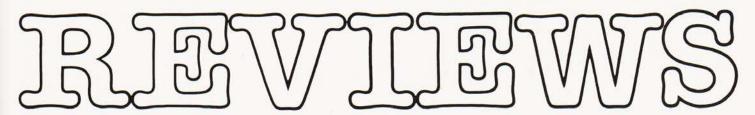
centre of a rather small Sherwood Forest, with a section at the bottom showing score, high-score, lives left, and level. There is also a medieval-sounding tune.

After selecting the level, the 'start' key or fire-button starts play. Your joystick controls the all-green Robin Hood on a scrolling scenery with its boundaries marked by the Major Oak at one end and a castle with a drawbridge at the other. Placed along the bumpy landscape are several things that just about pass as trees, a few small wooden-framed villagers' huts and the Olde Boar pub, which virtually takes up a whole screen (I'm glad to say they've got their priorities right!).

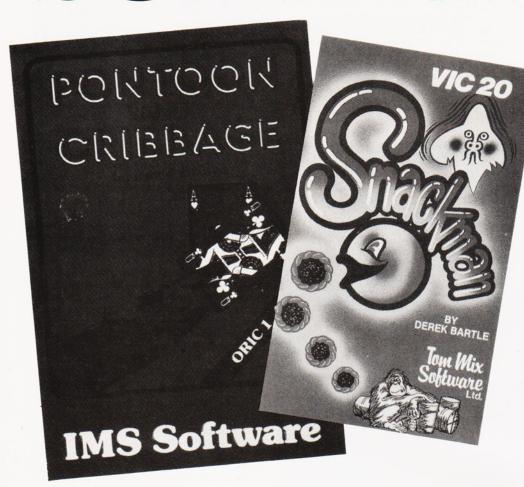
To gain points you must collect a certain number of bags of silver, according to the level, and take them to the Major Oak, being careful not to get hit by the arrows of the Sheriff's army. If you encounter one of these men you can kill him by firing an arrow and get more points. To avoid enemy arrows you can hide behind bumps in the ground or climb up trees or the wooden parts of buildings. Beware, though, if you fall too far, off a tree or building, you lose a life.

At each level however you have the chance to gain a life. This is where Maid Marian comes in. A kiss from her gives you the extra life, as long as you can get to her. She's held at the Sheriff's castle, so you will have to climb a ladder to reach her. By the way, she's immortal. I've tried to shoot her and it's impossible'!

The Adventures of Robin Hood is an original, enjoyable and fairly addictive game. The graphics are adequate, but sound is not very convincing. The arrows sounded rocket assisted! A 32 K version on side B with perhaps a bigger forest and a moving drawbridge would have been welcomed, but as it is, it is well worth getting.



## SOFTWARE



#### QUACK-A-JACK

Runs on: Oric-1 /Atmos 48 K Made by: Severn Software

Price: £7.50

The idea in this zany game is unoriginal, but the details are impressive indeed. You play the part of Red Jack the famous Pirate Duck and you are trapped in the dungeons — shown by a screen full of flagstones. Your main enemy is a teraducktile who hatches out of his egg and eats you unless you get to his egg first.

eats you unless you get to his egg first.
Using the cursor keys you leap from flagstone to flagstone making your way to the egg. However, you are not the only one in the dungeon. On each level you will be chased by different items ranging from teddy bears, ice cream cones and micros to prawns, burgers, kangaroos and more. Money can also be found in the dungeon and taking this earns bonus points.

As if this were not enough there are a number of cooking pots and landing on these is very nasty indeed. If you reach five eggs before they hatch you will move on to the next level. If in trouble you are able to slide flagstones towards you — a helpful feature on higher levels. As the game progresses the chasers speed up and you need to get more eggs as well. The graphics and sound are very good but the game does not hold interest for very long and after a short time you only play to see if there are any more chasers yet unseen.

The duck is very easy to control and the instructions are simple to follow.

#### PONTOON/CRIBBAGE

Runs on: Oric

Made by: IMS Software

Price: £7.95

Cribbage loads in and the opponent is obviously your trusty Oric. The rules are standard; six card cribbage and 121 up.

An impressive crib board is drawn in hires graphics at the bottom of the screen and, after the cut, your hand is also printed up. Play starts once the discarding on both sides has taken place. The game

procedes in the same way as the card classic and once the hands have been laid down the points are totalled up. The movement of pegs is shown graphically and explained each time. This is an excellent version of a popular card game and the computer is certainly a player with one thing in mind (or memory!) — winning.

Pontoon, otherwise known as twentyone, contains even better graphics than cribbage. Each card is drawn with the appropriate colours and symbols. This time you play for money, starting at £ 100. As in the card game, you are able to stick, buy, or twist. Sticking under 16 is not permitted.

The cassette contains two classis games, but beware, loading both games is very difficult so maybe the cassette should include the real card game — patience!

#### **SNACKMAN**

Runs on: Vic 20

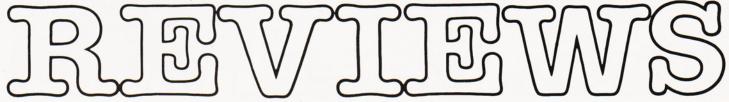
Made by: Tom Mix Software

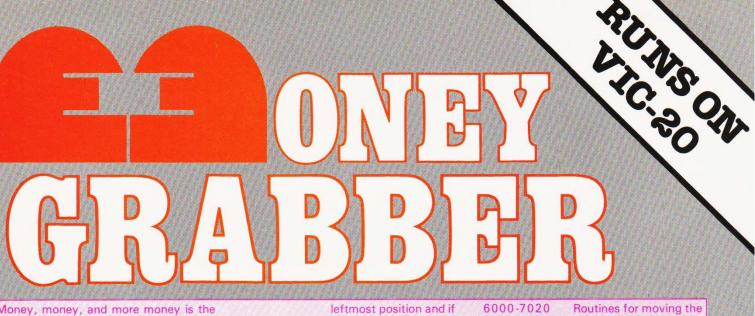
Price: £5.50

Snackman, you ponder, what does that remind me of? Oh, yes! It's Pacman. Another copy of the same game, under a new title. Maybe it's a bit much of me to ask for a slight variation, but I'm afraid it's not to be. Well, if you want to write a game with around ten copies on the market, you'd better make it good, but this was an awful failure; slowish, boring sound, a few standard high resolution graphics and you have Snackman — the lifeless colour made it even worse.

It had a good loader program, but I have seen so many better copies, that this is not even worth considering. I would not be surprised if many of the Vic owners

reading this could do better.





Money, money, and more money is the theme of this game. Make your little man run along the ground jumping over holes in the ground and barrels that come rolling towards him. When those obstacles are conquered it's up the ladder and onto the rope swing. Run onto the swing and wait as you fly across the screen. Leaping off the swing brings you to all that lovely money.

If this sounds easy, it isn't. Getting money is always a problem and this game has the added difficulty of a time limit. A bonus is awarded if you get the money with more than four units left on the clock. You start off with 99 units.

250-600

1000-1060

the man has hit it. Initialize strings used for rotating the bottom line. Print the bottom of the line and position

makes the man fall with

Routine for killing man,

sound effects. 2000-3000 Routine to move the man on the rope

6000-7020

7030-7060

7070-7090

8000-8500

9000-10000

Routines for moving the man up the ladder with sound effects.

Part of the jumping routine. Beeps once and handles the barrels. Title page and sound effects.

Score and rotate string

routine. Define characters and clear the top of RAM for UDGs

#### RUNdown

140-240

XMEF 259

Lines 0-45 Action Clear and set up screen, initialize variables. Check for the man being hit by the barrel, print up the time, see if 50-58 there is any time remaining and if the first screen has been

cleared.

60-110 Check keyboard, move rope swing, and move

barrel.

112-120 Check if man has gone up the first ladder and if

the barrel has reached the left of the screen.

Check to see if the barrel has reached the



Variables	Used	L	Used for poking the ladder onto the screen.	Convers	ion Clues
T2	Ladder flag ( = 1 if you have been up the first	C	Counter for rotating the screen.	The following converting	VIC pokes may be useful in this program for other
	ladder).	R1,R2,R3	Position of rope.	machines.	
SC	If this = 1 then the first	M	Position of the man.	36876	Turn on user defined
	screen has been	В	Position of the barrel.		character set.
	cleared.	K	Counter for the rope.	36879.8	Change the background
T	Time.	S	Your score.		and border colours to
A\$	Clear screen and 18	BS	Best score.		black (8).
	line feeds.	G\$	. Scan keyboard.	36878	Volume setting (0-15).
BO	Bonus (200 points).	I,X	General counters.	36878	Volume setting (0-15).
B\$	String used to rotate	L1	Total score after each	36875/6	Sound channels.
	the bricks at the bottom of the screen.		screen has been cleared.		arts at 7680 and finishes at

```
GOSUR9000
        REM MONEY GRABBER BY JOHN MACKAY
       PRINT"3":GOSUB7070:C=0
6 T=99
7 B0=20
7 B0=200
11 GOSUB250
15 PRINT"MUMBBBBB"
17 PRINT"SUMBBBBB"
18 POKE 7837,28:POKE7752,28
20 POKE 36879,8:B=8117
21 L=7854
22 FOR X=1TO3
23 POKEL,8
24 L=1-22:NFYT X
 24 L=L-22 MEXT X
25 L=7875
 26 FORX=1T012
27 POKEL,8:L=L+22
28 NEXT X
30 R1=7797
 32 IF PEEK(M+1)=101THEN GOSUB2000
40 R2=7797+22:R3=7797+44
           K=11
 50 GET G$:IFPEEK(L-22)ORPEEK(L-44)=32THENPOKEL-22,8
 50 GET G#:1PPEEK(L-22)ORPEEK(L-44)=32THENF
POKEL-44,8
51 IF SC=1THENGOSUBS500
52 POKER3,101:1FM=BTHEN1000
53 PRINT"S#TIME";;
54 IF MC=7753.01 THENGOSUBS000:SC=1:GOTO1
55 PRINT" SCORE"S
  56 T=T-1
57 PRINT "HIGH "BS
56 T=T-1
57 PRINT "HIGH "BS
58 IF T<0THEN1000
60 IF G$="M"THEN M=M+1:POKEM+1,32:POKEM,1
65 IFM=BTHEN1000
70 IF G$="M"THENM=M-1:POKEM+1,32:POKEM,1
71 IFG$="M"THENM=M-2:POKEM+2,32:POKEM,1:M=M+1:POKEM-1,32:POKEM,1:M=M+1:POKEM-1,32:POKEM,1:M=M+1:POKEM-1,32:POKEM,1:GOSUB7030
72 IF PEEK(M)=1010RPEEK(M+1)=101THENGOSUB2000
73 IF PEEK(M)=1010RPEEK(M+2)=32THEN1000
74 IF PEEK(R3)<>16NDPEEK(M+2)=32THEN1000
75 IF PEEK(M+1)=101THEN GOSUB2000
76 IF K(10THEN140)
79 B=B-1:POKEB+1,32:POKEB,15
80 R2=R2+1:R1=R1+1:R3=R3+1
81 POKER2-1,32:POKEM,1
90 POKER2-1,32:POKEM:1,32:POKER3-1,32
100 POKER2-1,32:POKER1-1,32:POKER3-1,32
100 POKER2-1,101:POKER1,101:POKER3,101
105 IF M=BTHEN1000
106 IF B=S100THENE=S117
110 IF R3=7797+44+9THENK=0:GOTO1+0
112 IF T2=1THEN116
115 IF PEEK(R37)=32)AND(PEEK(M-22)=8)THEN GOSUB7000:
T=T+15
                  T=T+15
 151+15
117 IF B=8100THENE=8117
120 GOTO 50
140 POKE M.1:IFB=8100THENB=8117
145 POKE8100.32
 143 POKES100,32
150 LET K=K+1
152 IF T2=1THEN170
155 IF PEEK(M-22)=8THENGOSUB6000:T2=1
170 R1=R1-1:POKER1+1,32:POKER1,101
```

```
190 R2=R2-1:POKER2+1.32:POKER2,101
220 R3=R3-1:POKER3+1.32:POKER3.101
230 B=B-1:POKEB+1.32:POKEB.15
          IF B=8100THEMB=8117
IF M=BTHEN1000
260 M=2100
270 POKEM,1
600 RETURN
1000 Z=254
1001 FOR X=1T015
1004 POKE36878,15
1005 Z=Z-9:POKE36876,Z
1010 POKEM,1:M=M+22:POKEM-22,32:POKEM,1:POKE36879,X:NEXT X
1020 POKE36879,24
1030 PRINT"2":POKE36869,240
1040 PRINT"300 YOU WANT ANOTHER 60(Y/N)"
1050 INPUT A# IFA#="Y"THENS#0:POKE36869,255:SC=0:60T01
1060 FNID
 260 M=8100
1060 END
2000 IF KC10THEN3000
2010 M=M+1 POKER3-1,32 POKEM-1,32:POKER3,1 RETURN
3000 M=M-1:POKEM+1,32:POKER3,1:M=M-0.11:RETURN
6000 FORX=1T012
6010 POKEM,1
6010 POKEM,1
6020 M=M-22 POKEM+22,8: POKE36876,128+(X*10)
6030 NEXT X POKE36876,0
6040 RETURN
7000 FOR X=1T04
7010 POKEM,1 POKE36876,150+(X*20)
7020 M=M-22 POKEM+22,8: NEXT X POKE36876,0 RETURN
7030 POKEM,1: M=M+1: POKEM-1,32 POKEN,1
7040 B=B-1: POKEB+1,32: POKEB,15
7041 FORX=1T010: POKE36875,128 NEXT X POKE36875,0
 7045 M=M+22 POKEM-22,32 POKEM.1
7046 IF B=8100THENB=8117
7050 IF M=BTHEN1000
 7080 FOR X=1T0255 POKE36878,X:POKE36876,200:NEXT X:
POKE36876,0
7090 POKE36869,255: RETURN
8000 IF T<5THENS=S+99 IFS>BSTHENBS=S:RETURN
8011 L1=B0+T S=S+L1
8015 IF S>BSTHENBS=S
8020 RETURN
 8500 PRINTAS PRINT"S" PRINTLEFT$(RIGHT$(B$,21~C)+LEFT$
(B$,C),21) C=C+1:IFC=20T
HENC=0

$510 RETURN

9000 POKE36869,255:POKE52,28:POKE56,28

9010 FORI=7168T07679:POKEI.PEEK(1+25600):NEXTI

9030 FORX=7176T07183:READD. POKEX,A:NEXTX

9040 FORX=7184T07190:READB.POKEX,B:NEXTX

9050 RETURN
  10000 DATA28,23,8,62,8,24,34,99
10010 DATA238,238,0,119,119,0,238,238
```

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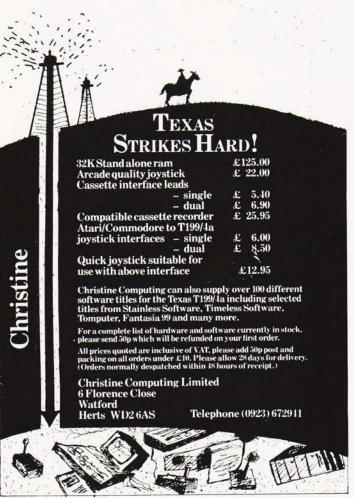


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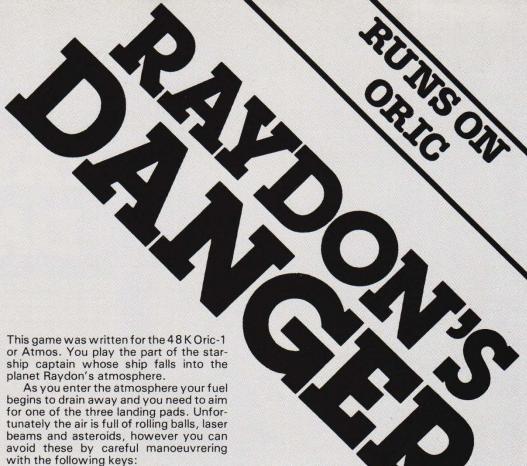


4 HAFFENDEN ROAD TENTERDEN

KENT TN30 60D

REM\* BY D.PATEL MARCH 1984





Cursor down - Move right Cursor left — Move left Space bar — Thrust

The rolling balls come in pairs and move from left to right across the screen. They also move up and down.

The laser beam comes from a gun on the left. When the beam is fired it starts at the left side of the screen and works its way over to the right side, then it disappears and reappears somewhere else.

The asteroids scroll across the screen from right to left. This is one of the

hardest sheets in the game.

At the beginning of the game you are asked what skill level you would like. This decides how fast the game goes and how many points you get each time you drop down one space. The harder the skill level the more points you get.

You are also asked what kind of gravity you want (this is a game remember!). Options are 'extra gravity' to make you thrust slower and the game harder. 'no gravity' makes you thrust very quickly

and the game a lot easier.

You start off with three ships and you gain an extra ship every time that you get 300 points. You can die in all of the conventional ways, but if you run out of fuel you can still land on one of the three landing pads, if you are lined up correctly.

#### RUNdown

<b>Lines</b> 8	Action Switch off sound
	and set colour of th
12-70	screen. Set variables.
80-220	Move ship.
230-355	Asteroid attack.
361-480	Laser attack.
485-570	Rolling ball attack.
580-600	Calculate score.
620-640	Bonus life.
650-670	Calculate lives.
780-800	Calculate fuel.
810-900	Through to next
	stage.

999-1150	Instructions.
1155-1190	Select skill level and
	gravity.
1200-1340	Game over.
2000-2156	Do UDGs.
2200-2400	Draw the screen.
2500-2560	All stages complete.

#### Variables Used

Α	Sets the mission.
B,C	Position of the ship.
F.G	Position of rolling ball.
G,K	Position of laser.
L1\$ - L4\$.	Scrolling of asteroids.
R1\$-R4\$	<b>3</b>
S.V\$.GR	Gravity choice.
LI%	Lives left.
SC.SK	Skill level.
FU	Fuel.
Z	Data flag.
ū	Print out what is
	coming on the screen.

#### Conversion Clues

Since Oric basic follows the Microsoft standard it should not be very difficult to convert it for other machines, however some points need considering. These are as follows

The UDGs are based on a 6x8 grid instead of the usual 8x8 in most computers. This means that the UDG data does not have any numbers above

63, the top two bit being zeros. ZAP, PING, and EXPLODE should be replaced by whatever sound effects your computer can produce.

CHR\$ (17) turns the cursor on and off, CHR\$ (6) switches the keyboard clicks on and off.

If you have a 16K Oric or Atmos then the GRAB statement may need to be used. Some of the POKE addresses may need to be changed, look on page 145 of the Oric manual.

## RAYDON'S DANGER

```
2000 FOR N=46856T046974
2001 Z=1
2010 READ D :POKEN,D:NEXTN
2020 DATA1,1,3,3,7,7,7,7
2020 DATA1,1,3,3,7,7,7,7
2030 DATA2,3,2,46,48,56,56,56,56
2040 DATA7,22,46,47,46,47,22,3
2050 DATA6,11,26,42,42,26,11,6
2070 DATA6,1,26,42,42,26,11,6
2070 DATA6,1,21,9,33,33,18,12,48
2100 DATA6,12,18,33,33,18,12,48
2100 DATA4,14,14,31,31,63,63,63
2110 DATA4,14,14,31,31,63,63,63
2120 DATA33,51,55,54,56,63,63,63
2120 DATA5,26,52,55,43,63,63,63
2130 DATA6,6,52,55,48,40,55,55,56
2150 DATA6,0,0,0,0,0,0,5,63,63
2140 DATA65,52,55,40,40,55,55,56
2150 DATA6,0,0,0,0,0,0,5,63,63
2140 DATA65,52,55,40,40,55,55,56
2150 DATA6,0,0,0,0,0,0,5,63,63
2140 DATA65,52,55,40,40,55,55,56
2150 DATA6,0,0,0,0,0,0,63,63,63
2140 DATA65,52,53,40,40,55,52,56
2150 DATA6,0,0,0,0,0,0,63,63,63
2140 DATA65,52,53,63,63,63
2140 DATA65,52,53,40,40,55,52,56
2150 DATA6,0,0,0,0,0,0,63,63,63
2140 DATA65,52,53,63,63,63
2140 DATA65,52,53,63,63
2140 DATA65,52,53,63,63,63
2140 DATA65,52,53,63,63,63
2140 DATA65,52,53,63,63
21
```

## My Amstrad CPC464 has now arrived, it is a great machine, combining all the good points of the BBC and Spectrum. Prepare for a battle royal between the software houses to be the first

This month our resident home computer hacker investigates subjects ranging from the case of the missing QL expert to the strange appearance of the coloured Aviator.

to produce the "pac-man" type classics. One of the nicest things about the design is that the monitor is BBC plug compatible, this is totally intentional, its good to see a manufacturer conforming to existing standards. There is a good chance that the monitor may be sold by

contrary at the launch. Sinclair has been up to its old tricks again, the add-on microdrives for the QL are not ready and won't be for the forseeable future - they've been refunding monies. I just wish that they had told the mail order department, when I rang them at the beginning of May I was told QL microdrives existed. Never mind, at least they've got most of the bugs out of the QL and it's now a true Acorn beater.

itself next year, despite statements to the

I have been told that there have been great advances made with the bundled software, Quill is now fast, it used to be so slow that it got quite infuriating to use. The size of the programs has been reduced, so there will be less loading bits of program from microdrive and you can store a lot of data in things like the Abacus spreadsheet. It not impossible that they could be multi-tasking, so that you could run packages simultaneously.

#### Peter Who?

Now that the QL has been more or less debugged Sinclair has decided that it no longer needs the people who got the first QL's to help them look for bugs. This means that if you call the 'phone number that came on a slip of paper with the QL you will now get referred to Camberly. The person who used to deal with QL enquiries, Peter Crabtree has left, this is odd because no-one called Peter Crabtree ever worked for Sinclair, he was a ficticious engineer in the Sinclair labs. This had several advantages, first when they finished with him could just disappear, second when anyone called asking for "Peter" they new it was about a QL bug, and third it gave everyone a jolly good

One thing which would have caused another jolly good laugh would have been some computer hacking on the BBC 'Micro's Live' program. The audience was a bit staid when any questions about hacking were asked, but then wouldn't you be when the heads of various computer databases were sitting in the audience.

There was one security lapse. Whilst we waited to be put into the audience the Beeb relayed the sound from the studio. There was a live link with America through the BT Gold system. Unfortunately someone at the London end



managed to leak the password confirming it with the New York end. A friend and I rushed to a payphone to pass this valuable information on. The first person we rang didn't have a modem, the second, a respectable software house didn't want to risk it, and the third was engaged. On breaking this news to the people involved with the program the reactions ranged from dissapointment at our failure to white faces. Still there's always a Micros Live III in October . .

Acornsoft are working on a racing car simulation for the BBC, it is being written by Geoffrey Crammond of Aviator fame. This will be in colour, I understand that some clever hacker has managed to produce a colour Aviator. If I see a copy I'll let vou know more.

There is a top secret 3D game written by the author of Starship Command on its way, believed to be something like the arcade "Star Trek"

As the summer holidays are in full swing there's plenty of time to play MUD, the Multi User Dungeon adventure game at Essex University. Most external players reach Wizard when the University is empty and free of rampaging Internal Wizards. This is of less importance to me now that I've reached Wizard. This took me 106 games and about eight months. It earned me a map of the land and a letter from Richard Bartle, the program's author congratulating me. If there's room I may look at the interesting powers of a wizard next month.

--- \* Thor The Wizard.

ISP marketing have had their SCOPE programming language for the Sinclair Spectrum out for some time now and it has proved extremely popular - even being nominated for the Computer Retailers Asociation's 'Program of the Year' award.

SCOPE stands for Simple Compilation of Plain English, the user can write his own games in the Scope programming language and the compiler will produce a fast running program in machine code from it.

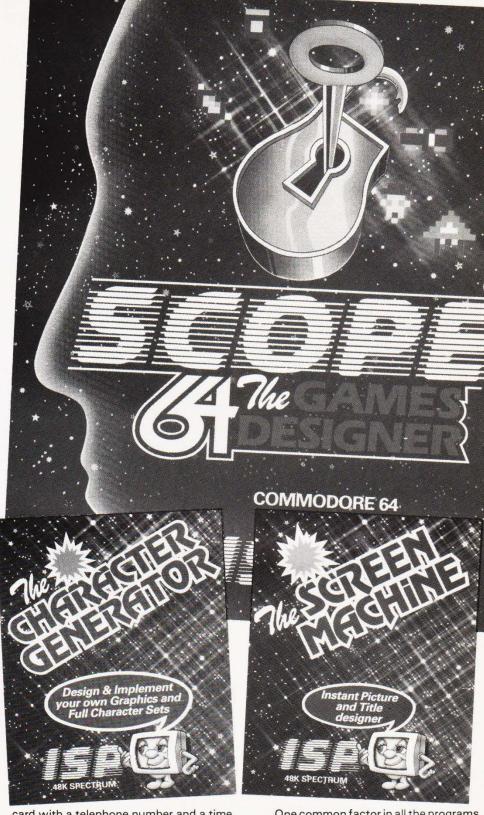
Not content with their success, ISP further refined their program and released it as SCOPE II for the ZX Spectrum and SCOPE 64 for the Commodore 64. These two new utilities replace the old Scope but give many more added features. Old users have the option to upgrade to SCOPE II by paying the difference in price.

The new SCOPEs have an extended instruction set and an interesting new feature. Most games designers or program generators need the original designing program to be resident when your game is being run — including the original Scope. Not so SCOPE II and SCOPE 64, these two programs will produce directly running machine code. So any program that you write in the Scope language can be sold commercially, like any other game. Obviously you should give ISP credit when you sell it and they would like to be given a chance to sell it first (after all they wrote Scope).

#### Join The Club

Along with the purchase of Scope the user will become a member of the Scope users club. This club is not just a marketing exercise by ISP but a useful hotline to ISP's programmers.

Each member is given a membership



card with a telephone number and a time to contact. Whenever a member gets into trouble with a scope programming problem or any other problem that uses an ISP product he can talk it over with somebody in the know.

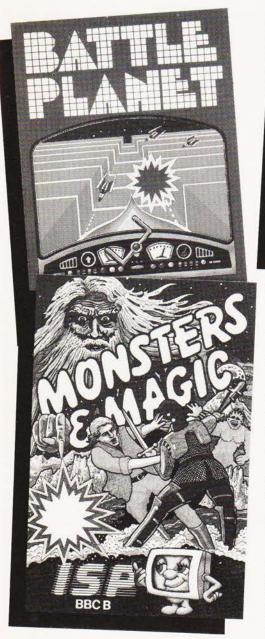
Just after Scope II and Scope 64 were released a whole new line of utility software came into being to develop Hi-Res screens, UDGs and character sets, and the most useful of all — a sprite generator.

The screen machine allows you to create an appealing hi-res SCREÉN\$ to backdrop on any game.

The character generator helps the user to create different character sets than the normal Sinclair set. Six pre-designed character set are included for use in your programs.

One common factor in all the programs is the instructions. Each program comes complete with a full, well-written, ring bound manual. The manuals allow any user to get to grips with each program quickly and easily.

A new departure for ISP is the publication of games. Monsters and Magic is a modular adventure game for the BBC Micro. The main game that contains all the programming logic for an adventure, such as displaying locations and handling the real-time combat, is in the main program. The plot and details for the adventure is separate and is loaded into the computer after the main program. Monsters and Magic contains two such modules - so really it is two adventure games in one.



Battle Planet is an action game for the BBC where the player plays the pilot of a defence ship that has to destroy the Battle Planet which is out to destroy Earth. You must fly down the trench and launch a plasma bolt at the final target.

#### What You Can Win

ISP Marketing in conjunction with *Games Computing* is giving away a vast number of prizes to the 166 lucky winners of this competition. Here's what you can win:

One mammoth 1st Prize.

Micro Tidy Computer desk. Complete set of ISP products. Free membership of SCOPE users club.

25 second Prizes.

Twenty-five copies of SCOPE II or SCOPE 64 depending on the winner's preference.

#### 15 third Prizes.

Thirty copies of The Screen Machine and Character Generator. The winners will get a copy of each.

#### 15 fourth Prizes.

Thirty copies of Multi file and Spectrum



Sprites. The winners to get a copy of each.

#### 10 fifth Prizes.

Twenty copies of Battle Planet and Monsters and Magic. The winners to get a copy of each.

100 consolation prizes.

Free Scope user's club memberships.

In addition all other winners will get free memberships to the Scope user's club as well.

There are so many winners and prizes that lot of people stand a chance of winning, and the competition is so simple.

#### What You Have To Do

Printed below are seven points that a buyer has to consider when buying a utility for his computer. All you have to do is list them in order of importance. Then, as a tie-breaker, complete the sentence in not more than 15 words. That's it — simple isn't it?

On the entry form are seven letters a tog these correspond to the following statements:

- a. Full colour advertising in the national press.
- b. Attractive full colour boxes.
- c. High quality data duplication.
- d. Professionally written clear instruction manuals.
- e. A telephone 'hot line' to support the user.
- f. A freindly and helpful software publisher.
- g. Good national distribution.

Next to each letter all you have to do is write a number, where 1 is the most important and 7 is the least important. The rest of the entry form (ie. what machine you require the software for etc) must also be filled in to qualify. So if you think that good national distribution is important — write the number 1 next to the letter g on the entry form.

Remember to send your entry to Number 1, Golden Square, London W1R

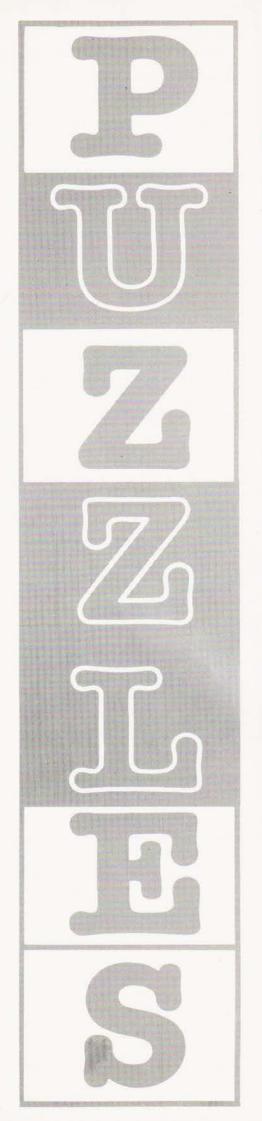
SAR

Please put the name of your computer and your seven numbers on the back of this envelope. This means that if you win a prize and have a BBC micro we will send you BBC programs, likewise with the Spectrum and Commodore 64. Of course the top prize is useful for every computer user.

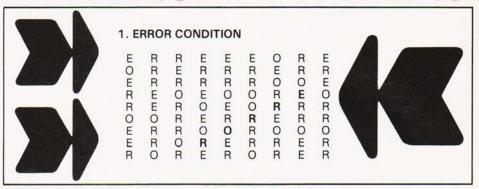
#### **Competition Rules**

- 1. This competition is open to all UK readers of *Games Computing*, except employees of Argus Specialist Publications Ltd, their printers and distributors, employees of ISP Marketing or anyone connected with them.
- 2. As long as the correct coupon is used for each entry there is no limit to the number of entries per person, photocopies will not be accepted.
- 3. All entries must be postmarked before 30th September.
- 4. The prizes will be awarded to the first 166 entries judged to be correct by the editor.
- 5. No correspondence will be entered into with regard to the competition results and it is a condition of entry that the editor's decision is final.
- 6. The winners will be notified by post and the results will be published in a future issue of *Games Computing*.

	ISP/GAMES COMPUTING COMPETITION SQUARE, LONDON W1R 3AB	İ
Machine Ty	/pe:	[
Answers:	abcdefg	
Tiebreaker:	I want to unlock my imagination with ISP products because:	V.
		X
TOVERNOON TO TAKE TO		- 1
 		120
		[
Tel:		



## ANSWERS



#### 2. EYE QUEUE II

a; If you think of the shapes as money then the first becomes 20p, the second a one pound note, the third, 1p, the fourth an old threepenny bit, the last one, a square, and odd for that reason.

b; So far as we know, there are no Delft toilets.

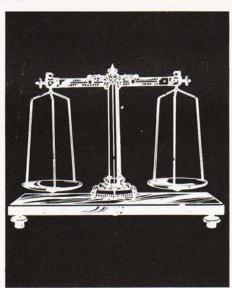
c; C.L.I.M. are all Roman numerals. B is not.

d; Tough eh? They're all anagrams of famous poets, except for Daffodil, which is a flower. The famous poets? Keats, T.S. Eliot, Gray and Anon — the most famous of all.

e; It's the seven times table - 0;7;14;21;28;35;42; etc.

#### 3. WEIGHTS AND MEASURES

The greengrocer weighs vegetables mainly, but he does the occasional fruit too.



#### 4. WEIGHS AND MEANS

He needs two weighs to detect the fake. This is how he does it. He divides the nine coins into three groups of three. He takes two groups and puts them on the scales. If they balance, he proceeds to the third group and weighs any two of those coins. If they balance, the fake coin is the third. If they don't — the lighter one is the fake. If on the other hand he weighs the first two groups and they don't balance; he reweighs any two coins in the lighter group to find the dud.

#### 5. TERMS AND CONDITIONS

There may be more — but these are the ones we put in — word, integrated circuit, graphics, software, teletext, Oracle, instruction, database, output, keyboard, silicon, crash, robot, mouse, RAM, ROM, program, Prestel, bar code, BASIC, cassette tape, printout, byte, run, Ceefax, ALGOL, LED, chart, chip, CPU, end, pixel, bug, user, lcd, network, input, matrix, vdu, disc, bit, memory, digital, storage, circuit, binary, port, get, menu, log, loop, error, net, cat.

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