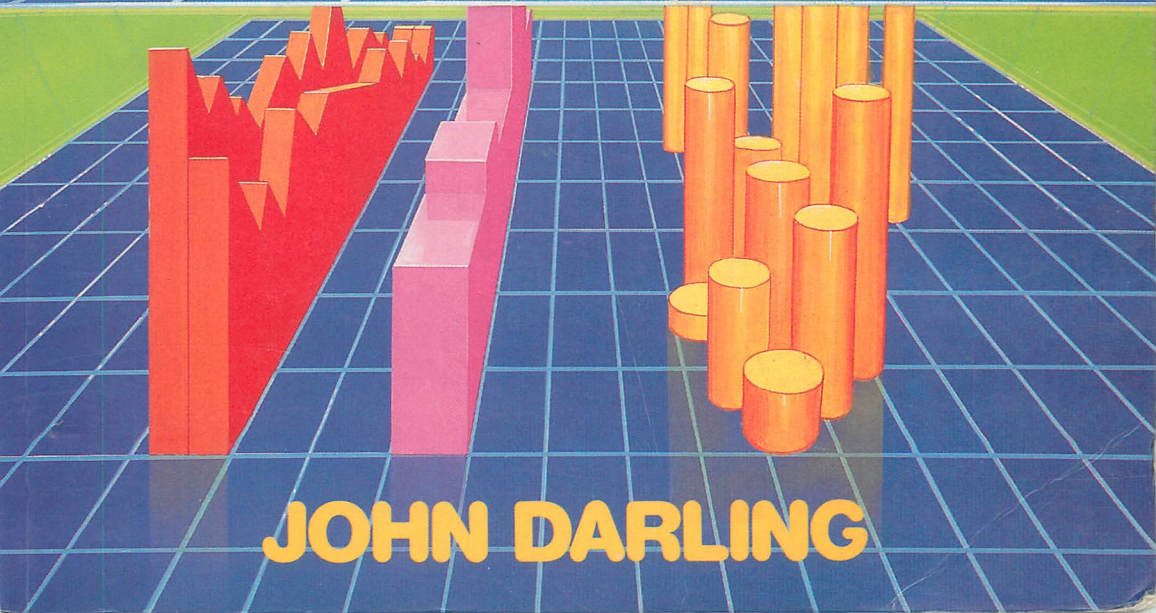
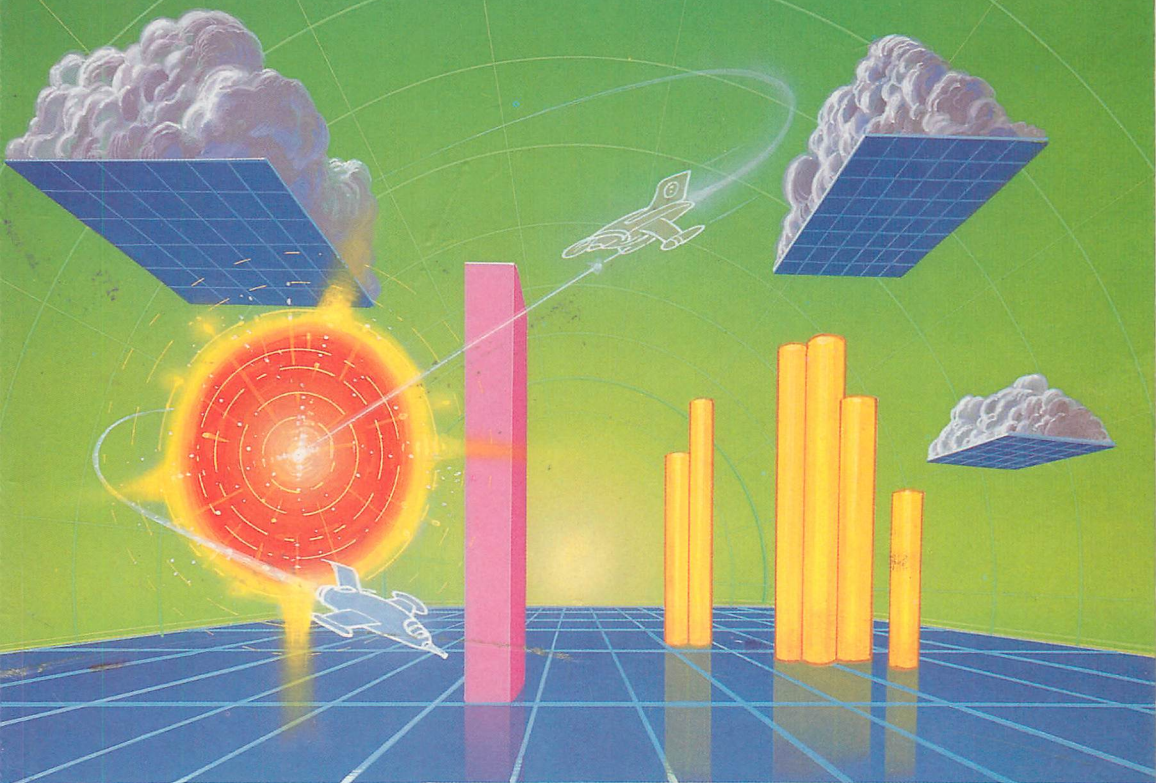


THE GUIDE TO COMMODORE 64 SOFTWARE



JOHN DARLING

The Guide to Commodore 64 Software

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The Guide to Commodore 64 Software

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Introduction

So sudden has been the impact of the microcomputer on our way of life that it is hardly surprising that many users are unaware of the sheer volume of good software that is currently available for their machine. This is particularly apparent with the Commodore 64 computer. It really is a machine for all the family. For example, Dad can use a variety of powerful programs in the running of his business. Mum can use the same machine for planning her home economy and for sorting out a dinner party. There is a lot of software that helps the elder child prepare for examinations. Middle child has a host of arcade games to keep him out of mischief. And junior can learn to read and write in a variety of interesting ways. And, at the end of the day, the entire family can get together to sort out the latest adventure program.

This book has been compiled with the assistance of practically all of the software houses in Britain who produce programs for the Commodore 64, and all the facts, to my knowledge, were correct at the time of going to press. Naturally, with such an up-swing in interest in this machine, one or two pieces of software have had to be omitted. Nevertheless, after reading this book, you will probably reflect that your computer can be used to assist you in every facet of your life. That is what it is there for. You have only to feed it the right programs for it to perform to its peak.

One of the most interesting facts about software is that it grows. It is never static. Some of the current arcade hits are so far advanced that they make the games of 1983 look terribly basic. However, the computer is applicable to every age group, so some of these early games have been included for the benefit of the less advanced player. In the business, utility and educational chapters, you'll come across programs which have evolved over a period of time to match the requirements of a sophisticated market. These will undoubtedly continue to evolve as fresh ideas improve the state of the art. For this reason, the names and addresses of the major software houses who write for the Commodore

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64 have been included. Many of them are happy to mail details of new and updated programs as they are launched. So you should have little trouble in ensuring that you keep abreast of new developments.

With the Commodore 64 now such a popular machine in so many walks of life, it would be nice to think that this book will stretch your appreciation of its power and capabilities.

John Darling

I

Arcade Games

This is where the micro boom started – as an extension of the arcade game industry. At first there were nothing but space invaders to be seen jolting their way down the screen. Then came an onslaught by the software houses of the world. The result is that today's generation of arcade games bear little resemblance to those of a year ago. They have become a great deal more sophisticated, with many of them combining interesting little adventures in their plot.

However, this chapter contains plenty of good old-fashioned shoot-'em-ups. Even today it is sometimes pleasant to drop out from stage eleven of the latest super-complicated game and plug in a game that provides nothing more demanding than streams of plasma bolts whizzing across the screen.

One of the odd things is that some parents don't approve of their children using their Commodore 64 to play games. Perhaps they think this smacks too much of levity. The fact, however, is that arcade games require excellent reflexes and precise hand-eye co-ordination. They also require no small amount of strategic thinking.

A recent refinement has been the combination of an arcade game with an adventure game. You have to complete the arcade section first, though, to find the running code to the adventure program.

The number and variety of arcade games for the Commodore 64 is huge. Since this machine's rise to popularity, many software houses have translated programs especially for it. So now you can find most best-sellers available for it, or will do soon.

Most modern arcade games are written in machine code, sometimes by a team of programmers. This code causes programs to run very much faster and permits more information to be stored in less space. This, naturally enough, allows extra RAM to be devoted to the graphics. Another advance has been the use of synthesisers to create music. While the melodies may not quite be Top 20 material, they certainly add to the games and are a vast improvement on the irritating electronic squawks that used to pass as the sound track.

ALICE IN VIDEOLAND

by Audiogenic

Disk. Joystick required. 1 or 2 players. Price: £12.95.

This is a complex interpretation of Alice in Wonderland, with the added interest that you control Alice from the moment she falls down the rabbit hole. In this, the first scene, Alice has to grab a basket in which to put the cakes, keys and bottles that she catches as she falls down the hole. She can unlock a door when her key matches its colour. The bottles and cakes help her to change size. In scene two the Cheshire Cat looks on as the Caterpillar sits on a giant toadstool smoking his pipe. Bread-and-butterflies and rocking-horse flies flutter past and three nasty flowers spit out seeds. Alice must find her way through this to the chessboard where the White Knights will escort her away from the Jabberwocky and those terrible twins – the black bishops, Tweedledum and Tweedledee. It really is quite a battle, and one which you will have to think your way through before you glimpse scene four, the Queen of Hearts' croquet field ...

AQUANAUT

by Interceptor Software

Cassette. Disk. Joystick required. 1 player. Price: £7.00 (cass); £9.00 (disk).

Deep beneath the surface of the world's oceans, order was maintained by dedicated submarine pilots of the Aquanaut patrol. In their sleek, deadly craft, armed with torpedoes and depth charges, they were invincible until they encountered the Caves of Shallic. Here the forces of a malevolent power have assembled. They are bent on conquest of the seas, wresting power from the Aquanauts. Their weapons include heat-seeking missiles, sea-tanks, hovering mine-layers and, worst of all, the deadly hunting mines. These cannot be destroyed except by causing them to collide with solid rock. However, their range is limited and they can be out-run, but only by skilled pilots. And only one of the Aquanauts has proved capable of escaping from this range of weaponry. You are that Aquanaut, the sole survivor of the patrol that was sent out against the evil power. Can you penetrate the deepest cavern and survive to return to base?

AQUAPLANE

by Quicksilva

Cassette. Joystick required. 1 player. Price: £7.95.

If you have ever thought about taking up water-skiing as a hobby, you

should, perhaps, be reassured that you'll never meet the kinds of obstacles in real life that you will meet in this fast, all-action game. Here you will encounter marine maniacs, G & Ts and Regattas. At the start they all seem deceptively easy to dodge as you ski across the wide blue ocean, but it won't take long before you realise that there seems to be an evil force that is out to get you, and each run will become harder as the game progresses. You must water-ski your way to success through the Rapacious Rocks and the Languid Logs. And watch out for the Great White Hungry which has an appetite for unwary people who go riding around on water-skis. He is likely to roll up out of the water and grab you just when you were beginning to think that the way ahead is plain sailing - or skiing! This rapid-moving arcade game has all the ingredients to make it highly addictive.

ASTRAL ZONE

by Channel 8 Software

Cassette. Joystick required. 1 or 2 players. Price: £6.95.

The Vengorian Empire has attacked Earth. All the armed forces of the world have been crushed by the Vengorian fighters and cruisers. So only you are the last hope for the survival of mankind. Your only weapons are two neutronium cannons which are mounted on the latest Terramobile. You also have a magnetic phase shift shield. But this is a tough game for only the best shots. Wave after wave of Vengorian fighters zoom in from the distant mountains in their attempt to rid the world of you and colonise planet Earth. The graphics are three-dimensional and scroll in all directions. And there are plenty of arcade-style sounds to help you through this battle. You finish a game when you have been hit five times by enemy photon bolts. But if you can hit enough fighters and cruisers to score 5000 points, the damage will be reduced by twenty per cent, allowing you one more life. Good luck, Commander, our survival depends on you.

ATTACK OF THE MUTANT CAMELS

by Llamasoft

Cassette. Joystick required. 1 or 2 players. Price: £7.50.

Evil alien forces have invaded Earth. Advance parties landed in the North African desert and abducted a number of camels from a nomadic tribe that lives there. Now those camels have been subjected to an incredible genetic engineering programme and the resultant mutants

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have been cloned into a terrifying army of destruction. The camels are approximately ninety feet high. They are armed with laser bolts and are protected by neutronium armour, the strongest substance in the universe. But your jet fighter is armed with Antimat cannon. You have a long-range radar scanner with which to detect the approach of the horrifying giants. Your defensive forcefield is designed to withstand the impact of up to four direct hits from laser bolts. But if you decide that discretion is the better part of valour, you have the ultimate escape route – trans-spatial hyper-warp drive. You may need this at some time during the thirty-one skill levels.

ATTACK ON WINDSCALE by Phoenix Software
Cassette. Joystick optional. 1 player. Price: £9.99.

Two games are in this package – one arcade, the other an adventure. But you can progress from the first to the second only after completing the arcade game and discovering the running code to the adventure program. Your mission is not an easy one and is based on our heavy reliance on atomic power in our present times for our energy needs. At Windscale, scientists are forever coming up with new ways to develop our domestic capabilities. However, our twenty-first century intergalactic enemies have been foiled by you and Captain Phoenix in the past – and future – and realise that their only chance of conquering us lies in their ability to defeat us in the past. Consequently, the aliens have set up a sonar vibrator beam somewhere in the surrounding countryside which is causing the atomic core at Windscale to go critical. You must defend it, then go in search of the sonar vibrator before a nuclear explosion rips the heart out of England.

AZTEC CHALLENGE by Audiogenic
Cassette. Disk. Joystick required. 1 player. Price: £8.95 (cass); £12.95 (disk).

You find yourself in Tenochtitlan, the capital of the ancient Aztec empire in the year 1500 A.D. Montezuma, the king of the Aztecs, presides over a powerful trade system with many roads stretching to different provinces. Although protected by large standing armies, these roads of commerce are constantly harassed by renegade tribes who attempt to disrupt traffic and communications by creating deadly

hazards and obstacles. To survive, the Aztec warriors have developed amazing abilities in running and leaping to avoid the traps of their enemies. As the Empire flourishes, these skills are considered to be godlike. But over the Aztec broods the shadow of one of the most barbarous religions the world has ever known. Each year their priests sacrifice many human victims to their gods. Once you are chosen to be sacrificed, you have only one chance of escape. You must complete an impossible test of endurance to prove your worth.

BITMANIA

by Virgin Games

Cassette. Joystick required. 1 player. Price: £6.95.

You are inside the data bus within the '64' and battling against the neuron flow. Your task is to reach the central core. But to defend itself the C.P.U. sends out its armies of Bits. These may vary in form, but you must beware! Each type is as deadly as the last. However, you can defend yourself by blasting away with a powerful laser cannon. Your mission is to destroy as many of the Bits as you can. But once you have shot one, it will mutate into a pod. These are obstructions that you will have to clear before you can proceed to the next level. But because the C.P.U. monitors precisely what is happening within the data bus, it sends out an additional Bit every eight and a half seconds to replace those that you have blasted away with your laser cannon. You can, however, escape to the next level, though you soon have cause to wonder whether this was as good an idea as it seemed at the time. The graphics, music and score facilities are good.

BONGO

by Anirog Software

*Cassette. Disk. Joystick required. 1 or 2 players.
Price: £7.95 (cass); £9.95 (disk).*

Bongo, the Super Mouse, one day heard the town crier announce "The King promises his daughter's hand in marriage to he who recovers the stolen diamonds". But what chance has a mouse, even a Super Mouse, to win the heart of a princess? But he sets out in search and finally arrives at the thieves' hide-out, a cave on the river bank. The hide-out contains ladders at various levels, with slides for the robbers to make a speedy getaway and trampolines to jump across the gaps. The cave is guarded by larger-than-life monsters with great cunning. The cave also

has transporters which carry the passengers from one side to the other. This is a hilarious game. You will enjoy Bongo's antics as he uses the trampolines to avoid capture by monsters and slides down the chutes with them in hot pursuit. Somehow the monsters seem to know precisely where he is going. There are three levels of difficulty, with six screens at each level.

BOOGABOO (THE FLEA)

by Quicksilva

Cassette. Joystick required. 1 player. Price: £7.95.

Down through the inky spaces between worlds we fell, the ether whistling past. Down, down into the blue, blue world below we fell, landing easily on a shelf of rock. Colourful alien vegetation pointed towards the stars whence we came. SPROING! An alien world lying a million light years from home, and what strange life forms will we find here? We sit and look out over the suns as they set in clouds of boiling vapours, the moons slowly gaining dominance in the night sky. SPROING! SPROING! The planet surface is cold now. We are going to retire for the night. Tomorrow we will explore. Strange, but we feel as though we are being watched. It's silly, really, what new planets can do to a person. And so the Boogaboo finds itself deep inside a cavern. The graphics in this original game are refreshingly different. You must move the Boogaboo to the exit at the top of the cavern, avoiding the Flying Dragon and Venus Fly Traps.

BOZO'S NIGHT OUT

by Taskset

Cassette. Disk. Joystick required. 1 player. Price: £6.90 (cass); £9.99 (disk).

All the player (Bozo) has to do in this highly amusing game is to get home after a night out with the lads. Although beer is never mentioned (only wobble-juice), the more he has to drink, the greater the in-built wobble to the joystick. While walking home, Bozo could be arrested if he staggers into a passing policeman, could get beaten about the head by an irate lady with an umbrella, or could fall down a man-hole. One of the scrolling screens shows a finely detailed street scene, while the other major scrolling screen is a park scene where Bozo risks being mugged by skin-heads and, much later, by dragons and goblins. A lot of thought and detail have gone into this colourful program. The player

can enter at any level, and drink up to sixty pints of wobble-juice. There is a three-dimensional implementation which allows Bozo to walk round enemies, trees, etc., and a full medley of drinking songs to accompany this delightful game.

BUG SQUAD

by Softek International

Cassette. Joystick required. 1 player. Price: £7.95.

It was only my third day as a 'Zappo' squirtomatic all-purpose garden pest controller when I had the tough luck to be given Mrs Bobkin's garden to look after. And what a garden! Well, how many times have you been attacked by a manic magnet? Or had a near-miss with a mutant lawnmower as it weaves its way around a garden laying poisonous grass? But I was being paid to destroy the bugs, and that I would do - if only they didn't keep dividing up into more and more numerous packs. And what is this? A deadly fly-past by a bottle of 'Essence of Spinach'? Well, if you care for gardening, and would like to score a mass of points in this crazy horticultural game, your best bet is to go for the bottle of Essence of Spinach because that will give you 1000 points. The manic magnet is worth between 300 and 900 points, while the leader bug is worth 100. The grass, however, is worth just one point. 'Tis a fertile game indeed!

BUMPING BUGGIES

by Bubble Bus Software

Cassette. Joystick required. 1 player. Price: £6.99.

The object of this game is to drive your car as far as possible through the seasons of the year, scoring points as you travel. You have five lives in which to travel along twenty different tracks through the four seasons. You must stay on the track and avoid plunging into the water. Your car is red, and you must steer it down a rapidly-changing track. When your car is moving at 100 mph or more you can then jump over other cars on the track by pressing the fire button. And if you're not travelling fast enough when you come to the water jump, you'll hit the wet stuff with a big splash and disappear from sight. You will score points when bumping other cars into obstacles, but if you manage to travel through a complete season without crashing any other cars, you will be awarded a special bonus. Happy motoring, then, through the thrills and spills of this highly addictive and skilful motor-racing game.

BURGER TIME

by Interceptor Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.00 (cass); £9.00 (disk).

Your object in this loony game is to guide Jumping Jeff, the fast-food chef, around the many different crazy kitchens. He is trying to make his favourite snack, a Llamaburger, but the ingredients aren't behaving in their most co-operative manner. Jumping Jeff must walk over the various burger parts – the bun tops and bottoms, the 100% pure llama meat, and the lettuce – to complete each of the four burgers in the trays. But he is being pursued by Mister Hot Dog and Miss Egg, who are out to get him and do unto him as he does unto llamas. But you can squash both of these characters between falling burgers to win extra points. And you can also release a cloud of pepper which is effective for a few seconds and renders the pursuing food harmless. You start each screen with three units of pepper, but get more by taking the milk shakes which appear from time to time. The burgers complete, you move to a new screen, of which there are five.

CAESAR THE CAT

by Mirrorsoft

Cassette. Joystick optional. 1 player. Price: £8.95.

Caesar is a cheeky young cat who keeps guard in a well-stocked larder. He is kept busy chasing a gang of hungry mice that run around the larder shelves, helping themselves to the family's food. The mice can jump between the shelves at amazing speed, and Caesar scurries after one only to see it leap over his shoulder and land on a large slice of cheese. He must be quick to catch them. You play against the clock to guide the cat to the mice, making him pounce and then carry each mouse out of the larder. You must not let him knock anything off the shelves to fall and smash on the floor. This colourful game, with cheerful, neatly-executed graphics, has catchy music and will challenge high-scoring arcade addicts as well as providing both novice and junior players with hours of immense fun. At the bottom of the screen are two bowls of fruit, the one showing the current score, and the other showing the high score.

CAVELON

by Ocean Software

Cassette. Joystick optional. 1 player. Price: £6.90.

This game starts with a dramatic screen title depicting a forbidding

castle stronghold. This is the forerunner to six different coloured mazes which unfold with some impressive pixel scrolling. Set in medieval days, you must ride your trusty charger up the six levels, enter the castle, defeat its evil keeper, and rescue Guinevere from behind the iron door. To gain entry to each maze level, you need to collect all the pieces of the door. Once this is achieved, you can continue on your mission. Progress is hindered by the hostile knights and archers who guard the castle. Skill with the fire button can exterminate them with a deadly arrow. Extra immunity is afforded by a secret weapon – the powerful Excalibur. Its magic power provides temporary respite from the enemy. Once Guinevere is rescued, your steed turns into Pegasus, the winged horse, enabling you to ride off into the sunset with Guinevere riding pillion.

CHINA MINER

by Interceptor Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.00 (cass); £9.00 (disk).

Somewhere in China lie the Jade Mines of the forgotten Pong Dynasty. After many years of searching, a miner called Wally has discovered them. He is now about to hunt for the treasure which he believes to be hidden somewhere in the labyrinth of tunnels. But the mines are inhabited by a few hundred creatures who have taken up residence in the abandoned workings, and naturally they don't take too kindly to Wally's intrusion. He must brave the perils of the mines while searching for the treasure and discover the keys that will give him access to the next, more difficult, level. But the path is not easy. Apart from chasms and collapsing floors, Wally must also learn how to cope with conveyor belts, moving floors and laser beams which the ancient Chinese used for mining when early Britons were still toying with flint axes. Thirty levels await Wally as he stands at the entrance, each one inhabited by strangely familiar creatures.

CHINESE JUGGLER

by Ocean Software

Cassette. Joystick optional. 1 player. Price: £6.90.

The aim of this game is to manipulate the juggler so that he spins eight plates on rods within a given time-limit. There are twelve different screens or acts. As the curtain comes down on each successive act, the

juggler jumps up and down with glee. But each successive screen becomes more and more difficult, with bonus points being awarded for spinning and juggling certain colours of plates. The game originated in Hungary, a country which does not have an arcade or video game industry to influence its game software design. It was written by Ivan Balzacs, a forty-year-old mathematician, and Emese Rovni, a twenty-eight-year-old artist. The music was produced by Ivan's brother Oscar, aged forty-eight. He is a professor of music in Budapest. So the moral of this game must surely be that you don't have to be a teenage whizz-kid to write a program which impresses by being a new concept in computer game software.

COSMIC SPLIT

by P.S.S.

Cassette. Joystick required. 1 player. Price: £7.95.

In this program you start with a screen full of toadstools – though they might be mushrooms – and a centipede which begins to slither its way down the screen towards you, weaving between the toadstools (or mushrooms). Your objective in the game is to destroy the centipedes before they can get to you in the same way as you would destroy attacking aliens, for the concept of this program is fairly basic and requires little strategic thinking. You start the game with three lives, and you control a laser cannon which is sited on the lower edge of the screen, and which you can move about from side to side. This game is all about running up as high a score as possible before you end up as calories for centipedes. Bonus points are awarded for the splatting of spiders, snakes, fleas, and fireballs. You'll also be confronted by mushroom-laying bugs in this classic, arcade-style shoot-'em-up game.

CRAZY KONG

by Interceptor Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.00 (cass); £9.00 (disk).

The massively-powerful King Kong has escaped from the frail cage in which he was being held captive and has taken refuge on the fifth floor of his steel fortress, where he is holding your lovely girlfriend hostage. To prove your undying love for her, you set out to rescue her and to rid the world of the murderous ape once and for all. But Kong's fortress is stocked with innumerable heavy barrels which he sends rumbling

towards you with deadly accuracy. You must leap over these if you are ever to see your lady love safe again. There are various screens for you to battle through, too, before Kong meets his end. However, before reaching the top of each screen, you must collect all the huge diamonds that lie around his fortress. Besides, what girl could refuse a chivalrous lad who not only destroys her tormentor, but who arrives carrying a sackful of fifty-carat diamonds? Surely they are a girl's best friend?

CYBERNOME

by L.B.D. Software

Cassette. Joystick required. 1 player. Price: £8.95.

Cybernome – the world's first biochemical computer – lies in a specially-constructed cavern below the moon's surface. At first it seems to live up to its promise. Designed to synthesise foodstuffs from sunlight, it performs well until the day that its consciousness of itself and its power begin to dawn. Harnessing the robot guardians of Cyberbase, the Cybods, to serve its own ends, Cybernome declares its independence from its human creators. When Cybernome's activity makes the Cyberbase area a danger to any spacecraft that approaches, a specially-trained strike force is sent to shut down the computer for good. Theirs is not an easy task. The Cybods can discharge lethal energy bolts and can home in on attacking craft and ram them. The computer is also protected by an energy shield. This surrounds the dome capping the shaft down which a laser bolt must be fired. Several direct hits are required to destroy it. Nine levels.

CYBOTRON

by Anirog Software

Cassette. Disk. Joystick required. 1 player. Price: £7.95 (cass); £9.95 (disk).

In the year 2001 the design was announced of the first robot with the limited ability to think. In subsequent years, robots with increasing intelligence and the ability to undertake human tasks were manufactured. Mankind became increasingly lazy and delegated all responsibilities, including those of design and manufacture, to the robots. Thus they relinquished any further control over them. Free of supervision, the robots began to avenge all the earlier humiliations heaped upon them. Over many years they continued to improve the robot intelligence and finally created the Brains and fighter robots

called Trons which were commanded by the Hulks. They equipped themselves with armaments that could wipe the human race off the planet. Luckily one human returned from an intergalactic journey and, finding his fellows over-powered, used his super-developed intelligence and fire power to rescue Earth from the grip of the robots.

DICKY'S DIAMONDS

by Romik Software

Cassette. Joystick optional. 1 player. Price: £6.99.

Dicky the Owl has had his hoard of diamonds stolen by Stephen the Spider. Stephen is keeping his haul hidden, but likes looking at the glint of diamonds, so he keeps one at the centre of his web. This is the only time that Dicky can retrieve a diamond, but first he must weaken the web. He does this by walking across every strand, turning them black. The last strand that he weakens must be a central one so that he reaches the centre just as Stephen is leaving it. If Dicky manages to do this, the web blows up and he picks up the diamond as it falls and flies away with it. Stephen will then bring another diamond from his hidden haul and will leave it in the middle of a new web, this time trying harder to protect it. If the last strand Dicky weakens isn't a central one, the web will still explode and Dicky, Stephen and the diamond will fall to the ground. In the eighth web, Stephen is able to summon help from his friend Cecil.

EAGLE EMPIRE

by Alligata Software

Cassette. Joystick required. 1 player. Price: £7.95.

This is an all-action arcade shoot-'em-up. Your mission is to blast your way through four tension-ridden levels of attack from the menacing phoenix and the battle-armed eagles before you can reach the heavily armoured and strongly defended Eagle Empire. Here you have to blast a path through its protective shield before you can destroy its evil force. If you complete your mission unscathed, you are rewarded with a further attempt. But it will prove to be even more difficult than the previous one. In the first phase of attack, swooping, swirling phoenixes home in on your position. In phase two, a further swarm of phoenixes appear, this time attacking with more menace. Then the magical blue war eagles hit the scene. At attack wave four, you confront the last line of defence for the deadly pink eagles before you reach the evil empire where you blast through to the core to destroy the Master Alien.

ESCAPE MCP

by Rabbit Software

Cassette. Joystick required. 1 player. Price: £5.99.

This program combines strategy with arcade skills. Your computer has gone berserk and you have been de-atomised. Dispersed into a mega-million different bits, you must escape through nine levels of logic to survive. Each segment of your being is hidden away in different parts of the computer and you cannot leave without putting them all back together again. The major problem facing you is that the MCP knows all your escape plans. It can predict every move you make as it has a direct probe into each one of your widely distributed brain cells. There are ten different screens, and parts of the maze are flashing to confuse you and a gigantic flying robot is trying to destroy you. Can you escape, or are you doomed to die of frustration and panic as the computer tests you to the very limit? Even more horrendous is the prospect that somebody may switch off the computer before you are out. Then nobody could put you back together!

EXTERMINATOR

by Bubble Bus Software

Cassette. Joystick optional. 1 or more players. Price: £6.99.

This is a highly-rated version of the popular 'Centipede' type of game in which a centipede (or whatever alien horrifying monster you care to imagine) slithers its way from the top of the screen towards you, dodging among the toadstools. Frantically you squirt laser-fire into its evil body – and into everything else that moves, or doesn't move – on the screen. This is a fast-action game in which your mission is to build up as high a score as possible, with wild sound-effects that will have the player's mind reeling as he tries time after time to beat the slithering centipede. But you have other adversaries to contend with – a swooping eagle and a deadly spider are also out to get you, adding to the frustration and the sheer addictive value of this program. A reviewer in the magazine *Personal Computing Today* termed this game as 'finger-pressing good', which just about sums it up. The graphics are both busy and colourful, too.

FALCON PATROL

by Virgin Games

Cassette. Joystick required. 1 player. Price: £6.95.

Flying a VTOL (vertical take-off and landing) jet fighter armed with

100 anti-aircraft missiles, your job is to defend fuel and armament installations against enemy aircraft. The enemy come hurtling in with their bombs and must be shot down. The more enemy planes that you destroy, the greater the number of reinforcements that will be sent to take their place. Most of the screen is taken up with an impressively-detailed landscape that shows buildings, roads, palm trees, transport and fuel depots. The score board at the bottom left of the screen shows current and high scores together with the number of lives remaining. The radar window at bottom centre shows your current position as a vertical band, with white dots to indicate the direction from which the next wave of enemy bombers will come. Fuel and missile information is shown at bottom right, and the graphics and music of this all-action game are quite excellent.

FLYING FEATHERS

by Bubble Bus Software

Cassette. Joystick optional. 1 player. Price: £6.99.

In this original game, you are the game warden in a boat out on your lake where eagles are taking an unwelcome interest in the fish that you are paid to protect. You are expected to reflect that most eagles are conserved species, especially Ospreys and other fish eagles, but that shouldn't be allowed to influence your enjoyment of this addictive game. It will keep you busy for hours. You are armed with a shotgun, and your point-of-aim is designated on the screen by a set of cross-hairs which you position precisely where you want your shot to go. This is all you have to do in skill levels one to four. However, at skill levels five to eight, life becomes a little more difficult. You fire your shot either with your joystick button or the computer's space bar, but must hold it down until the shot is over the target. When you release it, if your reflexes are fast enough, you should make a kill.

FORBIDDEN FOREST

by Audiogenic

Cassette. Disk. Joystick required. 1 player. Price: £8.95 (cass); £12.95 (disk).

At first glance it looks like a pleasant woodland glade on a peaceful, mild day. Until a giant spider suddenly appears. You don't know how it happened, or how you got here, but unfortunately you have wandered into the Forbidden Forest. You will find a bow in your hand and a

quiver full of arrows on your back, as well as four more full quivers on the ground beside you. You will need them. The Forest is a place of unrelenting terror and trial. It is ruled by the dreaded Demogorgon, the demonic king of monsters. He will send in his horde of grisly creatures against you. Should you defeat his armies of nasties, you'll meet the monster king face to face. And nobody has yet returned from the Forest alive. You do battle in five different areas of the Forest, which you can run to at any time. The moon crosses the sky as you go from afternoon to night, facing adventures that become increasingly harder, with many levels of difficulty.

FRANTIC FREDDIE

by Audiogenic

Cassette. Disk. Joystick required. 1 player. Price: £8.95 (cass); £12.95 (disk).

Freddie is a telephone engineer who has accidentally come across a secret magical 'phone network. Pots of gold are sitting on the wires, and Freddie is so greedy that he has to get them all. Unfortunately, the gold is guarded by the dreadful Greeblies. They may look cute, but they are ruthlessly efficient at disposing of anyone who comes to steal their gold. Your mission is to guide Freddie around the screen. When he meets a telegraph pole he must go up or down it – only the Greeblies can go through it. When he has grabbed all the pots of gold, the game advances to the next level. There are sixteen different levels of difficulty, wacky messages, cute bonus characters, ten full-length musical scores, and two different intermission cartoons. This arcade game is touted as one of the few with a sense of humour, and that seems a fair appraisal. The Greeblies, however, seem a little too aggressive to appreciate the lighter side.

FROGGER

by Interceptor Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.00 (cass); £9.00 (disk).

Spring is sprung, the birds are shouting their heads off, and frogs everywhere are hurrying to the nearest patch of water to indulge in the rites of spring. But not every frog is likely to make it to his or her chosen pond, lake, river, stream or puddle. There are obstacles to be negotiated before the joys of courtship can commence. And this is your

opportunity to learn precisely how risky a business it is for the frog who would a-wooing go. There are cars and articulated lorries belting along the main road, and no frog yet born has any defence against the crunch of a cross-ply tyre. Then your frog must leap from the river bank and hop across the backs of logs and turtles. Some of the turtles are treacherous and will dive as soon as they feel a frog hop aboard. The ultimate destination is a hole in the river bank from which to croak a love-song to attract a mate. One slip, and the frog drowns, though a crocodile may get him first.

GALAXY

by Anirog Software

Cassette. Disk. Joystick optional. 1 or 2 players.

Price: £7.95 (cass); £9.95 (disk).

Your star cruiser is under attack from a formation of fighters. But they only attack while their formation is complete, and this provides you with the opportunity to wipe them out. Once the attack has started, the formation is joined by the mother ship. This then forms a convoy to attack or capture you with its laser traction beam. If you are captured, the other fighter in your formation takes over the battle. If he manages to shoot down the mother ship, the captured fighter returns and joins the other fighter, forming a formidable combination with double-firing capacity. Some basic rules separate this game from run-of-the-mill, alien-zapping, shoot-'em-ups. The mother ship, for example, requires two shots to destroy it, and must not be attacked before it starts attacking, else you lose a fighter. It can be attacked only when attacking you. There are several levels of difficulty in this rapid-action, machine-code-written game.

GRIDRUNNER

by Llamasoft

Cassette. Joystick required. 1 player. Price: £8.50.

Shortly after beginning operation, the grid was found to be delivering less power than had been predicted. Investigation teams were sent out and they discovered that alien Droids had invaded the grid and were using its power to reproduce themselves. The intelligence division analysed the Droids' intentions and concluded that they were massing for an invasion of Earth. To combat this deadly menace from these powerful aliens, a special combat ship was designed. It was small and

incredibly manoeuvrable, and it drew its power from the grid. Having such huge energy resources, it was able to carry on it an awesomely powerful plasma cannon. You are the pilot of the Gridrunner, and it falls to you to protect us Earthlings from the dreadful Droids. You will be able to use your plasma cannon as often as you need because, with so much power at its disposal, it will never run out of bullets.

GRIDTRAP 64

by Sumlock Microwave

Cassette. Joystick optional. 1 or 2 players. Price: £8.95.

This program will appeal to all players of any age where the objective is to get the highest possible score. The player has to move Mr Livewire across a room to reach and defuse a time-bomb which is counting down to explode. The floor of the room consists of a grid of squares, which Mr Livewire has to step on and move in any of the four directions – left, right, up, or down. As he walks around the room to reach the bomb, the grid of squares that he has stepped off turn into traps which prevent him from walking over these areas again. Each timebomb has a countdown from 30, exploding at zero. But another one will appear if the first bomb reaches 15. Five bombs must be defused, after which Mr Livewire moves to another, more difficult room. Skull-and-crossbone squares are also deadly. So, too, are the big boots that are out to stomp him. And the whole game becomes tougher and tougher to infinity.

GUARDIAN

by Alligata Software

Cassette. Joystick optional. 1 player. Price: £7.95.

Here is a fast-moving space spectacular in the classic mould. You can test your skill and reflexes to breaking point in an endless battle to halt the progress of the landers in their mission to capture humanoids from your planet surface. You must stop them from returning to outer space where they will eventually mutate and take up a deadly pursuit of your space fighter. And in between all this, you must keep alert for flying pods, swarms, alien bombers and the deadly baiters. In fact, you will find yourself confronted by a cast of characters that has starred in many an outer-space shoot-'em-up. It must be quite embarrassing to be eaten by an overblown jellyfish, but your chances of avoiding this ultimate and terminal defeat are scant indeed. Your aim is to build up as high a

score as possible before the inevitable overcomes you. But take heart – you win an extra life and more smart bombs at 10000 points!

GYROPOD

by Taskset

Cassette. Disk. Joystick required. 1 player. Price: £6.90 (cass); £9.99 (disk).

In this game, the player is the villain of the piece, travelling to new worlds and destroying them in the Galaxy Ranger. Each planet is defended by a fleet of up to ninety-six ships. Your mission is to destroy all of the defenders. Your Gyropod ship then auto-blasts the planet, and you proceed to the next one. Limited stocks of ammunition force you to plunder the nearest planet in your command pod for fresh supplies. But if you have failed to weaken the opposition sufficiently, you will have a tough time picking up the ammo boxes. Assorted other complications such as oxygen deficiency and shields for both the Gyroship rim and the command pod inhibit a mindless shoot-'em-up approach. The program features a demonstration mode and eight other different game screens. There are easy, normal and hard settings, after which follow twelve levels of difficulty. The graphics are excellent, especially of the spacecraft's detail.

HARRIER ATTACK

by Durrell Software

Cassette. Joystick optional. 1 player. Price: £6.95.

This action-packed, super-fast game requires great skill. The harrier jet takes off from an aircraft-carrier and flies over seaborne defences to attack enemy installations on a nearby island. The harrier may fly faster, slower, higher or lower, and is armed with both bombs and cannon to defend itself and to make its own attack. If it flies too high, it will be detected by enemy jet-fighters, although it can counter-attack. So it generally hugs the mountainous terrain – which changes with each new game. But the island is heavily defended by anti-aircraft missiles and by tanks, which the harrier may again counter-attack or fly through. Tallies are kept of fuel, speed, ammunition, high and player scores. Finally the harrier makes its bombing run over the enemy base before flying past more hostile ships to its own carrier. When hit, the pilot escapes by parachute.

HEXPERT

by Anirog Software

Cassette. Disk. Joystick required. 1 player. Price: £7.95 (cass); £9.95 (disk).

Bert is a small, charming, furry creature who used to live on a far-away planet. He was captured by an evil witch called Zoganaar. She forced him to play on her games pyramid. This three-dimensional pyramid is constructed from hexagons. Bert has to change the top faces of all the hexagons to different colours by jumping from one face to another. Zoganaar throws rubber balls down the pyramid to crush Bert. Her pet snake, Coily, chases him up and down the pyramid. But he has two spinning discs on which he can jump to lure Coily to his death. When Bert has painted all the faces, the witch forces him to paint them a different colour, but makes it more difficult for him to do so. Your mission is to turn Bert into a Hexpert. After completing three screens, a man with spectacles appears. He is slightly bigger than the massive rubber balls, and is also interested in tormenting poor little Bert.

HIDEOUS BILL AND THE GI-GANTS

by Virgin Games

Cassette. Joystick required. 1 player. Price: £6.95.

This program is a gripping tale of heroism and romance. You help Hideous Bill to pit his wits against the Gi-Gants and rescue his true love, Greta. At the first level your task is to save Greta from becoming ant-food. To complete this phase you must crush all the eggs, but don't expect the ants to stand around while you do this. Gi-Gants' shells are covered with poisonous slime, and just one touch is fatal unless you have an antidote tablet. Your death, which is inevitable until you have mastered the strategy of this game, will be one of the most melodramatic of any computer game, accompanied by just the right sort of music. At the second level, you are without weapons, and you will require the magic baked beans for use on level three. Here you will be able to tunnel through walls, but the Gi-Gant's eggs on the point of hatching, and only after you have crushed them all will you be able to break down the walls of Greta's prison.

HORACE GOES SKIING

by Melbourne House Software

Cassette. Joystick optional. 1 player. Price: £5.95.

This game has a demonstration mode to take you through its various stages. Horace wishes to go skiing, but before he can get to the slopes he

must fetch his skis from a hut on the far side of a busy road. He starts with \$40 to spend, but if he is knocked down it will cost him \$10 in ambulance fees. After he has successfully crossed the road, you guide him to the door of the hut to fetch his skis. Ski hire costs Horace ten bucks, too. And he isn't even allowed inside the hut unless he can afford to pay. If he has spent all his money on ambulance fees, he can accumulate points and dollars by crossing and recrossing the road repeatedly. At every 1000 points boundary he receives a \$10 bonus. But he shouldn't hang about too long because the traffic becomes heavier. Once on the piste, Horace skis down the Hannekon run, avoiding trees and slaloming between the pairs of red and blue flags. But if he breaks a ski, it's back to the hut.

HOUSE OF USHER

by Anirog Software

Cassette. Disk. Joystick required. 1 player. Price: £7.95 (cass); £9.95 (disk).

Having travelled many wearying hours through a grim, forbidding landscape, you finally arrive at the legendary House of Usher, the ancestral home for generations of madmen, whose twisted minds have devised many fiendish challenges, guaranteed to torment and frustrate the unsuspecting visitor. Dare you enter? Iron nerve, total concentration and manual dexterity are vital if you ever hope to leave. On entering, you are in a large reception hall which gives access to a further nine rooms. Behind each closed door an action-packed arcade adventure awaits you. Each one demands a different strategy to overcome the various obstacles and challenges. But each room has a common factor – your task must be completed successfully if you wish to leave alive. After travelling through nine rooms you go through the treasure chamber to the final room which contains the secret of the House of Usher. But you still have to learn the code-word!

HOVER BOVVER

by Llamasoft

Cassette. Joystick required. 1 player. Price: £7.50.

It is summertime in England, and throughout the land the lawns are sprouting thick grass and men's thoughts turn to the chore of mowing. So it was with Gordon Bennett. But when he went to his garden shed, he found that his ancient cylinder mower had rusted into a heap of

junk. 'No problem', he thought, for borrowing the neighbour's mower is a traditional aspect of English suburban life. So Gordon popped next door to Jim's house and abstracted his mower. Soon he was at work on his lawn. Unfortunately, Jim has decided that he wants his Air-Mo back, reflecting how careless Gordon is with garden tools. And no sooner has Gordon begun his task than Jim sets out in hot pursuit, intent on retrieving his machine. Your task is to guide Gordon around his garden, trying not to upset his dog Rover, and irritate the gardener by mowing the flower beds. At the same time, you must help Gordon to escape from Jim's unwelcome attentions.

HUNCHBACK

by Ocean Software

Cassette. Joystick optional. 1 player. Price: £6.90.

Quasimodo the hunchback must rescue the beautiful lady Esmerelda who is imprisoned in the castle stronghold. But he has a long and arduous task ahead of him. For a start he must jump along the ramparts and avoid the balls of fire which come rolling towards him. Then he must swing by a rope over the fiery pit. If he mistimes his jump and fails to grab hold of the rope, he will be frazzled alive. He must also dodge the arrows of the defending knights and travel fast enough to avoid a confrontation with the knight who has been sent to chase him. There are fifteen action-filled screens in high-resolution graphics, each one becoming more difficult and more challenging than the previous one. You may end up wondering if you have always held the wrong opinion about hunchbacks – they need to be superhuman to rescue fair ladies in distress. Ah, but isn't Esmerelda worth all that trouble? She'll probably say 'What kept you so long?'

HUNGRY HORACE

by Melbourne House

Cassette. Joystick optional. 1 player. Price: £5.95.

Horace just cannot eat enough – of anything. You meet him in the park, which is more like a maze, and you join him while he tries to eat as many flowers as possible without getting nabbed by the park keepers. So you set off over bridges, through tunnels, and along paths in your efforts to avoid being evicted from the park. But at least you have to be caught four times before you can be ejected. If Horace can steal one of the park's alarm bells – and, no doubt, eat that too, all the park keepers

will panic and run out of the park. Maybe one will drop his lunch in his haste to escape. It consists of cherries and strawberries, and if Horace can munch through them he will get a big bonus. With each of his objectives achieved, Horace moves on to a different sector of the park, of which there are several. But the action gets hotter the more sectors in which Horace can get up to mischief, because the keepers become more determined to stop him.

ICE HUNTER

by Anirog Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.95 (cass); £9.95 (disk).

The hunter finds himself in a magical cavern with five floors. He can go from any of the three lower floors to another floor, but not from the fifth and fourth floors to the others. His mission is to bring the ice cubes from each of the floors to the fifth. There he will throw the cubes into the water, climb on them, and sail to rejoin the igloo he is building. He has to carry the ice from one floor to another through little holes that are protected by bridges. These are easy to break through, but if he accidentally walks on a hole where the bridge is broken, he falls through and loses a life. During his mission he is attacked by sea-lions, dragons, and birds. The sea-lions remain on floors four and five, the dragons and birds on the other levels. Sometimes a blue magic pill flashes on one of the floors. He can eat it to paralyse his enemies. Each new game requires him to take an extra cube to the igloo, and the enemies move faster.

JAMMIN'

by Tasket

Cassette. Disk. Joystick optional. 1 player. Price: £6.90 (cass); £9.99 (disk).

The hero of this game is Rankin' Rodney. The villains are Bum-Notes, Dischord, and Distortion. The player guides Rankin' Rodney through the colour-coded maze/ludo board/conveyors to retrieve the instruments in the band. Each instrument and route is colour-coded. Wandering Bum-Notes replace your instrument, and destroy the game's melody for a second, while roaming Dischords steal the instruments, and wreck the melody for even longer. And the deadly Distortion is lurking at the end of most conveyors. The screen is filled

with lively and vibrant colour. Twenty (*the* top twenty, of course) different mazes with highly interactive sound tracks greet the player. There is a demonstration mode, easy, normal and hard settings, with twelve levels of increasing difficulty thereafter. Naturally, while Rankin' Rodney is trying to hit the number one spot in the charts, he is accompanied by drums, bass and lead throughout the action.

JEEPERS CREEPERS

by Softek International

Cassette. Joystick required. 1 player. Price: £7.95.

Here at last is your chance to infest the cabbage patch as the fastest-moving spider around. But you must be on your look-out for the low-flying Doodle-Birds and for Fearless Freddy the Frog. Both of them adore spiders and will crunch you up with great gusto should you be unwise enough to let either of them get too close. The Slick Lizard is a fancy mover, and he is partial to spider, too. You, however, can gorge yourself on flies, be they large or small. As you waltz around the garden, you will do a neat job of turning all those cabbages to different colours. The trouble is that nearly every other inhabitant of the garden is determined to change them back again. The caterpillars are excellent at doing this, by the way, but they are harmless. After all, whoever heard of a caterpillar eating spiders? You start off with a fixed bonus and must infest as many cabbages as you can before this runs out. You then move on to the next patch.

JUMPIN' JACK

by Sumlock Microwave

Cassette. Joystick optional. 1 or 2 players. Price: £8.95.

This is a game of the 'Frogger' type, with the major difference that the graphics are three-dimensional, and very realistic they are, too. The player controls our hero, Jack the frog, in an attempt to get him to his riverside bay within a countdown of 60. His journey takes him across a busy dual carriageway with cars, buses and trucks whizzing up and down it. Assuming that Jack hasn't been splatted in this initial stage, his next obstacle is a fast-flowing river. He must negotiate this by hopping onto logs, the backs of turtles and at the same time avoid adversaries such as snakes, otters and crocodiles. But his ultimate objective is to rescue his lady frog, Jill, and carry her to the safety of his bay. She is stranded on a log and is obviously too feeble to continue on her own.

There are nine levels of difficulty, which are pre-selectable. However, the action becomes progressively hotter as skill increases.

JUNGLE TROUBLE

by Durrell Software

Cassette. 1 player. Price: £6.95.

This original and witty game is set in the depths of the African Jungle. First you must direct your cartoon fugitive away from a pile of axes, from which he has taken one, to cross a nearby river via stepping stones that protect him from a lurking crocodile. Then he must climb a ladder to the next level, where he must fell a number of trees in his path. As he does this, a marauding ape appears from the left of the screen and steals his axe. So it's back to the start for another axe and more problems with the crocodile. And the ape. Having hacked a path through the forest, he may climb another ladder to level three where he has to leap a chasm by grabbing a swinging rope. If he misses, or lets go, he will fall back through level two into the water with that awful croc. You may end up wondering if your fugitive will ever make it back to the city, but that is the nature of this frustrating, addictive game.

JUPITER LANDER

by Commodore

Cartridge. Joystick optional. 1 player. Price: £9.99.

After making a long journey through the deepest reaches of outer space, you need to get your spacecraft on to solid ground before your fuel runs out. The nearest planet is Jupiter, but the planet's surface is covered with dust, and if you were to land on this, your craft would sink into it as though into quicksand. So you must land on the only solid landing site that exists on the red planet. You must make as many exploratory landings as possible before your fuel runs out, but there are only three possible sites, and three exciting levels of difficulty. You can also control the thrust level of play. The softness of the landing site is displayed on the metres-per-second gauge on the right side of the screen. If you land below the yellow zone, you will crash. The softer the landing area, the more points you will get. You should try to land with the marker high in the yellow zone.

KAKTUS

by Supersoft

Cassette. Joystick optional. 1 player. Price: £9.20.

In the prickly wastes of the desert, the only plant that can survive is the giant cactus (*Cactus ginormus*). But now a massive swarm of wasps is threatening to topple the last surviving cacti one by one. Only you can save this valuable species by eliminating all the wasps and hornets before they can zoom in and take a bite out of the bottom of the plant. The hornets look like wasps, except that they have darker heads and must be hit twice before they can be destroyed or they will take two bites from the cactus. You are able to move about either above or below the ground, but beware of the mole which may come along and fill in your escape hole, trapping you above ground. If the mole succeeds in doing this, you risk being put out of action by wasp droppings, the evil buzzard and its devastating eggs. So take care when you fire at the invading hordes, else no Western landscape will ever look the same again!

KILLER WATT

by Alligata Software

Cassette. Joystick optional. 1 player. Price: £7.95.

Your mission is to explore the murky depths of the underground cavern. You must seek out and destroy the twelve brilliant light bulbs. But you should remain on constant alert for flying men, carnivorous flying fish and marauding mechanical birds. At the magical gateway, you have to blast your way through to the next deadly challenge. You are in control of a spaceship as you whizz through the maze of caverns – and there are several for you to explore. The maze is complex and fully tests your reactions and delicacy of touch. The game is of a high graphic standard, with the caves scrolling from side to side. To the theme of Toccata and Fugue, you shoot down mechanical ducks – which are original and visually appealing. You can choose from five levels of skill, and you can also select the number of protective shields on the spaceship. This game is designed to have you twitching with anticipation as you attempt to put in a huge score.

KONG

by Anirog Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.95 (cass); £9.95 (disk).

Kong has abducted the beautiful starlet Fay Wray and has trapped her in

his lair. This game has four screens. In the first, Kong rolls barrels at you as you climb the ladders from one floor to the next. But if you get hold of the mallet you can smash the barrels and the chasing fire balls for extra points. But you can hold the mallet for just fifteen seconds, and then you can't jump barrels or climb ladders. The next screen is the pie factory with a cooker in the middle. You have to jump over pies as you run along the conveyor belt, desperately avoiding being carried into the oven. At the third screen Kong throws down girders upon you to crush you while you attempt to take the lifts to his level. The fourth screen is Kong's lair. You have to run across each of the supports to knock them out. When they are all knocked out, the lair collapses and Fay Wray is years until the next time you feel like taking on Kong.

LANDER

by Channel 8 Software

Cassette. Joystick required. 1 player. Price: £6.95.

As a Trainee Space Commander, you have to pass your landing tests before you can be awarded your 'wings'. So it is imperative that you land your spaceship successfully on all the zones otherwise you may end up as the ship's cook. In this game there are four different scenes, with three levels of difficulty for each one. The graphics are simple but effective and the sound effects add to the pleasure of it. It is not always as easy as it appears to be, especially when you are asked by your landing-test examiner to take your spacecraft into a cavern and land on its rocky floor. No small amount of skill is required by you – or any other Trainee Space Commander, for that matter – to complete the twelve levels of this game. But if you do crash your spacecraft, how could you expect anybody to ask you to fly a mission to Mars, knowing that although you might be competent to get there, you might pile your space-ship into a rock on arrival.

LASER ZONE

by Llamasoft

Cassette. Joystick optional. 1 or 2 players. Price: £7.50.

It is a dark time for the Terran Federation. The evil empire of Irata and the devilish warfiends of Zzyrax have combined to attack Terran outposts throughout known space. Even now, vile Iratian Skull-Ships and the extremely nasty Bug-Ships of Zzyrax are targeting on your outpost. To counter this horrifying onslaught, the Terrans have

constructed the Laser Zones. Upon these are sited two computer-controlled plasma cannons. They deal instant death to the swarming alien hordes, trapping them amidst a lethal cross-fire. But care must be taken, because each cannon is quite capable of knocking out the other. And don't think that you can relax after fighting off the first wave of attack because many others are inevitable. And other ghastly creatures will be sent into the attack – Rhomikrons, Rabbitrons, Electrocuted Spiders, Maniac Mice and Viraloids will soon be making you, the defenders, ask for a transfer!

LAZARIAN

by Commodore

Cartridge. Joystick required. 1 player. Price: £9.99.

You are the pilot of a space fighter stationed in a remote sector of the galaxy. Your mission is to rescue stranded starships and to defend your sector against all types of hazards. You start with three ships, but if one is destroyed, you get a new, refuelled ship. The game is in three phases. In the first, a sister ship is trapped inside an interlocking cluster of meteors which you must blast apart. Phase two is similar, but the meteors are harder to blast apart. In phase three you get to meet the deadly one-eyed space leviathan, Lazarian. You resolve to destroy it, but this you can do only by shooting its eye. But this is protected by heavy folds of laser-resistant fibre, and you must cut through these folds before you can get to the eye. Even then, the eye must be hit a minimum of four times before you can claim victory. And all the while, missiles are targeted onto your ship. Your mission is tough, indeed!

LOCO

by Alligata Software

Cassette. Joystick optional. 1 player. Price: £7.95.

Here you find yourself on the train journey of a lifetime. You risk death every inch of the way and face a fatal collision around every bend. Skilfully you manoeuvre your classic steam locomotive along the six-track railway, dodging the constant aerial bombardment from airships and planes. You must time the release of your lethal smoke-screen to bring them to grief. You must stay alert to switch tracks quickly or arm your steam blasters and avoid a disastrous confrontation with the explosive-laden handcarts. And all the time you have to keep your eye on your fuel gauge because once you stop, you're a sitting duck. To

make life a little easier, you have been provided with an in-built radar scanner that gives a momentary warning of the dastardly obstacles to come. But don't become over-confident. Even with the scanner you will need exceptional talents at each of the five levels to match this test of skill.

MANIC MINER by Bug-Byte Software/Software Projects
Cassette. Joystick optional. 1 player. Price: £7.95.

After many centuries of peace and prosperity, the civilisation had been torn asunder by a sudden, violent war. The people had entered a long, dark age, abandoning their industry and their machines. Nobody, however, thought to tell the mine robots to stop working. Throughout countless aeons, the automaton workforce steadily accumulated a huge stockpile of precious metals and minerals. Miner Willy realises that here is his chance to make his fortune by finding the underground store amongst the caverns and tunnels of the mine. Can you guide Willy through to the store, and out again with the treasure? To move him along his course, you will be required to deal with a horde of nasties. These include poisonous pansies, stifling spiders, slippery slime, and, worst of all, the manic mining robots. This game is a classic, with many different screens and levels of difficulty to keep you glued to your machine for hours.

MATRIX by Llamasoft
Cassette. Joystick required. 1 player. Price: £8.50.

It is ten years after the infamous Grid War (see 'Gridrunner'), and you, one of the few survivors of the Gridrunner Squadrons, are relaxing at home, thankful that you managed to save the World from a terrible fate. Suddenly you are summoned to Earth Defence Headquarters to be told that once again the Droid forces are amassing and are threatening to invade. A new squadron, codenamed 'Matrix' is being formed from the best combat space pilots available. Your new fighters can operate both on and off the power grid, with improved firepower and manoeuvrability. They supercede the old Gridrunners. However, the Droids are better armed, too. Invisible forcefields which reflect your own fire back at you have been developed by them, and this presents you with a new and deadly threat. They have bombs and new, bizarre

psychological weapons – camels of outer space. There are twenty skill levels for you to contend with.

MEGAWARZ by Paramount Software
Cassette. Joystick optional. 1 player. Price: £7.50.

'Megawarz' is a magical planetary trip – fast, smooth action with realistic and colourful locations which captivate the imagination. The player is given the illusion of actually being in space. Your mission is to travel from Pluto to Earth, visiting all the intermediate planets. You will touch down on Pluto, Neptune, Uranus, Saturn, Jupiter, Mars, and ultimately Earth. The hostile inhabitants of these planets will aim to destroy you for intruding into their territory. However, your Cyclonic Megawarz Uniship Mk1 is equipped with the full extent of Man's technological advancement beyond the year 2000. Your ship and your skill can ensure your place amidst the ranks of the Megamortals. But if you fail, you will become one of the many who float aimlessly and interminably in space, awaiting rescue from any ship that may happen to chance upon you. But if you can rescue astronauts, you will be awarded bonus points.

METRO BLITZ by P.S.S.
Cassette. Joystick required. 1 player. Price: £7.95.

The object of this game is to defend your city against an onslaught of suicidal aliens. Six different types of alien bombard you without mercy, and you must shoot down as many of them as possible. But you must not collide either with them or the borders of the screen. There are twenty-four attack waves which become progressively more difficult. At wave thirteen you enter the advanced level, while at level nineteen you're into the championship challenge league, and at wave twenty-two you must endure the termination attack! You start with ten ships and at the end of each wave you are awarded bonus points and an extra ship. You receive a three-ship bonus when you enter the advanced wave. Occasionally a 'Seeker' will appear and home in on you rather than the city. The game ends either when you run out of ships or the aliens succeed in destroying the game's title which is displayed beneath the city.

MICROMOUSE GOES DEBUGGING by M.C. Lothlorien
Cassette. Joystick optional. 1 player. Price: £6.95.

Each screen contains a basic program from which software bugs are stealing letters. The player controls Micromouse. It is his task to replace all the letters in their correct positions. To assist Micromouse in his task there is an aerosol of Datakil which gets rid of the bugs. Points are scored each time a bug is deactivated. You also win points for replacing the letters and for executing the little program. This must be done before progressing to the next screen. There are six different screens, and each of these can be played several times with different levels of difficulty. If a specific number of letters is found to have been stolen, there will be a simulated systems crash, and you will have to start out all over again. You cannot carry letters while you have the aerosol can in your hand, and if one of the bugs tramples you, your aerosol returns to the bottom of the screen. The game includes high-speed machine-code graphics and action.

MOBY DICK by P.S.S.
Cassette. Joystick required. 1 player. Price: £7.95.

The object of this game is to blow up submarines with your depth-charges, to destroy the helicopter with your missiles, and to catch the falling pilot (a top-ranking international spy/terrorist who will be interrogated until he leaks more secrets than you would ever believe possible). But you can catch the pilot only by rushing across the surface of the sea to intercept his fall. If he lands in the ocean, both he and his secrets will be lost forever. But while you are anxious to destroy the submarines, you must take care not to allow any of your depth-charges to hit the very rare whale which also inhabits these waters. If you do hit it, a green ship, loaded to the gunwales with conservationists, will come tracking over the sea and will ram you. Whales, after all, shouldn't be the casualties of international skulduggery. The green ship is there to ensure that the species is left in peace.

MOON BUGGY by Anirog Software
Cassette. Disk. Joystick required. 1 player. Price: £7.95 (cass); £9.95 (disk).

You are driving in the very latest A.T.M.B. (All Terrain Moon Buggy),

on a routine patrol when you are heavily attacked by fighters operating from a star-cruiser. You must manoeuvre your A.T.M.B. over the constantly-changing landscape of lunar rocks, and craters to destroy the alien attackers. There is fast and furious arcade action when you come across the aliens. Your A.T.M.B. is capable of rapid acceleration or deceleration and is highly manoeuvrable. It can jump over the moon rocks and across the craters. And it is fitted with high-speed laser missiles. There are three waves of attack by the aliens. First there's a low-level aerial attack in which rapid-flying fighters drop photon bombs which will destroy your craft. Then the attackers pursue you in tanks fitted with laser bolts. You will die if you don't jump over them. And at the third level, the alien task force lays mines which must be jumped over or they'll blow you to shreds.

MOTOR MANIA

by Audiogenic

Cassette. Joystick required. 1 player. Price: £8.95.

You are about to embark on a thrilling cross-country car rally. Your speed machine is tanked up and ready to go, but the journey ahead is not going to be easy. Your route takes in motorways, side-roads and dirt tracks. All of these are full of dangers. Other cars, driven unpredictably by drivers who are obviously drunk, will try to obstruct you and make you crash. Various road hazards will appear in your way and you will have to swerve to avoid them. If you don't, you will surely crash. If you do crash, or run your car off the road, you will be given another car by your friendly neighbourhood gas station. But you will be allowed only five cars with which to drive as many miles as possible. Fortunately you won't lose your no-claims bonus, because if you end the game in a high-speed pile-up, you'll soon be able to get hold of another five cars. Ahead of you lies a nightmare of hazards awaiting to challenge you.

MR WIMPY

by Ocean Software

Cassette. Joystick optional. 1 player. Price: £6.90.

Mr Wimpy's task is to make his delicious burgers, and your mission is to guide him around the screen so that he can achieve this. First he must assemble the ingredients, avoiding the moving manholes which will swallow him up, and the dastardly Waldo the Burger-Thief. With all

the ingredients assembled – and don't delude yourself that this will be an easy task – Mr Wimpy tries to make his burgers, avoiding a kitchenful of rebels who know all the tricks of how to hinder him. However, if he becomes trapped by the rebels he can pepper them into oblivion. But he can do this only three times, unless he can pick up bonus gems, the ice cream or the cup of coffee. These will provide him with more chances to shoot, and get him closer to the making of his favourite snack. The program offers rare insight into why customers sometimes have to wait a small while after ordering a burger! You'll soon get the taste for this delicious game.

MUGSY by Melbourne House Software
Cassette. 1 player. Price: £6.95.

This gangster game is termed 'an interactive video comic strip', and you are Mugsy, the Godfather to a gang of hoodlums, and your aim is to be the toughest gang leader in the city. Your tasks involve managing the gang, making lots of money, organising the protection rackets, buying weapons and ammunition – but beware! Your reign as the Big Boss is rather delicate. If you are too successful a contract on your life will be put out by other gangs who want to get rid of you. If so, a vicious shoot-out may occur, and at this stage a full arcade game is incorporated in the program. You will have to make smart decisions about such matters as how many people Mugsy is standing over – too many and he'll lose control, too few and he may not get enough to pay the mob. And how much dough should he spend on guns? Too much, and he's broke, too little and he loses control. How many 'clients' must be leaned on? And how much is to be spent on bribes?

NEOCLYPS by P.S.S.
Cassette. Joystick required. 1 player. Price: £7.95.

You are the Good Guy, the freedom fighter and renowned star pilot. The Bad Guys, an alien race from a distant solar system, have invaded Neoclyps, one of your colonial planets. Being the good guy that you are, you set off to liberate the population of Neoclyps from the oppression of the Bad Guys. But they can detect your approach through their radar towers. There is generally one Bad Guy per tower, and it is in your best interests to destroy both towers and Bad Guys.

You start off with twelve ships and lose one each time you collide with a Bad Guy, a tower or the planet itself. Once you have destroyed a Bad Guy, you receive a shield that enables you to pass through the planet for about four seconds. This time is reduced at higher levels. But by the time you have cleared the planet, the intruders have built even more towers, making your mission even tougher, especially from wave five onwards when they start firing rockets at you.

O'RILEY'S MINE

by U.S. Gold Ltd

Cassette. Joystick optional. 1 player. Price: £14.95.

As O'Riley the fearless miner, you must travel swiftly through your mine to collect all the buried treasures and return safely home again to the top of the mine shaft. You must avoid being drowned by the on-rushing water, and avoid being eaten by the aquatic monsters. You may set dynamite charges behind you to block the monsters' pathway, but remember that the debris can be washed away by the water as it floods through your shafts. If you can time the explosions so that a monster is completely destroyed, you will score extra points. At lower levels of difficulty, from one to three monsters will appear and you will be allowed from five to nine sticks of dynamite with which to obstruct or destroy them. At higher levels, three monsters will always appear, but you will have between two and five sticks of dynamite with which to wipe them out. And you will have to watch out for the moon. When it rises, the monsters move faster.

OUTBACK

by Paramount Software

Cassette. Joystick optional. 1 player. Price: £7.50.

Trouble is about to drop in at Hoppy Valley in the form of rather cunning Swagmen whose aim is to capture baby kangaroos. Boss Roo (that's you) has erected a purpose-built pulley system with a platform from which to defend the Outback against the Swagmen. On this platform is mounted a super-strong bow which fires arrows at the Swagmen as they descend into Hoppy Valley. They descend from the trees on their early-morning attack. They jump from a helicopter during their mid-day attack, and they appear out of the hillside for their night-time onslaught. For each Swagman landing, you will lose one baby kangaroo. To prevent this, you must explode the balloons or

parachutes with arrows fired from the platform. If you hit a Swagman, he will throw a boomerang back at you. If it, or any other missiles, should hit you then you will lose a life. Swagmen may roll rocks onto you too. The next screen comes after you have defeated 32 Swagmen.

PAKACUDA

by Rabbit Software

Cassette. Joystick required. 1 player. Price: £5.99.

No doubt you have read all the travel brochures and have found how attractive the clear, blue Caribbean Sea can look. You've probably wished that you could be there and laze in the sun in between dips into that lovely warm water. Well, here is your opportunity! But you won't find it nearly as inviting as you thought it would be after a very short while. You have been granted your wish, on one very important condition. You can go there only as a barracuda, the predatory fish that is legendary for its ferocious mouthful of teeth. You must face your dream amongst all the other ferocious sea creatures who also enjoy a warm, peaceful and well-fed existence. You must survive by feeding up on the shoals of plump and delicious fish. Sharpen your appetite when you feel like munching an octopus by eating the occasional electric eel. However, the appetite of the octopus is as keen as your own!

PANIC

by Interceptor Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.00 (cass); £9.00 (disk).

You will find yourself in a four-storey building with ladders connecting each floor to the other. But evil monsters hear your arrival on the ground floor and, because they love to scrunch up people like you, they set off to hunt you down. The only way to avoid ending up on the monster's menu is to plant a bomb which blasts a hole straight through the floor into which the wicked ones fall to their doom. But your bombs have a very short fuse. You must run for your life or face death by flying shrapnel. On the first wave of attack, the monsters die after falling through just one floor. On the second wave you must blast craters through two floors, one underneath the other. And so on to the fourth wave which is something else again. After that, your ability to work out a foolproof game strategy means just one of two things – life or after-life. This is a fairly simple arcade game, but one which provides a lot of fun – and frustration.

PANIC PLANET

by Alligata Software

Cassette. Joystick optional. 1 player. Price: £7.95.

Do you have the ingenuity and stamina to fight off an invading horde of alien monsters? Why! Of course you do! But armed only with a shovel? What do you do? How can you use it? In this relatively straightforward arcade game you frantically dig pits for the monsters and bury them in the earth. Thus begins your challenge with death. You must be fast to react and quick with the digging. But your state of near-collapse will pay off when you succeed in matching your foe. However, you have won only the battle, not the war. A more powerful assembly of monsters appears and these you have to dig through two layers of earth. And you must make sure that you are careful for if a monster climbs out of his grave, he'll be after you with the renewed strength of one of his more deadly friends. Can you win through to conquer the most awesome of them all? It is unlikely, for all the while your supply of oxygen is dwindling as you dig.

PEGASUS

by Audiogenic

Disk. Joystick required. 1 or 2 players. Price: £12.95.

'Pegasus' takes the player back to the time when the battle between good and evil was fought by heroes on winged steeds. The Pegasus appears from the ruins at the bottom of the screen while the Black Riders phase in near the top. As champion of the forces of good, you must down all the Black Riders by swooping on them from above. The Rider will then topple from his mount onto the ground, and you must finish him off by riding over him at the bottom of the screen. From level two onwards, white stallions walk along the ground to pick up any fallen riders that have not been killed. If they pick up any, they will become Black Riders that can terrorise you once more. If a Black Rider gets you from above, you will lose a mount. Other creatures appear at certain levels – Gadflies appear, and even though they have a brief life, you should avoid them at all costs. The Chimera – a walking purple dragon, and Fazzdir, a buzzard, add interest to the scenes.

PETCH

by Anirog Software

Cassette. Disk. Joystick optional. 1 or 2 players. Price: £7.95 (cass); £9.95 (disk).

Petch the penguin has amassed a fortune in diamonds which he stores

for safe-keeping in a maze of ice-blocks, the remains of an igloo built by an old Eskimo hunter. Petch has hidden his diamonds amongst these huge ice-cubes. Unfortunately, spring is coming, the ice-cubes are melting, and revealing eggs that are about to hatch into two different Arctic monsters, the Snowbow and the Snowbox. The latter is the more dangerous. He has a voracious appetite and can eat through the icy walls of the maze. Both types are carriers of the disease which is invariably fatal to penguins – the common cold. So Petch must avoid all contact with either of them unless their germs can be deactivated. Petch can destroy the Snow Monsters by crushing them between two blocks of ice or between an ice block and the enclosure fence. He can stun them and their germs with electric current, destroy the eggs before they hatch, and rescue his diamonds.

POTTIT

by Romik Software

Cassette. Joystick required. 2 players. Price: £6.99.

This program shows a snooker table with three balls on it. One is a black cue, another is a white cue, and the other is a red. The players control the black and white balls to score points by potting the red ball. If your ball hits the opponent's ball immediately after potting the red, you score bonus points. You win an extra point if your ball is the first to touch a red after colliding with your opponent. You get another point if your opponent's cue ball goes into a pocket. When a ball is potted, it will be respotted automatically, even appearing on another spot if its own spot is covered. Scores are shown along the bottom of the screen. Coloured indicators appear when a potential score has been set up. A red indicator after the cue balls have collided shows that the first to hit the red will score. Bounce between your opponent and the red for bonus points. And if he is about to pot a red, charge in and knock it away!

PURPLE TURTLES

by Quicksilva

Cassette. Joystick required. 1 player. Price: £7.95.

Turtle-bobbing is a sport which may only be carried out with the very rare Purple Turtle (*Purpilius turtilorum*). These fabled Purple Turtles rise and fall through the water in their river as their whim – and their need for oxygen – takes them, because they use their whims

to inflate their air-sacs. Due to their passive nature and unusual buoyancy they may be used as stepping stones by you when you feel like hopping from one side of the river to the other. This is a fully-animated arcade game with Lovable Turtles, Cuddly Graphics, and more cuteness than you'll find anywhere else. It is a game for the young at heart, for those who don't mind the occasional ducking from a renegade turtle, and for people who have grown tired of bashing aliens. You'll find fluffy white clouds, falling bananas, an owl who is a real hoot, and a whole lot of fun while bobbing from turtle to turtle beside this river. In short, it's a simple, fun family game.

QUAK ATTAK

by Softek International

Cassette. Joystick required. 1 player. Price: £7.95.

Oh gallant knight! Having battled valiantly all morning with a particularly stubborn lid on a marmalade jar, are you now ready to face your king's foes? It would help if you are, because hark!, the faint 'quack quack' can be heard as they approach from the west. This leaves you barely enough time to save half a dozen damsels, fight a crusade or two, kill off those few lingering dragons, and polish off that marmalade jar lid once and for all. Armed with your laser-lance, and astride your Osturky, you will be your king's last chance. Do not fail us, your king and queen are relying on you. And, anyway, who else could we get to take those lids off our marmalade. You first unsaddle your foe, for which you score fifty points. You then shoot him down with your laser-lance while he is running along the ground to score twenty points. If you let your foe escape, you forfeit fifty points. But watch out for the occasional wandering dragon!

QUEST FOR THE GARDEN OF EDEN by Phoenix Software

Cassette. Joystick required. 1 player. Price: £9.99.

There are two games in this package, one arcade, the other an adventure. But you can progress from the first to the second only by completing the arcade and discovering the running code to the adventure program. Man's downfall, we are told, was caused by Adam when he defied God and accepted an apple from Eve. If only there had been someone present to grab the apple away from Adam! You must

travel back through time from the present day until you arrive at the Garden of Eden. Once there, you will have to succeed in the face (or fangs) of opposition from Eve and the serpent. Unfortunately, the road back is fraught with difficulty and danger. You will have to find a series of time holes and then go through them. You must take care to avoid the obstacles of the ages. Jump over Robert Bruce's spider. Beware of Cleopatra's asp. Watch out for Dr Livingstone's gorilla. But even if you succeed you fail because Adam *did* take the apple!

RADAR RAT RACE

by Commodore

Cartridge. Joystick optional. Price: £9.99.

You are a mouse, and like all nice mice you have a passion for cheese which is matched only by your fear of cats, especially large black ones. There are several in this game and, should you bump into one, you will vanish from the screen with a squeak. Your mission is to race around an ever-changing maze which contains ten cheeses. Some are more delicious than others. The first cheese tastes like 100 points, the second like 200 points, and so on. But one of them is twice as tasty as all the others and doubles the score of all cheeses that you eat thereafter. But you are not up against such simple opposition as cats. You are also being pursued by cheese-crazed rats. However, if they come too close you can lay a false scent to confuse them. Fortunately you have a radar facility to help you detect what is around you as you scuttle through the maze, but you'll have to keep your whiskers tuned to rats and cats!

REVELATION

by Softek International

Cassette. Joystick required. 1 player. Price: £7.95.

Lost in the caverns of Hell, you commence the suicidal quest for the Monster of the Apocalypse. You set forth astride your sacred eagle armed only with a magical staff to do battle against the Monster's hordes. You will face no fewer than thirty-one monsters as you travel through over forty caverns to reach the Monster of the Apocalypse before he is fully crowned. In each cavern your task is to destroy all the castles and to reveal the pentangle that lies hidden in each. While you are destroying the castles in a cavern you will also have to fend off the various monsters with your continuously-blasting staff. But look out, because until all the castles in a cavern are destroyed, you cannot kill all

of the monsters there, and so reach the next cavern. Just as the last castle in a cavern is destroyed there will be a brief blue flash to indicate the fact as the power is fully unleashed into that level.

REVENGE OF THE MUTANT CAMELS by Llamasoft
Cassette. Joystick required. Price: £7.50.

This program is yet another gem from Jeff Minter, the programmer who adds a new dimension of fun to the word 'zany'. It is a sequel to the 'Attack of the Mutant Camels'. Here you find yourself controlling a ninety-foot-high, neutronium-shielded, laser-spitting death camel which you use to lead a rebellion against your evil Zzyaxian overlords. The game features beautiful scrolling graphics and no fewer than forty-two different attack waves from a host of strange creatures varying between bats and wacky whackers. The backgrounds are no less implausible, either. The challenge of play will last for months. This is a highly addictive game, and you will spend a lot of time trying to see what is on the next wave. The camels are determined to strike a blow for earth and all earthly forms of life against the vilest, weirdest forces that this galaxy has ever seen. You've never met attacking aliens like these before!

ROAD TOAD by Audiogenic
Cassette. Joystick required. 1 player. Price: £5.95.

It is the mating season for toads, the time when they must return to their ponds and rivers to breed. Their instincts are so strong that they rush blindly across roads and rivers, heedless of the dangers that will surely send them to the Great Pond in the Sky should they be daft enough to take on an articulated truck single-flipped. Many of them will never make it, ending up crushed by cars on the highway, or drowned in rivers that they are too exhausted to swim. However, our heroes have one advantage. You, the greatest conservationist of toads of all time, are on their side. You will guide your chosen toad across the busy highway, then assist him to leap from leaf to log to turtle across the river, finally delivering him safely into one of the four holes in the river bank. Later you will find that some of the turtles are not so friendly and have teamed up with snakes and crocodiles to hamper your life-saving mission.

SABOTEUR

by Cable Software

Cassette. Joystick required. 1 player. Price: £7.50.

Your mission is to destroy the secret weapon which has been mounted inside a tank which is heavily guarded by deterrents that include droids, electrified walls, moving electrified fences, and the ultimate biological weapon – white clouds of deadly gas. On screen one you must destroy two gas clouds by leading them into mines which appear now and then at the centre of the screen. Once these are destroyed, you can steal a jeep and drive off to the next area. Here are more gas weapons, and electrified walls and gates which move. These must be carefully negotiated before obtaining fuel and boarding a helicopter with which to arrive at the next guarded area. An enemy 'copter is intent on ramming you and you're confronted by additional enemy weaponry. After this you will locate the secret weapon hidden inside the tank, overcome more minor problems, defeat the droids, destroy the weapon, receive a hero's welcome – and discover you have to start again!

SAVAGE POND

by Starcade Software

Cassette. Joystick required. 1 player. Price: £8.95.

This is a complex, highly original, carefully designed game which is destined to become a classic. You start out as a tadpole in a pond eating amoebae but avoiding hydra on the bottom and, later, jellyfish up at the surface. You must snap up any worms that fall into the water, and the dragonfly's eggs. If these hatch, they'll become nymphs that will eat you. More hazards appear, one of these being radioactive waste that man dumps into your pond, producing poisonous patches, until you are confronted by a beetle larva which, if ingested, allows you to become a frog sitting on a lily-pad and zapping the passing dragonflies. Ultimately a female frog will hop onto the screen and you embrace her with a cheeky wink. The resultant egg hatches into yet another little tadpole to recommence the cycle. At later levels a flight of vicious bees appears. But this is just the beginning. It's a colourful, pulsating game with a very strong narrative.

SCUBA DIVE

by Durrell Software

Cassette. 1 player. Price: £6.95.

You are in control of a diver who must swim down through jellyfish,

sharks, barracudas, and a host of other under-sea nasties to locate the entrance to a submarine cave. He must then follow its twisting and branching passages, which change with every new game, to locate the magical giant oysters with their fabulous treasure of enormous pearls. However, many of the passages lead to dead ends, while some are filled with horrible under-sea monsters. Even the giant oysters are liable to snap shut and catch the diver just as he is about to reach out his hand. Each dive has to be timed carefully so that there is enough oxygen left for the return journey. This is further frustrated by the diver's boat shifting its anchor and threatening to decapitate him with its propeller. The game features three divers, player and high scores, hall of fame and full sounds effects. It is an epic arcade adventure.

SEA WOLF

by Commodore

Cassette. Joystick required. 1 player. Price: £9.99.

This special version of the famous Midway arcade game puts you in command of a submarine. Your orders are to sink and destroy all enemy ships and to prevent them from resupplying the armed forces which are threatening your home base. Your primary targets are the fast-moving P.T. boats. Sink one of these and you will not only earn yourself 1000 points, but a commendation from the Admiral. Cruisers are less worthy game, but still worth hitting, even only for the pleasure of knowing that they are less of a threat. They score 500 points. Freighters, which are the ones loaded with all the essential resupply war materials, are worth just 200 points. Your submarine is armed with four torpedoes which will reload after you fire. You can also play against the clock, to add spice to your game strategy. But remember – each ship that gets past you is carrying war materials to the enemy forces.

SHADOWFAX

by Postern Software

Cassette. Joystick optional. 1 player. Price: £6.95.

You are Gandalf, the White Wizard, riding against the dread riders of Sauron, the Dark Lord of Mordor. Your steed is Shadowfax, the swiftest horse ever to grace the meadows of Middle Earth. During your ride you must dodge the enemy riders for their touch means instantaneous death. At the same time you must destroy as many of them as you can with your thunderbolts. The big difference about this

game, in which the main feature is the blasting of tough and ungentlemanly opponents, is that you have to release the fire command button just before your fire-bolt hits its target, otherwise it will not explode and have the desired effect of destroying your enemy and adding points to your tally. The score for the current game is shown at the top left of the screen, while that for the highest score is shown at the top right. However, it has to be admitted that this program is not the most demanding of the more advanced arcade games player.

SHATABLAST

by L.B.D. Software

Cassette. Joystick required. 1 player. Price: £8.95.

You are looking from the turret of a defence ship which is guarding the only naturally-occurring deposits of Zarontium, a rare element found only on the moon Titan. Readily convertible into a fuel for starships or into an explosive with planet-splitting force, Zarontium is much sought after by pirates, hijackers, and militarist adventurers throughout the Galaxy. As a result, supplies are regulated by the earth's government and the deposits safeguarded by the defence ship. The ship is supported by a robot surveillance satellite which continually scans the surface of Titan. However, an alien battle star has entered the Solar system and is poised to challenge the rights of ownership to Titan's mineral wealth. The aliens open their challenge with a long-range missile strike aimed at knocking out both the defence ship and its robot companion. Only your reflexes and accurate shooting can prevent total disaster.

SHEAR PANIC

by Channel 8 Software

Cassette. Joystick required. 1 player. Price: £6.95.

One Sunday afternoon, you are just finishing a bit of weeding in your neat walled garden, when suddenly up pops a strange white flowering vine. And then another on the opposite side of the garden. And even more. Soon it is obvious that the vines are out to strangle your garden, so you grab your pair of trusty old shears, and are just about to cut one down when you notice it twitch slightly and double in size. You hack at the base of the rampant weed but fail even to make a scratch so you try to chop off the top. This you manage to do, but are shocked to see another flower appear on the stem that you have just trimmed. Again you hack, and again you manage to remove the flower head from the

top of the stem. Each time a vine grows, the growth rate increases, so the more flowers there are, the faster they will grow. If you can chop them down fast enough, the growth rate will dwindle. If you are slow, your shears will explode.

SHEEP IN SPACE

by Llamasoft

Cassette. Joystick required. 1 player. Price: £7.50.

This game, as you would expect from author Jeff Minter, is a shoot-'em-up with a difference. It has the special fast-loading 'turbo' system which goes a long way to avoiding the long wait which normally occurs while loading a CBM 64 program from a cassette. Your objective in this game is to kill all Hostiles by firing glowing Bonios of Doom at them. You have to prevent the destruction of your planet system by destroying the energy-stealing, low-flying Hostiles. You must prevent a build-up of charge at the Planet Buster. If you get hungry – and the screen display tells you if you are 'peckish' – you can land in a field, provided your sheep's little legs are pointing downwards for landing, and eat to your heart's content. However, you will be less manoeuvrable if you over-eat and will be less able to escape from Hostiles. Sheep fly fast between planets and slowly over surfaces. You control them with your joystick.

SIEGE

by Postern Software

Cassette. Joystick optional. 1 player. Price: £6.95.

This program may seem like a simple arcade game at first, but as you get to know it you may decide that while the basic concept doesn't sound too complicated, the achievement of a really high score is not as easy as you expected. Your mission is to defend your mediaeval castle against wicked marauders who are climbing up the walls. As you stare down at them from the battlements, you may be puzzled by their ability to climb up a vertical surface without any trouble. You attempt to dislodge them by hurling rocks down onto their heads and knocking them off the walls. However, this does not have quite the same effect that you would have hoped for. Instead of running away with sore heads, the assailants show more and more determination to get at you and do you in. They become enraged, and begin to climb faster and faster. But you mustn't let them get to the top of the wall or they will finish you off there and then.

SKRAMBLE

by Anirog Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.95 (cass); £9.95 (disk).

In the year 2184, after years of constant bombardment, the planet Earth has been taken over by Cobrons who have departed but have left the government of the country in the hands of a super-intelligent command module. The defenders of the base, where this module is kept, are formidable. A steady hand and accurate control are required to guide the fighter plane that has undertaken the suicidal mission to destroy the base. You must guide the plane through six sectors to your final victory. In the first sector, you must face a ferocious rocket attack. In the second, you find yourself inside a cavern and fighting against lethal UFOs. You must dodge the fireballs in the third sector – you can't shoot them down. In sector four, you find your ship flying between city tower blocks. Sector five is a maze, and here again some clever steering will be required of you. Finally, you arrive at the Cobron nerve centre. In all sectors, refuel your plane by bombing enemy ammo modules and fuel dumps.

SKRAMBLE

by Rabbit Software

Cassette. Joystick optional. 1 player. Price: £5.99.

Your task in this classic space game is to pilot your RS272 jet fighter, armed to the teeth with Liaison heat-seeking missiles and the latest Steepline Shark lasers, across the ragged mountainous terrain to your home base. It will take skill and determination to get there. You must bomb the enemy fuel dumps and ground installations whilst avoiding and destroying the fast-moving ground-to-air missiles, meteors, fireballs and space monsters. Then, using all the skill at your command, you must negotiate your way through the treacherous tunnel, the city and then the underground maze complex. When you finally make it back to your home base, you must attempt to land with extreme care because your craft contains extremely delicate equipment that is easily damaged should you arrive back on terra firma with a thump. The ship runs on radiation energy cells which are replenished by blowing up the ground-based fuel dumps.

SLINKY

by Audiogenic

Cassette. Disk. Joystick required. 1 player. Price: £8.95 (cass); £12.95 (disk).

Slinky was just out having some fun and hopping about a little. He

came across a stack of coloured blocks that looked to him like a good place to do some jumping around. So he started bouncing up and down the rows. Each time he jumped on a cube, it changed colour. Wow! But Slinky is not aware that the coloured blocks are the property of the Wicked Wizard of Cubet, and he simply can't stand having anybody playing around with his toys. Pretty soon he will round up some of his so-called friends and send them along to make their unwelcome presence felt in Slinky's afternoon jive. So, your task is to keep Slinky on the move as fast as you can and out of the reach of Wizard Cubet and his disenchanting pets. The game starts easily enough, but soon hots up. Playing hints keep you informed of what evil creature is after you at each level, but from levels twenty-one to ninety-nine, you'll have to work it all out for yourself.

SNAKE PIT

by Postern Software

Cassette. Joystick optional. 1 player. Price: £6.95.

You are in control of a Grinning Gobbler and are using this to outwit the menacing snakes which wriggle and twist around the screen, forming an endlessly-changing dynamic maze. At the start of the game, the screen is filled with tiny eggs. The snakes are in separate boxes. Your Gobbler begins in the bottom right-hand corner and you have to guide him from there. The Gobbler can eat eggs, which are worth ten points apiece. No snake, except the red one, can eat eggs or move on top of an egg. At the start of the game, the snakes are trapped inside walls of eggs. The red snake releases the others by eating the walls of eggs that surround them. Any of the snakes can eat you. None of the snakes can cross over another snake, but can cross over themselves. When all the eggs have been eaten, the game speeds up and phase two begins. Now the Gobbler can eat the snakes. This is your opportunity to exact your revenge!

SON OF BLAGGER

by Alligata Software

Cassette. Joystick optional. 1 player. Price: £7.95.

Now is your opportunity to relive the daring exploits of Roger the Dodger through his prodigy, Slippery Sid. With more skill and more nerve, this cool little character seeks not only to follow in his famous parent's footsteps, but to establish some amazing feats of his own.

Money is not his game. Espionage is his middle name. Having forced his way into the National Security H.Q. he is faced with a no-return journey through one of the most dangerous, most complex buildings in the land. Can he successfully complete a nerve-tingling search for the Golden Keys? These are his only means of escape. Or has his skill and daring taken him too far this time? He must watch out for those weird killer security guards, and he has no way of predicting what chilling surprises the mad scientists have produced. He must beware that the floor will disappear from under his feet, sending him to an early grave. There are twelve rooms to explore.

SOOPER FROOT

by Commodore

Cassette. 1 player. Price: £4.99.

This program is a colourful computer adaptation of the popular English pub fruit-machine game. Because it is on the computer, and there's nobody else waiting for a turn and you don't have to keep shelling out tokens or cash when you wish to play a game, it is even more addictive. At the start of each game you are given a stake of two pounds. You then place ten-pence bets on the chance of obtaining one of the winning combinations. It is more than a simple slot-machine because the program incorporates the features of hold, nudge, and re-spin further to test your luck and your gambling skills. Instruction screens are displayed at the start of the program and you are advised to read these carefully to work out the relative values of different winning combinations. This is significant for developing strategic play. The game ends, as usual, when you run out of credit. Unfortunately, you can't spend the jackpot on booze!

THE SORCERER'S APPRENTICE

by Phoenix Software

Cassette. Joystick optional. 1 player. Price: £9.99.

Two games are in this package: one arcade and the other an adventure. But you can proceed from the first to the second only after completing the arcade game to discover the running code to the adventure program. Here is your chance to be apprenticed to a sorcerer. Unfortunately he has whisked himself on holiday and has left you in charge of the practice. All goes well at first, but then the mischievous brooms decide to flood your reservoir. With the aid of your magic

wand and accompanied by excellent music, you must nudge the brooms into dropping the water. But you must take care lest the brooms multiply. Ultimately you must go into the sorcerer's castle to find the appropriate spell to halt the brooms in their tracks. Whilst you're there, take the opportunity to try out a whole variety of spells. Who knows – if you become a frog, a princess might appear and turn you into a prince. On the other hand, she might not.

SPACE PILOT

by Anirog Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.95 (cass); £9.95 (disk).

This game allows you to roam the skies and engage in dog-fights with enemy fighters. There are five screens, starting with the biplanes of 1919 and ending with the fighters of 2001. In each screen, you must shoot down fifty-six aircraft which are intent on shooting or bombing you into the ground. In the first screen, you are in the age of the biplane. These are slower than your craft, but not to be sneered at. The World War I era ends when you shoot down the Zeppelin. Screen two deals with World War II, the age of Spitfires and Heinkels. They fly faster and fire more rapidly. A large Junker appears, and its destruction takes you to screen three. Here you are in the age of helicopter gunships which fly fast and launch rockets. Destroy the largest, and you move to screen four. Here jet fighters are fast and bristling with missiles. You end the game at level five, in the future, where super-fast fighters carry special missiles.

SPIDER AND THE FLY

by Interceptor Software

Cassette. Disk. Joystick required. 1 or more players. Price: £7.00 (cass); £9.00 (disk).

The object of the game is to trap flies and butterflies. The latter have a higher point value. To do this you must completely encircle the insect and complete the web. You will find that the web can grow only to a certain length, after which time it runs back on itself. 'The Spider and The Fly' is a multi-level game which becomes increasingly difficult as you accumulate points. There are also many dangers to look out for. If the tracking hand hits you, you lose a life. If the hand intersects your web you fall but do not lose a life. If you get hit by insecticide, you also

lose a life. As the game becomes harder, so the number of insecticide cans increases. These cans occasionally puff a squirt of lethal chemical at you, so watch out. The green and blue flies have different point values, and to advance from one level to the next you will have to capture a specified number of flies. You'll have to be a clever spider to win this game.

SPRITE MAN

by Interceptor Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.00 (cass); £9.00 (disk).

You find yourself in a maze, being pursued by four hungry ghosts with scary eyes. They are very much against your intrusion into their labyrinth and chase you relentlessly. Their intention is to frighten you to death and the land of shades. But your mission is to clear the maze of ghost-droppings, and your only hope against the four remorseless spooks is to eat a red power pill. This will provide you with a shot of anti-ghost serum and, for a brief period, allows you to eat them. But they rematerialise to chase you soon enough. However, if you loiter near a power pill until all the ghosts are close at hand, you can eat the power pill, then all the ghosts, for a large bonus. On later screens you will find fruits littered around the ghostly maze. Bonus points are available for eating the fruits. This is a traditional computer arcade game, of which there are several versions, but all of which are quite addictive.

STELLAR TRIUMPH

by Romik Software

Cassette. Joystick optional. 2 players. Price: £6.99.

This game is a battle in outer space between you and a soon-to-be-hated friend. You are both buzzing around the screen in your spaceships, and to get the best out of this game you really ought to use joysticks or you won't be able to enjoy the speed of it all. You have the option of about 25 billion variations in the game, allowing you to put a black hole in the middle of the screen which will deflect your shots, your opponent's shots, and other intergalactic gismos that flit around. You can even redefine the laws of physics by giving the black hole negative gravity. Or change it into a sun. You can alter the scoring, the length of each game between one second and one and a half hours, how many

shots you can fire, how fast the spaceships travel, what sort of inertia they'll encounter, and more. The screen menu makes it easy to change around different parts, but play the first few games straight just to find out what happens.

STIX

by Supersoft

Cassette. Joystick optional. 1 player. Price: £7.00.

The Stix is a bundle of energy that roams the universe destroying all that lies in its path. However, a freak cosmic storm has trapped it in a warped hyper-square. This gives you the opportunity to harness its immense evil power for the good of mankind. To keep the Stix under control, you must restrict its movements by constructing force-fields inside the hyper-square. There are four hazards to overcome first, however. You must avoid being touched by the Stix as it struggles furiously to escape. And if it touches any part of an incomplete force field, the field synthesiser will disintegrate due to molecular transposition. But there is also a design fault in the synthesiser, and the stabiliser will disengage, sending a ripple of energy through the field which will destroy you. This program comes with excellent full-colour graphics and is as addictive as it can be frustrating to play! No small amount of game strategy is required.

SUPER BLITZ

by Commodore

Cassette. 1 player. Price: £4.99.

You are flying a light bomber aircraft which is rapidly running out of fuel. Desperately you search the ground beneath for a landing area. But all you see is a city landscape. You must clear a landing area by bombing it flat. And you must avoid crashing into one of the skyscrapers. However, King Kong inhabits this city and has driven all the other inhabitants away, so there is no fear of wiping out half the population of Manhattan simply because you can't find anywhere to park your plane. If you bomb a building while he is climbing it you will be everybody's hero and will win extra points. The trick is to raze buildings, leaving only a few tall ones so that you will have more time to hit Kong. But watch out. From time to time your plane will fly into low clouds which will obscure your view and will spoil your aim. At the

start of this game, your plane stays high in the sky, but gets lower as your supply of fuel dwindles.

SUPER DOGFIGHT

by Terminal Software

Cassette. Joystick optional. 2 players. Price: £7.95.

In this game you find yourself looking on an aerial view of the classic setting for one of the legendary duels between World War I air aces – a clear day with good visibility. Banks of dense white cloud part to form a natural arena in the sky. Suddenly two biplanes emerge from the cloud, there's a moment of recognition as they fly alongside, and then loop into combat, the blue plane against the black plane. The winner is the plane which is first to score ten hits against the other plane. Fast machine code action and a computer-moderated game make this an amusing two-player program. There is a full wrap-around screen picture which permits uninterrupted play, and healthy sound-effects to set off the aerial duel. So here is your opportunity to see whether you have the nerve to become a legend in the Officer's Mess, or whether you ought to be trusted with nothing more complicated than polishing the biplanes' wing-mirrors.

SUPER PIPELINE

by Taskset

Cassette. Disk. Joystick optional. 1 player. Price: £6.90 (cass); £9.99 (disk).

You are Foreman Fred in this modern-style version of the maze-type of program. F.F. and Plumber Pete battle to keep the water pipeline open. The evil Ladderman drops plugs to stop the flow while the six-legged Venusian Pipe-Spiders roam the network of pipes. Fred has to take Plumber Pete to unblock the plugs in the pipeline and protect him from the Spiders. In later stages they must grapple with a Hard-case Super Lobster. Pete knocks out the plug to restore the flow of water. You must keep the pipeline open long enough to collect 1000 gallons and earn the right to the next, more complex, network of pipes. Each of the game screens is a detailed network of pipes. Intermediate cartoon screens, help, demonstration and option screens are also featured. The rules of this program are straightforward, but that doesn't mean it is simple to play. There are easy, normal, hard, then twelve levels of difficulty. The graphics are excellent.

TANK ATAK

by Supersoft

Cassette. Joystick optional. 1 player. Price: £8.95.

This is the latest report from the battle zone. Your forces have all been destroyed. All, that is, but for one tank. It stands alone between the enemy and their supreme goal – the Middle East oil fields. Your tank stands amid a barren wasteland of rocks and scrub. You have only your cannon with which to fight off the enemy onslaught. You know that they will throw all their hardware at you in their attempt to break through. So you must fend off attacks from heat-seeking missiles and robot tanks in a final, desperate struggle for survival. You must strike fast to gain the advantage. And if you're bold enough to take on the flagship of the reconnaissance fleet, a super-fast revenge missile attack is likely to follow. Not that it seems to matter too much if you get wiped out by the enemy. All you have to do is to start the game again and the enemy is as far from those oil fields as it was last time.

TRIAD

by Sumlock Microwave

Cassette. Joystick optional. 1 or 2 players. Price: £8.95.

This is a space conflict in three-dimensional graphics. The Galactic merchants have constructed Hyperways to allow instant travel between distant star systems. As the gigantic transports ply their way through the star gates and along the Tachyon tunnels, they are attacked without warning by the Triad. As one of the escort fighters, your task is to eliminate the Triad. When all are destroyed, a path must be cleared through the meteor storm with your pulse laser to allow the transport fleet safe passage. Your fighter has an energy shield which will protect you from the Triad's anti-matter fields and the meteors, but you'll lose a life if the energy shield becomes depleted. A real test of skill awaits any player who switches off the laser target sight and plays by the sensor screen alone. There are nine pre-selectable levels of difficulty, and these progress right through to infinity. This game has many other interesting angles.

TURTLE JUMP

by Romik Software

Cassette. Joystick optional. 1 player. Price: £6.99.

Ekim, a giant ant, was discovered in the year 1647 by some pirates on a

group of Caribbean islands. He was trained to recover treasure that was beyond the reach of their ships. On Ekim's home island is a hut. He must bring the treasure there. He can jump quite long distances and walk on anything solid – land, logs, the bridge, turtles, crocodiles, or magic islands. Because turtles are wet, when Ekim jumps on to the back of one he has to keep walking to maintain his balance. Beware. When a crocodile comes out, all the turtles dive for cover. If Ekim is caught out by them, he will lose one of his five lives. He obviously uses energy and must eat to regain strength. Various foods grow on the islands, and you get bonus points for them. He can take treasure from a chest by diving in when the lid is open, jumping out with his horde before it closes. The pirates return every third trip to collect the treasure that he has recovered.

UGH!

by Softek International

Cassette. Joystick optional. 1 player. Price: £6.95.

The Ice Age is coming, and Ugh knows that he has got to stock up his cave with food. Stealing Ptery the Pterodactyl's eggs seemed like a good idea at first until Ptery caught on to his escapade and started to drop hunks of rock on poor Ugh! Being fleet of foot, Ugh was doing a fair job, though, of stealing a good number of eggs, but then Rex the Tyrannosaurus appeared to assist Ptery. Ugh must run from his cave at the foot of the hill up to Ptery's nest at the top and dodge the rocks as he does so. He has a spear to defend himself against either the Pterodactyl or the Tyrannosaurus. But he can carry only one spear at a time. If he needs another one he has to return to his cave for it. When he has scumped one of Ptery's eggs, Ugh has to take it back to his cave. But he has to drop his spear if he is to be able to carry the egg. This leaves him defenceless for the home run.

VORTEX RAIDER

by Interceptor Software

Cassette. Disk. Joystick required. 1 player. Price: £7.00 (cass); £9.00 (disk).

You fly your jet scooter through the three terrains of forest, temple and sea in your quest for the Golden Treasure Chest. You move your sights to guide two laser cannons onto various creatures which form the outer defences of the Vortex. Once five creatures of a kind have been hit,

another five of a different kind must be executed. You then proceed into another, deadlier terrain. As you penetrate deeper into the Vortex, more mines and giant mutated eagles block your path. The scanner must be watched carefully if mines and eagles are to be avoided. Once all three terrains have been penetrated, a final obstacle lies between you and the Golden Treasure Chest. But two remaining guardians mutate and will swoop into the attack. If you can survive this far and get through the Vortex, you will be rewarded with a bonus. But first you have to get there, and speed is vital in this highly addictive and frustrating game.

WALLIE GOES TO RHYMELAND by Interceptor Software
Cassette. Disk. Joystick required. 1 player. Price: £7.00 (cass); £9.00 (disk).

Here comes our hero Wallie, in a race across the screen,
 Jumping Jeff and Grahamipoos appear upon the scene,
 Wallie's only weapon is the chewing gum he spits,
 But don't get hit by raindrops, or fall in burning pits!
 Wally wants to visit Humpty on his wall so high,
 But arrows, eggs and guardsmen only want to see him die!
 The spoon throws down a challenge, I bet you can't reach me,
 My cats and cows and dishes will block your path, you see!
 Wallie's getting hungry, he sees some curds and whey,
 But Bo Peep and Little Miss Muffet have entered in the fray.
 He next espies a golden ring, belonging to the owl,
 They try to stop him reaching it by doing things most foul.
 At last they all gang up on him, he meets the motley crew,
 But Wallie has the answers and he knows just what to do.
 A man's gotta chew what a man's gotta chew is the moral of this game,
 And to head the high score table is your only chance of fame!!!

WIDOW'S REVENGE by Bubble Bus Software
Cassette. Joystick. 1 or more players. Price: £6.99.

This is a different version of the popular 'Centipede' type of game in which a centipede (or any similar horrifying alien nasty you care to imagine) slithers its way from the top of the screen towards you, dodging amongst the toadstools. Your mission is to obliterate all of the

Widow's Warriors, but you must watch out for the Photon Webbs and the devious Egg Layers. Beware that if a warrior hits a white energy egg, he will shoot back. This is a fast-action machine code program in which the player's mission is to squirt laser-fire into everything that moves – and doesn't move – on the screen. The purpose is to build as high a score as is humanly possible, which, of course, makes this program one of the more addictive ones, especially if you have a friend who can put together bigger totals of points than you can! The graphics of this game are finely-defined and busy. On-screen instructions make it easy for the newcomer to follow the rules.

ZAPPY ZOOKS by Romik Software
Cassette. Joystick required. 1 player. Price: £6.99.

This is a 'Pacman' type of program, and therefore one with which many arcade games players are familiar. You can choose how many Zooks you want to have chasing you around the maze while you scoot about gobbling up white dots. There is even a practice mode so that players who are keen to notch up a really impressive score can have a few scoreless runs before taking on that level of the game. In each of the four corners of the maze are the blue power pills which enable you to chase the monsters for a change. While this happy state of affairs continues, you score large bonuses for chomping monsters. You also score bonuses when you bump into a bonus block sited somewhere in the maze. This type of program is becoming somewhat dated, but it is still fun to play – many arcade games fans wiggled their first joystick on this type of program. And very addictive it is too, especially when you get onto the harder levels.

ZODIAC by Anirog Software
Cassette. Disk. Joystick required. 1 player. Price: £7.95 (cass); £9.95 (disk).

A coven of the most powerful Masters in the art of black magic have gained terrifying power. They have removed the mystical Signs of the Zodiac from the Time Vaults to cause awesome confusion. These twelve signs are scattered about the corridors of time. The dreaded Masters have created numerous demons which populate the corridors and which zealously guard the Signs of the Zodiac. A destructive force

field flows along the corridor boundaries. Any contact with either the corridor walls or the demons results in loss of life and total disintegration. Your task is to destroy the demons, collect the twelve Signs, and return them to the Time Vaults. There are four hundred corridors to search, so beware – your enemies are continually multiplying. But when you do reclaim the Signs, you'll have a tough time trying to relocate them in Time Vaults. Here you will meet the most powerful demon, Jemon. He is indestructible.

ZOIDS by Softek International
Cassette. Joystick optional. 1 player. Price: £7.95.

It's one of those little-known facts that a distant cousin of J.S. Bach, Thomas R.E. Bach, invented the world's first ever video game. Here, for the first time in recent history is the authorised version of this game. Recharged by listening to an ever-so-slightly modified version of a fugue by J.S. Bach, you do battle against the Zoids. They appear from nowhere and will grow and develop before your very eyes. Your task is to blast them with your Plectoid's laser, but as they mature, longer bursts of laser-fire will be required to disintegrate them. This means that you must keep an eye on your energy level. To maintain your fire-power at its peak you will need to keep your energy levels high by collecting energy packets. These are transported to you by your associates in their protective suits. But these suits will only protect them for just so long, so pick them up quickly before they blow! You score 100 points for each man picked up.

3D TIME TREK by Anirog Software
Cassette. Disk. Joystick required. 1 player. Price: £5.95 (cass); £9.95 (disk).

You are one of the few survivors of the planet Corillian following a devastating raid by marauding space pirates. You have vowed to avenge their murderous attack, to seek and destroy these aliens and to end their galactic tyranny. Your newly-designed, super-powerful starship bristles with computers and sensors which enable you to search out and destroy the space pirates wherever they may hide. This is a clever startrek game with arcade-style battle action in superb three-dimensional graphics. The cassette version has turbo-load which

allows you to feed the game into the computer in under ninety seconds. You are provided with a map of the galaxy which shows its entire area in an eight by eight square. Your long-range sensors are in a three by three matrix, with you in the middle. Empty quadrants, nearby planets and aliens are clearly shown. If the battle gets too hot for you, you can warp off elsewhere.

2

Adventure Games

You start out on many adventure games knowing no more than how to load the program. Some tell you where you are at your point of departure, but the pleasure of this type of program is that you have to find everything out for yourself. Much of the enjoyment comes from making clever guesses, playing hunches, using (and completely ignoring) pure logic, and pitting your wits against a program writer who often doesn't want you to work out the plot too easily.

The adventure game is like taking part in a story. You can chat to and boss about the protagonists instead of being no more than an observer as the action unfolds. Some games are moderately easy to work out, while others will keep you puzzled for weeks. Some programs have a score facility which tells you how great a percentage of the game you have completed. Some programs are sufficiently complex that the scenario changes each time you play them.

The computer's ability to record your reactions along with those generated by the program is put to good use by writers who feel that you should need a set of clues only once. The result is like being inside a story that changes each time you open the book.

A recent innovation has been to combine an adventure program with an arcade game. You have to learn the running code for the adventure game, but only after completing the arcade game. This idea prolongs the life of a package by increasing its interest value.

The Commodore 64 has excellent graphics facilities, although not every adventure game uses them. Nowadays text-only games are less widely appreciated than those which feature graphics. Not only are scenes carefully portrayed, but there is movement and action too as you go about your business of solving the adventure. So, if you're bored with blasting aliens and fancy torturing your brains in some quiet corner, have a go at some of the programs in this chapter.

ADVENTURE QUEST

by Level 9 Computing

Cassette. 1 player. Price: £9.90.

Middle Earth has long been a tranquil and peaceful place. The battles against the Dark Lord are ancient history, and no dragon has been seen since the sack of Esgaroth. Even the last elves sailed for the west centuries ago, after the rescue of their fellows from the dungeons below Colossal Cavern. But disaster struck. A vast army of orcs swept down from the north, crushing all in their path, and they now besiege the last brave defenders in Minas Tirith. All seems hopeless. Then, to your amazement, you are summoned by the Wizards' High Council. 'The orcs are servants of the demon lord Agaliarept', they say. 'He has taken up residence in the Dark Tower on the edge of the world. From safety he controls our enemies. Perhaps one brave hero, acting alone, could sneak into the tower and defeat him. We don't think you have a ghost of a chance, but the king insists we do something. Will you volunteer?' Naturally you refuse, but nobody listens!

ARROW OF DEATH, PART 1

by Channel 8 Software

Cassette. 1 Player. Price: £9.95.

A blight has fallen on your homelands. The Golden Baton (see 'The Golden Baton') has become tarnished and now radiates a malevolent aura of evil. Your mission is clear - to trace the source of this evil and to destroy or be destroyed. This is the first part of an epic adventure, although each part can be played alone. You start off in the King's palace where the Baton is kept, but from which the king has fled to escape its evil influence. Zardra, the king's sorcerer has been battling with the Baton for three days trying to make it reveal its secrets. You wonder how a mere mortal like yourself could prevail over such a powerful enemy if Zardra has failed. In this game you will come across a host of clues that will lead you from the palace to a mud pool. From here you find your way to an eagle's nest where you hope to obtain feathers for the flights of your arrow. From here you go to a stream where a willow tree furnishes the arrow's shaft.

ARROW OF DEATH, PART 2

by Channel 8 Software

Cassette. 1 Player. Price: £9.95.

Having successfully completed Part 1 of 'The Arrow of Death', you are

now in possession of the component parts of an arrow. You will need this to destroy Xerdon the Evil, the source of the ill that has befallen your homelands. You open this second part of the program by finding yourself on the edge of Desolation Marsh with no clear idea about what to do next. Your main objective is to seek out the only man who is able to create a magic arrow from the parts you now possess. He is Arnid, the Royal Fletcher. But he has been kidnapped by the minions of Zerdon the Evil who have somehow learned of your intent. You must now set off in search of Arnid. Danger lurks at every step, and your only hope of survival in this quest is to rely on quick wits and cunning. Eventually you will meet up with Xerdon the Evil. But have you collected all the items that you will need to outwit his magic and to restore good to the Golden Baton?

THE BOSS

by Peaksoft

Cassette. 1 player. Price: £8.95.

This program is for the football fan who would like to try and run his own team and take it to the top of the First Division. There are a total of thirteen separate screens. They help you to pick your team, to make a swoop into the transfer market, to spy on another club, to talk to your understanding bank manager, to check on the season's fixtures, to remind yourself of past results, to study the league table, and very much more. Your job is to build the best team possible from the cash and the players available. You must face the day-to-day problems of running a football club, and then to send your team out to do their best each Saturday. You will have to bite your fingernails throughout the match as you get a minute-by-minute commentary of the goal action, over which you have no control. There are big rewards for successful clubs – the League Championship, the F.A. Cup, and a place in the European Cup or the Cup-Winners' Cup.

CIRCUS

by Channel 8 Software

Cassette. 1 player. Price: £ 9.95.

You have been driving along a lonely road over the moors when suddenly your car's engine starts to cough then dies on you. You look at the map and discover that you are miles from the nearest habitation. Reluctantly you step out into the cold night air and begin to trudge

down the road in search of help. As you turn a bend, you find yourself confronted by an amazing sight. In a nearby field is a huge circus tent! But this is no ordinary circus, as you soon discover. First you have to get into the tent. Everything appears to be deserted. There isn't a light to be seen and the generator which you find is unwilling to burst into life. Once inside the tent you will encounter a host of items, plus a clown, which could be of use to you. The whole escapade seems to become a nightmare, especially when you encounter the tiger. But you have yet to find the essential can of petrol before you destroy the evil circus.

CLASSIC ADVENTURE

by Melbourne House

Cassette. 1 player. Price: £6.95.

Before Crowther and Woods wrote 'Adventure' in 1978, all games had something in common – the player knew the rules and had to try to use them to get the best possible score. In an adventure game, the aim is to discover the rules. To do this, the computer acts as your eyes and hands. It will tell you where you are and what you can see. You can tell it what you would like to do by giving it simple one- and two-word commands. The aim of this game is to find the many fabulous treasures that lie hidden – and often guarded – in the Colossal Caves, and bring them back to the building from which you start out. But take care to avoid being destroyed, like other adventurers before you. Magic is said to work in the caves, and things are not always what they seem. Many things you pick up have strange side-effects, and there are shady and often unfriendly characters lurking in the dark. You can, however, apply to the computer for help and hints.

COLOSSAL ADVENTURE

by Level 9 Computing

Cassette. 1 player. Price: £9.90.

This program is based on the original Adventure, and it is as colossal as the name suggests. Some of the locations and clues have been added to. Colossal Cavern is a name of power, whispered in dark corners, embodying incredible riches and untold danger. Sensible folk hold the cave to be a myth and the product of fevered imaginations. But every year a handful of people set out to find it, driven by necessity or by overwhelming greed. Most return empty-handed with tales of fruitless wanderings, or stories about the dangers faced – volcanoes, gigantic

snakes, dragons and the like. But some have never returned, and speculation holds that they are the successful ones who have found the cave and perished. Or may have used the enormous wealth from it to found great empires in far-off lands where they live in luxury. This game takes you to over two hundred different locations in search of the treasure.

DUNGEON ADVENTURE

by Level 9 Computing

Cassette. 1 player. Price: £9.90.

This adventure completes the trilogy that starts with 'Colossal Adventure', and continues with 'Adventure Quest'. Jubilation reigns in Minas Tirith. At sunset yesterday the city was besieged by a sea of orcs. It seemed as if the defenders were doomed. But, at sunrise, the watch looked out over an empty plain. The attackers had fled when at the point of victory. The first reaction was a stunned silence, then word spread that the demon lord was dead. Two weeks of carnival were announced and the population enjoy themselves for the first time in a long while. But you were wise. With the demon lord out of circulation, there should be rich pickings amongst the ruins of his fortress. Now, eight days later, you stand on a sandbank beside a great river. North of you are the dungeons of the demon lord. You are determined to brave the brooding presence that seems to be watching you. Perhaps the demon is alive and waiting for you.

ESCAPE FROM PULSAR 7

by Channel 8 Software

Cassette. 1 player. Price: £9.95.

It all started as a routine mission to deliver samples of the precious ore Redennium to minor planetoids of the Xanotar system whose civilisations had evolved beyond primitive nuclear power and who were seeking new methods of energy transference. After successfully trading your load of Redennium and receiving as part payment for the consignment a strange creature for the intergalactic zoo on your home planet, you and your crew set course for home. Initially the trip was uneventful except that the creature broke free from its cage and took to rolling about playfully in the remnants of ore in the cargo hold. It was recaptured. But then it became restless and started growing at an alarming rate. It then broke free again, now the size of a horse, and

started to kill the crew members. Now only you remain, and you must escape through the maze of ventilation ducts to the shuttle craft which will take you to safety.

EVEREST ASCENT by Richard Shepherd Software
Cassette. Disk. 1 player. Price: £6.50 (cass); £9.50 (disk).

Your objective is to reach the top of Mount Everest, but beware, there are many hazards and pitfalls. First you will be given £1000 to finance your expedition. With this you must hire sherpas and purchase equipment. You choose from the list of sherpas, paying particular attention to their daily rates and strength ratings. You may choose as many as you wish but must make sure you can afford their daily rates while on the mountain. You choose your equipment from the list, taking care to keep within your price range. Some items have special uses – but you have to decide what these are! You will then need to be clear on how many days' supplies you will require initially, although you can descend later to the village to collect more. Your strength is a vital factor in this game. So you must remember that the more equipment and supplies you take with you, the more sherpas you will need to maintain your strength.

THE FALL OF ROME By ASP Software
Cassette. 1 player. Price: £6.99.

In 395 A.D., the Roman Empire was still an immense power, even though it was no longer at its greatest size. It dominated Western and Southern Europe and controlled every shore of the Mediterranean sea – no small achievement in itself. Sixty years later, Rome had been sacked, Western Europe and North Africa has been lost, and a much-reduced Empire battled for survival in the East. The game player's task is to refight history, take command of Rome in its struggle for survival, and change the destiny of this great civilisation. The resources of the Empire are available for the struggle against the barbarians from the North and the Eastern Empires of Persia and Armenia. The game is played on a high-resolution map of Western Europe and the Mediterranean. There are twelve moves, each covering five historical years. The game features a score routine which allows the player to chart his progress from loser to saviour of Rome.

FEASIBILITY EXPERIMENT

by Channel 8 Software

Cassette. 1. player. Price: £9.95.

Far across the gulfs of time and space, a dying race of super-intelligent beings search the Universe for a hero to save their existence. At length their thoughts turn to planet Earth. And you are chosen to be their saviour in a bizarre scenario where death is a mere thought away. Your initial location is a strange, unearthly place. You feel a surge of unfamiliar power. This is caused by the beings who worked their will upon you and brought you here. Your mission is as yet unknown to you, for you can do no more than simply explore your surroundings in search of a clue. In this mysterious adventure, you first find yourself in what appears to be ancient Rome with its gladiators, lions, and the catacombs of the circus. You then find yourself in a Stone Age village and continue on through this bizarre adventure until you encounter a fire-breathing dragon. But that is by no means the end of the story.

FLIGHT PATH 737

by Anirog Software

Cassette. Disk. Joystick optional. 1 player. Price: £7.95 (cass); £9.95 (Disk).

As the pilot of this high-performance jet airliner you must take off from an airfield that is surrounded by high mountains. Having climbed your aircraft safely over them, you must prepare yourself and your jet for landing in an airfield in the valleys below. When you first run this program you will be shown the pilot's notes about the aircraft's performance. You are advised to study these, noting the stalling, taxi and take-off speeds and all of the controls. You will then be asked to select a level of flying experience ranging from first solo to test pilot. Start with the first solo, where the mountains are not very high and where you will not be exposed to engine fires, crosswinds or other hazards, and where the aircraft can cope with a fairly heavy landing. Your screen shows an artificial horizon, either the mountains at take-off or the runway at landing, together with the complete range of instruments you'll require for successful flying.

FOOL'S GOLD

by Romik Software

Cassette. 1 player. Price: £6.99.

This is a relatively straightforward textual adventure game. You are in

an old mine. You are hunting for the long-lost treasure that you know must be there, because it is almost impossible to find an old mine in the land of computer games that hasn't got a few million pounds worth of loot stashed somewhere inside it. In this easy-to-use keyboard-operated game, you pick your way through some 150 different parts of the mine to gather all the treasure. But life is not that simple. Doors are locked and wild beasts, that have made their home in the ruined galleries, look upon you as little more than lunch on legs. The game is played by simple two-word commands like 'get axe', 'open door', 'examine wall', 'go south' and so on. If you wish to leave the game and come back to it at a later date, you can save your progress to another tape. Sadly, there are no graphics to excite the imagination.

THE GOLDEN BATON

by Channel 8 Software

Cassette. 1 player. Price: £9.95.

You must venture into a strange province of sorcery and evil magic to recover the Golden Baton, a priceless artifact whose powers are said to bring health and prosperity to its possessor. At the beginning you find yourself in a forest. On the ground beneath you are an old cloak and a pile of leaves. Make sure that you don't ignore the leaves because there is a difference between searching and examining something. From here you must make your way to the castle walls behind which the Baton is to be found. One the way there you will get stuck in briars, encounter a wolf, come across a hut, and find a stagnant pond with what seem like goldfish in it. Once inside the castle courtyard you have to get to the Gorgon Room where the Baton lies imprisoned. You meet sentinels, locked doors, an ivory horn, a rusty helmet covered with runes, and old oil lamp, a lump of quartz, a Lizard Man, slugs, a genie, an elderly crab and other interesting clues.

HEROES OF KARN

by Interceptor Software

Cassette. Disk. 1 player. Price: £7.00 (cass); £9.00 (disk).

You start off near a small cottage, which you hope to return to after working your way through the complex adventures that lie deep in this program. Your objective is to rescue the four Heroes of Karn and to find the treasures of the realm. The story starts long ago when there came from the distant north a horde of fell creatures – dragons,

vampires, enchanters and others. They swept down as a dark gale on the Halls of the Mountain Kings of Karn, and terrible was the slaughter of men. Only four survivors escaped from the city. They are Beren the Mighty, last king of Karn, master of all birds and swordsman unsurpassed; Istar the Wise, lore master and magician; Haldir the Elf-lord, the greatest of minstrels; and Khadim the Dwarf, carver of stone. One by one they fell captive, bound with iron, stone and magic spell. Only the Stranger, from the land where machines can think, can rescue the heroes and defeat the Powers of Night.

THE HOBBIT

by Melbourne House

Cassette. 1 player. Price £14.95.

This program follows Tolkien's original plot very closely, so a copy of his novel is included in the package along with an instruction book to help you get through this very popular game. You assume the role of Bilbo in your attempt to reclaim the Dragon's treasure and you alone must overcome all the dangers and challenges that will undoubtedly come your way. You will meet Gandalf, Thorin, Gimli and Elrond as well as all your other favourite characters. You will actually talk to them and answer the questions that they will ask of you. More importantly, you can even suggest to them what you would like them to do. However, each time you play 'The Hobbit', events will proceed in a slightly different manner and the further you journey into Middle Earth, the more unique each visit will become. At the end of each attempt you will be told the percentage of the adventure that you have solved. You can expect a great deal of fun.

HULK

by Adventure International

Cassette. 1 player. Price: £9.95.

This game comes from Scott Adams, a man who is reckoned to have one of the more devious minds in adventure gaming. You start out with a screen which tells you 'I am Bruce Banner, tied hand and foot to a chair. Tell me what to do'. Try as you might to escape, you can't - until you change into the Incredible Hulk. You require all your powers of logic to read the clues in this game and think yourself clear of the many tight corners that you will find yourself in. You will come across alien ants with wicked mandibles on which you may meet a nasty end. The

secret of the addictive nature of this game is that you have to keep thinking all the time because as soon as you think you're ahead and become complacent, you're jolted into a state of disorientation. The locations and brief textual replies serve to concentrate your mind on the puzzle. The graphics are also of a similar high standard in this program.

KRYSTALS OF ZONG

by P.S.S.

Cassette. Joystick required. 1 player. Price: £7.95.

The object of this game is to gather treasures while avoiding the snakes (found on levels one and five), bats (levels two and six), spiders (three and seven) and mummies (four and eight) that pursue you. The mummies can throw fire-balls. On each level the pursuers move more quickly than before, making your challenge progressively more difficult. Your environment at each level consists of a series of nine rooms arranged in a three-by-three square. Each room consists of a maze with a treasure compartment at the centre. There are two entrances to this compartment, and each room contains a coloured key and a white sword. The compartment can be opened only by the key that corresponds to the colour of the maze, for each of the nine have different-coloured borders, and the keys are randomly placed. The sword stuns pursuers for a limited time, and magic potions, boots, lanterns, torches and ladders assist you in this complex adventure.

LORDS OF TIME

by Level 9 Computing

Cassette. 1 player. Price: £9.90.

This program is a text adventure written in machine code and which should take you about a month to solve. You start off in an absurd dream in which the evil Timelords are meddling with Earth's history. Naturally it is your job to stop them. So you must travel through world history, seeking items with which to avert the evil future planned by the Timelords. You will shed light on the Dark Ages, and go roaming with Caesar's legions. In this game you can travel history right through from the prehistoric ice age, through Roman and Medieval times to the present and beyond to the far future. Not that this prevents the inhabitants of one part of history from creeping into another. Throughout history you will encounter items marked with an

hourglass. You must place these in a cauldron to make a spell that will defeat the Timelords. But you will have to visit around two hundred locations before solving this adventure.

MYSTERY OF MUNROE MANOR by Severn Software
Cassette. 1 player. Price: £8.50.

This is a full graphic adventure containing seventy different screens, each one displaying the different locations and action during the game. You start off on the misty moors outside the gates to Munroe Manor. The ancient recluse who once lived there, old Mr Barstow, has disappeared, but reports persist of his wealth hidden somewhere inside the Manor. It is up to you to enter the Manor, explore its detailed layout, and find your way to old Mr Barstow's reserve pension. You instruct the computer with two-word English commands, each consisting of a verb and a noun, and the computer will respond as appropriate. Your aim is to solve the puzzles and mysteries within this adventure by taking note of all occurrences and using your logic. It will be helpful to take note of any clues and make a map as you explore. Keep a pen and paper handy, else you may take an awfully long time locating Mr Barstow's secret hoard.

PERSEUS AND ANDROMEDA by Channel 8 Software
Cassette. 1 player. Price: £9.95.

In this adventure you travel into the realms of ancient mythology, battling with grotesque monsters and supernatural powers as you search for the hidden secret of myth and legend. You start off in the marble hall of a royal palace. The king is instructing you on your mission. You then encounter a beggar and solve a few problems before winning a pair of magic sandals. A blind peasant also turns out to be a useful source of information, should you do him a favour in return. After a few more interesting bits you are rewarded with a scroll of parchment which will take you to a rocky isle where you suffer a certain degree of hassle with the local Harpies, and get to meet Medusa – but only after ditching those valuable sandals. After beheading the most snakey lady in mythology, you hail a passing Pegasus and whizz off across the skies to free Andromeda, tossing the Medusa's head to the Kraken as you go.

THE QUEST OF MERRAVID

by Durrell Software

Cassette. 1 player. Price: £7.95.

This is a challenging and enjoyable adventure program that was written by a confirmed adventure addict who grew tired with the ease with which he solved other adventures himself. The program will accept and act on sentences containing up to nine words, which makes it very user-friendly. The adventurer becomes Merravid. He is charged with the task of locating, taking, and then returning with the magic Firestone of the Dwarves. However, overcoming the many novel and original hazards is no easy matter. Careful and imaginative thought is required if progress is to be made, and the Firestone tracked down to the lair of the Dragon of Thargon. Even then, the Dragon has to be defeated and the stone retrieved. So, it is possible to work right through the plot and still not achieve your goal. Two versions of this compulsive and extremely enjoyable adventure are available on one cassette tape – one for the Commodore 64, the other for the Vic 20.

RED ALERT

by Mr Chip Software

Cassette. 1 to 4 players. Price: £5.50.

The aim of this game is to use your skill and judgement to out-manoeuvre your opponents throughout the contest as you aim to break into Missile Control Centre and launch the missile. You start the game with capital of a thousand pounds. To support your mission, you must first increase that capital. The first way is by gambling in the casino. You are also in contact with dubious underworld characters. They will offer you secret documents to sell. However, the police are taking an active interest in you. So you may have to dump your documents to avoid arrest. To complete your mission you will need ten agents and seven pieces of equipment. These opportunities will be offered from time to time. Agents can turn traitor. If one of your opponents offers an agent more money than you, he will leave you and join them. You will require around sixty thousand pounds to equip, recruit, and then accomplish your mission.

SHIP OF THE LINE

by Richard Shepherd Software

Cassette. Disk. 1 player. Price: £6.50 (cass); £9.50 (disk).

You are an officer in the Royal Navy of the Seventeenth Century, and

in command of a ship of the line in the Mediterranean. The object of the game is to battle with other ships in order to win the favour of your superiors. However, you must ensure that you have adequate supplies of food, water and ammunition, and that you have enough crew to man the ship, otherwise you may be forced to surrender in mid-battle or be set upon by a hungry crew. However, you are also able to estimate the strength of your enemy and whether or not to engage with them. As you return to port to resupply your ship, your progress will be estimated and you will be promoted – if you have used your ship and your resources to their best possible ends. You could end up as First Sea Lord. As you progress, your crews will become larger, your ammunition stocks will get bigger, and you will be more forceful in battle. But the food and water still lasts only a limited time.

SKULL

by Games Machine

Cassette. Disk. Printer optional. 1 player. Price: £7.95 (cass); £9.95 (disk).

The object of the game is to collect treasure from a maze without losing lives and thus to achieve the highest score possible. There are a number of hazards within the maze – pitfalls, trapdoors, portcullises and wandering skulls. These skulls will attempt to guard the treasure by catching you. You may find a green cross within the maze. This will give you a period of safety in which to attack the skulls. You have to make sure that you aren't in danger should a portcullis snap shut behind you. You can buy a glimpse of a map of the maze at twenty-five points for just a few seconds. You can take safety ladders to lower levels of the maze. This is randomly generated, so you will be advised to save your position in the game if you wish to finish it later. You can win a lucky charm bracelet which warns of the proximity of skulls. And you can ask the computer to list an inventory of how much treasure you have collected.

SNOWBALL

by Level 9 Computing

Cassette. 1 player. Price: £9.90.

You take the part of Kim Kimberley, secret agent, and you find yourself with a small problem on your hands while you are stuck on board a five-mile long colony starship. This textual adventure takes

you to over seven thousand locations and gives you plenty of puzzles to solve on the way. The Snowball 9 has been hijacked and sabotaged. Its robots have been modified, so they will not obey your orders. It is your job to save the colonists from destruction. And you have two weeks in which to solve the problem. You have to move from the outer levels into the centre to locate the control room. You have to avoid murderous robots, padded cells, and a variety of sci-fi dangers. The game is witty and clever. Little friendly cleaner robots bustle about muttering to themselves. You can have a lot of fun crawling through ventilation shafts and taking lifts from place to place, never knowing quite what to expect at the other end.

SPECIAL OPERATIONS

by M.C. Lothlorien

Cassette. 1 player. Price: £6.95.

One of your planes took a photograph during a routine reconnaissance mission of what appears to be a highly-guarded security area. Intelligence reports suggest that there is a vast underground complex beneath the enemy compound. It seems likely that it is the location of their Advanced Weapons Research Centre. Further reports suggest that work is well advanced on a new and highly sophisticated weapons system. It probably contains a powerful bacteriological virus capable of causing untold death and disease. And there is reason to believe that a new type of rocket technology is being linked to the virus experiments. Your mission is to check out the installation and, if asked, to destroy it. There are seven different levels of play in this adventure war-game, and each of them has a different objective. Apart from the initial selection of your four-man team, the entire game is portrayed graphically.

STAR TREK

by Interceptor Software

Cassette. Disk. 1 player. Price: £7.00 (cass); £9.00 (disk).

You are in command of a full-size star ship that is exploring outer space. You find yourself deep in uncharted galaxies where you will encounter planets whose atmosphere would be lethal to yourself and to your crew should you be unwise enough to beam yourself down to them. But you are equally likely to come across planets where life would appear to be as compatible to humans as it is back home on planet Earth. If things go bad for you, you will find yourself being

attacked by aliens, no matter how peaceful, scientific or generous your intentions. However, throughout your voyages around outer space, you will be able to seek guidance from your all-knowing, all-seeing, on-board computer. This will advise you until it is time to report back to Earth – for lunch, perhaps. There are several screens which are more in keeping with a flight-simulation program, but which make this a perfectly serious intergalactic flight program.

TEN LITTLE INDIANS

by Channel 8 Software

Cassette. 1 player. Price: £9.95.

This mystery begins with a train journey into a strange country. At first, nothing seems to be happening, but eventually you have to make your move and deal with an old dwarf who might be of value to you if you treat him right. You take a swim out from the decrepit wharf of a river, making your way to an ancient country mansion which comes complete with towers, fancy suites, a walled garden with a fountain, and a full set of matching balustrades. You find yourself locked in the bathroom in a suit of armour, but don't let that worry you because the armour might be your way to escape from the mansion and discover the idols of the Indians. But to reveal any more snippets about this adventure would probably give away too many secrets. Maybe you will not live long enough inside the adventure to find out – but only you can discover that. But what will you do when you finally run into the ten little Indians?

TIME MACHINE

by Channel 8 Software

Cassette. 1 player. Price: £9.95.

As a local news reporter for the Tulkingham and Dunsby Gazette, your assignment is to investigate the strange goings-on around the old house on the moors. Your first stop was the Wentworth's house, these being the people who first expressed concern at the strange events. The house on the moors, they tell you, was recently purchased by a Dr Potter, an eccentric scientist who kept himself to himself and rarely spoke to anybody. The Wentworths have seen strange lights and heard weird noises emanating from the house, and once they thought they saw a figure wearing a suit of armour inside the house. But tonight the fog lies thick on the moors and you must locate the house, then find out what

has been taking place there. Once inside, you come across a mysterious machine which transports you to a prehistoric swamp. Your journey then takes you to strange places before you are able to locate the Doctor and learn his strange story for yourself.

TRANSYLVANIAN TOWER by Richard Shepherd Software
Cassette. 1 player. Price: £6.50.

High on a crag overlooking a gaping ravine and a rushing river deep in the twilight forests of Transylvania, Count Kreepie keeps open castle to any ghoul who doesn't want to steal his treasure-trove. And you may think that just because you managed to enter his five-storey tower through the dungeons, you have not been detected. A floor-plan even allows you to make your way through the various cells to the stairs that lead up to the second level. Here you will meet Count Kreepie's pack of bats, which you can shoot if you have enough bullets, or otherwise destroy with the weapons that he has left scattered around his castle. A golden ring will allow you to escape through solid walls, but when you make it to level three, the entire prospect becomes a whole lot tougher. When you were on lower levels, the bats were easy to shoot down. Now you must hit them straight through the heart. But will you be able to challenge Count Kreepie face to face?

TWIN KINGDOM VALLEY by Bug-Byte
Cassette. 1 player. Price: £9.50.

The major feature of this adventure game is the number of different locations in which it takes place. There are over 175 different screens of high-resolution and colourful graphics, and some of them are animated. The object of this game is to collect as much treasure as you can without being killed. To measure your progress, you are given a score which will increase as you harvest the available loot. The maximum score is 1024 (1K) points, which you achieve only after you have loaded up with all the treasure. As you play the game, your path will be beset with traps and puzzles, so mind where you go! The last puzzle, of course, is to decide what to do when you have 1024 points! You start the game standing on a road running from east to west. Nearby is a wooden cabin which you have just rented from the keeper

of the Sword Inn. What you do next is entirely up to you, provided you don't spend too much time drinking in the inn!

URBAN UPSTART by Richard Shepherd Software
Cassette. Disk. 1 player. Price: £6.50 (cass); £9.50 (disk).

Scarthorpe is the sort of place where even the dogs carry flick-knives. Where the Forsdyke Saga, Andy Capp and Coronation Street are too respectable. Where there is only one road in and that's a one-way street. The sort of town where rebuilding means a new coat of paint, and where people queue up to queue up for a job. Not many people go to Scarthorpe and even fewer leave. The church bells chime three in the morning. The streets are deserted. Now is your opportunity to escape from Scarthorpe. To help you on your quest, the program shows a graphic representation of every location you enter. Among these will be the hospital and the jail, because you might be arrested for indecent exposure, or beaten up by a football hooligan who doesn't like the colour of your scarf. If you go into the fish and chip shop and take the red herring on the counter, a swarm of cats will follow you around. But are they of practical use?

VALHALLA by Legend Software
Cassette. 1 player. Price: £14.95.

This great adventure game contains thirty-six different characters and twenty-one different objects, each interrelating with the other to produce a program which will keep you glued to your CBM 64 for many a long hour. Indeed, as you will discover, you can have great fun simply watching 'Valhalla' and issuing commands to the characters. However, there are six adventures awaiting you. Each of these is a quest for a special object that is hidden somewhere in the game world. These objects can only be discovered in order. They are Ofnir, the key; Drapnir, the ring; Skornir, the shield; Skalir, the sword; Felstrong, the axe; and Grimnir, the helmet. But before you can start you need to equip yourself and to familiarise yourself with Valhalla's world. But don't be surprised if you aren't told essential pieces of information. This adventure game is designed to be both fascinating and difficult, so you'll certainly enjoy playing it.

WESTMINSTER

by Mr Chip Software

Cassette. 1 to 4 players. Price: £5.50.

This is a computerised board game in which each player leads one of the four political parties – Conservative, Labour, Liberal or Independent. You will move round sixty constituencies where you spend money on canvassing. At the end of the game voting will take place and you will be able to see how well you played. Central Party Office gives you eight thousand pounds to start you on the campaign trail. More help will be available from the C.P.O. during the game. You will be asked how many rounds of canvassing you want. Each player will take or miss one turn during each round. One hundred and twenty rounds take about an hour to play. During each round a player who does not miss a turn will be moved at random between one and eight segments around the ring of the sixty constituencies plus fifteen random outcome boxes. An opinion poll is shown for each constituency, allowing you to decide whether or not to canvass heavily.

WHEELER DEALER

by Mr Chip Software

Cassette. 2 to 16 players. Price: £5.50.

In this game you become a tycoon in the motor trade. You must obtain gear-boxes, tyres and engines to produce cars for sale. You may form syndicates, buy and exchange parts, and buy dealerships. But take care because you may become bankrupt and have to liquidate. This, however, is your opportunity to discover if you have got what it takes to become a wheeler dealer in the motor trade. At the start of the game only, you may form a syndicate with any other player. You are both then treated as one player, but with twice the amount of money to start. Dealer licences are auctioned for gearboxes, tyres and engines to the highest bidder. But no player or syndicate may own more than one of each type of licence, though you may own as many different licences as you can afford. There is an element of chance in this game because random Town Cards require you to sell off cars and Hazard Cards require you to part with cash.

THE WIZARD OF AKYRZ

by Channel 8 Software

Cassette. 1 player. Price: £9.95.

The evil sorcerer lay in the depths of despair. Waves of spiritual agony

tortured his soul. To be defeated twice by a mere mortal was almost too much to bear. Only an intense force of evil prevented the sorcerer from complete vanquishment. Slowly he rebuilt himself, feeding on his malice. A plan was forming in his demented mind which would ensure victory over his mortal enemy. His plan is to destroy utterly the mortal who had been instrumental in his earlier downfalls. In those two adventures (see 'The Golden Baton' and 'Arrow of Death'), the mortal had recovered the Golden Baton from him after he had thought it successfully stolen. And when the sorcerer tried to pollute its influence by getting his ally Xerdon to cast a magic spell on it, he truly believed that he had hit on the perfect plan. Now he has his experience to use against the mortal. So will the mortal, you, be able to outwit him in this epic adventure?

3

Traditional Games

Traditional games like chess, Othello and similar, translate to the computer extremely well. Instead of a board with pieces that get knocked over or lost, you can use the computer's monitor to play on. This also means that if you need to keep a game before you have finished it, you can store it in the computer's memory until you are ready to proceed.

Because there is little limit to the capabilities of the CBM 64 when it comes to playing games, you will probably not be surprised to find pinball and football games carefully laid out on the screen in front of you. The list is likely to grow as the capabilities of this machine are explored more widely by programmers.

One of the vital characteristics of the computer is that it can teach you games like chess and bridge without your having to suffer the embarrassment of making naïve mistakes in front of a more experienced player. Indeed, these two games are a case in point because the programs which cover them are written by experts. So, you receive expert tuition to a level unprecedented by traditional means of learning – i.e. being beaten every time. At least the computer doesn't get bored with teaching you and you can go back to earlier levels should you discover that you have overlooked some essential point.

Other games – word games like hangman – can be played without requiring a pencil and paper. And the computer selects the words so there won't be somebody sitting beside you feeling smug while you struggle to place the vowels.

One final point – most of these games have variable skill levels. This allows you to play at whatever level you feel up to. So, if you don't feel capable of too much thought after a heavy Sunday lunch, you can select something nice and easy.

BRIDGE MASTER

by Bridgemaster

Cassette. 1 player. Price: £24.95.

The 'Bridge Master' course has been prepared by Terence Reese, one of

the world's foremost authorities on this popular game. He has over forty books to his credit on this subject and is also a well-known bridge correspondent. As a player, he has won every honour in the game, including the World Championship. This program was devised with the novice in mind, though that is not to say that the experienced player will not glean a lot of useful tips from it. The program provides the two ingredients that are essential to success – expert tuition and the chance to play and learn from experts. The course comes with a package that contains three tapes and a book entitled 'Begin Bridge with Reese'. This provides background reading that is complementary to the course and it contains many constructive quizzes. The graphics are very clear and well laid out, making the program very easy to follow.

COLOSSUS CHESS 2.0 by C.D.S. Micro Systems
Cassette. 1 player. Price: £9.95.

'Colossus' is currently the most modern chess program available for any home computer and, the publishers claim, it is the best. It has beaten all other chess programs in extensive tests. The program has been written using the very latest techniques by a computer chess programmer of seven years' experience. It has the widest range of true features available, including some that have never before been implemented in a micro chess program. The program has a perfect understanding of all the rules of chess, including underpromotions, the fifty move rule, and all draws by repetition. The display uses two screens to provide clear information on the state of the game. The main screen shows a graphics chess board and various messages and questions as required. The second screen shows the past move record, the clocks, the program's thought processes including lookahead, positions examined, and best-line evaluations.

GRAND MASTER CHESS by Audiogenic
Cassette. 1 player. Price: £17.95.

This is widely regarded as the world's most powerful chess program for the home computer. Whether you are an experienced player or a newcomer to the world of chess, this program will provide you with hours of entertainment and interest, either as an opponent or as an instructor. An enormous amount of highly-sophisticated features have

been built into the program. You can watch the computer analysing all of the various possible moves of both sides at any point in the game. And if you so wish, the program will provide you with hints on your own play as the game progresses. All legal moves according to the rule book are possible in this program. These include the promotion of pawns, en passant, and castling. There are nine levels of skill, so the newcomer to this ancient game will find no problems in getting to know the ropes without feeling overpowered by a predatory opponent. Did you know that 'checkmate' means 'the king is dead'?

HUSTLER

by Bubble Bus Software

Cassette. Joystick optional. 1 or 2 players. Price: £6.99.

This program has been described as a 'must' for those people who are addicted to the click of ball against ball on the pool table. The cue is represented by a small cross. You move it to the required position with either joystick or keys and press the fire button to shoot. A power gauge in the bottom right corner of the screen indicates the strength of the shot. Scores and fouls are controlled by the computer. Six games are available on this program. In the first, one player can pot any of the balls into any pocket. In the second, one player pockets the balls in order. In the third, one player puts each ball into its own pocket. In the fourth, two players put each ball into its pocket and score the pocket. In the fifth, one player goes for the orange balls, the other for the black balls. Your colour is the first ball you put down. In the final game, one player pots in order one to six, the other in order six to one.

KICK-OFF

by Bubble Bus Software

Cassette. Joystick optional. 1 or 2 players. Price: £6.99.

This program is based on the table football game with moving rods through the players. Two players can use two joysticks simultaneously to score goals against each other. You move the ball by kicking it with the footballers, spinning your men to make the ball travel faster. The game is over eight balls, with half-time at four balls if two players are using the program. The teams then change ends and the players exchange joysticks or keys. In the one-player game, you play the red footballers and the computer will be your opponent. There are seven levels of speed, and if you decide to play at level seven, you will require

very fast reflexes because the ball moves fast. This type of program is one in which the entire family can take part. You can devise your own league table. The program is written in machine code, hence its speed of response. The graphics are excellent – even the crowd scene that appears at the title page.

PINBALL SPECTACULAR by Commodore
Cartridge. Paddles required. 1 or 2 players. Price: £9.99.

This is no ordinary pinball game. In place of the usual flippers, you'll find two sliding paddles, one at the bottom of the screen, the other near the centre. The bottom paddle operates like a normal flipper, hitting the ball up into play and preventing it from being lost off the table. The top paddle adds a new dimension to flipper use by giving you the ability to deflect the ball from below as well as to direct it from above. The table is filled with popping, ponging, ringing, clashing, colour-changing obstacles, gates, rows, and bumpers. At the top of the screen are two multi-coloured grids of breaker points. You must wipe out each block to score points. By clearing all the blocks on a side you will close the corresponding drain lane in the bottom corner. To make blocks reappear, hit the ball with the bottom paddle. Naturally there's a lot more to the game than this, because strategy soon becomes of over-riding importance!

RENAISSANCE by Audiogenic
Cassette. Joystick optional. 1 or 2 players. Price: £8.95.

This is a computerised version of the game called 'Othello'. The game is played on a board on the screen which measures eight squares by eight squares. The two players are black or white. The object of the game is to end up with more pieces on the board at the end of the game than your opponent. This is achieved by trapping your opponent's pieces between your own. This then turns his pieces the same colour as yours. Although it may appear simple at first glance, this board-game has fascinated, frustrated, and enthralled man for hundreds of years. The very highest level of strategic thinking is required if you wish to become proficient. Alongside the board lies a list of commands which include play, colour change, take back (for correcting a mistaken move), set the board, help, change the level, the level currently being played, and a

count of the moves that have been made. There are eight skill levels.

XANAGRAMS

by Postern Software

Cassette. 1 player. Price: £6.95.

This is a word game that combines the fun of hangman with the mental stimulation of anagrams and crosswords. In its simplest form, this program can be regarded as an educational word game for young children. However, at higher levels it will challenge the skills of even the most literate adult. If you manage to score 1200 points or more, the cassette-insert tells you that you may go to the top of the class and will be allowed to give out the pencils at playtime! The program contains over 5000 different words so the number of permutations is huge. The program asks how many words you would like displayed (one to five). These will be linked like a crossword. The screen will lay out the words in a series of boxes and you have to guess which letter goes into which box. On the right of the screen are all the letters that make up the words. A correct choice scores thirty points, while an erroneous choice loses five points.

4

Educational Software (4-14 years)

A phenomenon that is causing no small amount of injured pride throughout the land at present is the ability of small children to understand and use computer technology at a time when their parents can often do little more than stand and stare in amazement. So it is hardly surprising that this book should have such a healthy section of educational programs that are intended for children aged four years and older.

Many of the programs in this chapter are designed to help with the basics of the subjects they aim to teach. The second chapter on education looks at the heavy-duty software which is targeted at 'O' level students.

Most of the programs in this chapter are designed to be operated by the children themselves after initial parental guidance. This does not mean you need to be able to do anything more complex than read the loading instructions and explain, from the accompanying instructions, precisely how the programs should be run or played.

After you and the children have got the hang of using the Commodore 64 as an entertaining educational tool, you will probably bless it for introducing hours of peace and serenity to the household. This is because the computer has one great advantage over the human teacher – it doesn't demand results, doesn't compete, and allows young learners all the time they need to progress at their own pace. For this reason, you are likely to find young minds becoming engrossed in this fascinating twentieth century machine.

It can teach any subject you care to mention.

BASIC ADVENTURE PART 1

by Honeyfold Software

Cassette. 1 player. Price: £9.95.

There are two adventures in this book and cassette package. One

adventure is in space. The heroes must learn to control a spaceship's computer so that they can escape from an alien planet and get back home. The second adventure has a far grander hero – you. In this one you will learn to control your own computer. It just so happens that the spaceship's computer is remarkably like your Commodore 64, so you can learn along with Dr W. Aleat and SN7. Fortunately one of the wanderers in space kept a notebook, so whenever you find that you don't understand one of the computer-type words that are used, you will find it explained in the section called 'Dr W. Explains'. You will find the adventures on side A of the tape. On side B are four teaching programs that will help you with certain of the command words used in BASIC. You can use them when you feel the need for them as they will give you plenty of extra help in solving the adventures.

BEGINNER'S ASSEMBLY LANGUAGE COURSE by Honeyfold
Cassette. Price: £14.95.

This package is part of the Dr Watson computer learning series and is a step-by-step guide for the beginner to the intricacies of machine code and all those other complicated pieces of program writing that terrify the newcomer until he realises how much they simplify programming. A cassette and an accompanying manual provide the newcomer with a gentle start, with only very short programs at first. Decimal numbers are used throughout the early stages so that the reader will not be confronted with the problems of getting to grips with the assembly programs and having to grapple with hexadecimal. The reader is guided through the early programs, and all the author's results for each program are printed with further explanations where necessary. More advanced programmers will be interested in the sections on thirty-two bit multiplication, and higher levels of programming. This program is the first step towards writing a top-selling game!

BMX NUMBER JUMP by Longman Software
Cassette. Joystick optional. 1 player. Price: £7.95.

Designed for children aged six to ten years old, this program practises addition, subtraction and multiplication. It develops speed and skill of calculation using the number range one to ninety-nine at a variety of levels of difficulty. The game allows your children to wheel their way to

maths success, with all the thrills and spills of BMX bike riding. This is the fastest-growing outdoor activity for kids. Pursued by a bunch of crazed kangaroos, the only escape is over the gate that shows the correct answer to a given maths problem. The child must control the bike through 180 degree spins, bunnyhops, and wheelies. This program is a fun way to learn the basics of mathematics. The program is designed for straightforward use by children after initial assistance from parents. A short manual helps to come to grips with the game, and the game itself caters for children with a wide ability and age range.

COUNT WITH OLIVER

by Mirrorsoft

Cassette. 1 player. Price: £7.50.

Here are two entertaining games to introduce children to the basics of counting and simple addition and subtraction. In 'Toyshop', Oliver asks the young player to count toys in a shop window. Using plain language in large letters, Oliver makes his requests and the player answers using the number keys. With three sorts of toys in three colours, the program introduces the idea of sets as well as numbers. The program is graded, becoming more difficult only when the child has mastered the early stages. In 'Lollipops', Oliver is at a shop and asking for lollipops of different shapes and colours. Addition is introduced naturally as Oliver collects different sorts of lollipops. Subtraction follows when hungry Oliver eats some. He swells visibly as the game progresses, becoming fatter and fatter with more correct answers until he is ill – kids love that bit. The game shows clearly-written sums and is carefully graded in difficulty.

DAS SCHLOSS

by Chalksoft

Cassette. 1 player. Price: £9.25.

This is a game which teaches and tests your knowledge of the German vocabulary. There are two programs, each with different topics. They are chosen to be useful to anybody over the age of nine – school children, students, businessmen or anyone thinking of visiting the land of castles. You select a list of words from the menu. There are twenty lists, with the facility to create one of your own to cover specialist vocabulary. Topics include 'the family' and 'eating out'. You will then be asked to enter a German word. The number of letters and the

English equivalent are displayed as a clue. Every correct response is rewarded by part of the Schloss Castle being built on the screen. The aim is to build the castle as quickly as possible. If you can do this in twenty-one answers, you win the title of 'master builder'. But if your knowledge of German is not so hot, you'll be a 'brickie's mate'. A complete castle earns a moving musical display.

EIFFEL TOWER

by Chalksoft

Cassette. 1 player. Price: £9.25.

This is a game which teaches and tests your knowledge of the French vocabulary. There are two programs, each with different topics. They are chosen to be useful for tourists and language students alike. You select a list of words from the menu. There are ten choices on each side of the tape, making twenty in all. You will then be asked to enter a French word. The number of letters and the English equivalent are displayed as a clue. Each correct answer completes another stage (intended as another day's work) in the construction of the Eiffel Tower. Building is complete after twenty-one correct answers have been recorded by the computer. You will then be rewarded with a musical moving display. You are also able to add your own list of words by selecting option eleven in the menu. You have only to follow the instructions given on the screen. When twenty-one words have been entered, you have the option to save them to tape.

FACEMAKER

by A.S.K.

Cassette. 1 player. Price: £4.99.

With this graphics package, children are able to make up the face of somebody they know, somebody they imagine, or somebody who would probably have plastic surgery if they really looked like that! There are 120 different options for the player to choose from when forming a face on the screen. This is, in effect, an identikit program, written in both BASIC and machine code, and the player is prompted to decide what will appear on the screen with a series of questions about the features that he would like to see put up by the computer. These can be changed as the face progresses. For example, the face may look better – or worse – if the beard were shaved off. A different nose may better suit the person being portrayed, or different glasses can be tried.

The hair, too, can be left long or cut short. This type of program allows the child to consider the way in which personality in a face is affected by its features.

FIRST STEPS WITH THE MR MEN

by Mirrorsoft

Cassette. 1 player. Price: £8.95.

In the first game, 'Mr Greedy's Ice-Cream Hunt', a child must guide Mr Greedy to a giant ice-cream. The game's purpose is to allow children to explore sense of direction. It progresses through five carefully-graded stages. In 'Mr Silly's Hat Game', the young player has to help Mr Silly try on hats that are arranged on shelves, assisting children practise left-to-right scanning and colour and shape matching skills. There are three levels in this game. 'Mr Forgetful's Wardrobe Game' is a simple memory test for young children which also develops their shape-recognition skills. The young player helps Mr Forgetful to open the doors of wardrobes in which are hidden pairs of familiar objects. The last game, 'Mr Forgetful's Letter Game', is a variation on the wardrobe game in which random letters of the alphabet are hidden in wardrobes rather than objects, thereby developing recognition of letters.

FOL-DE-ROL

by Sulis Software

Cassette. 1 player. Prices: £9.95.

Simple spelling for five- to ten-year-olds is what this program teaches. It contains over four hundred and eighty simple words and clues. The jumbled-up clues include only those letters which make up the correct spelling. There are no extra distractors as in 'Besieged' by the same publisher. The words in this program are those from the basic vocabulary of children which have been proved to cause the most spelling difficulties. 'Fol-de-Rol' is based on the story of the Three Billy Goats Gruff, starring a terrible troll who watches out for mistakes. This program helps towards good spelling, a wide vocabulary and the correct use of words. These skills are essential for anyone who needs to write English, whether for essays, letters, reports, examinations, or anything else. Some examining bodies deduct half a mark for each word spelt wrongly in English papers. So, this program helps to provide a child with a thorough grounding in this essential skill.

FRENCH IS FUN

by C.D.S. Micro Systems

Cassette. 1 or 2 players. Price: £9.95.

This is part of a suite of programs which are designed along traditional lines for learning a language, but with the lightness of touch which is the edge that the microcomputer has over the old-style textbook. This French program may not teach you the language to 'O' level standard, but it will provide you with a very sound basis for a trip abroad. After all, most everyday conversation does not require heavy-duty vocabulary, so you'll have little problem making yourself understood, especially since an audio cassette is available for each program. At the earliest level, you associate words with pictures. You can choose your location – the street, beach, cafe or whatever. The computer gradually draws a picture of the scene and tells you the name of each object that it adds. Then some simple phrases are translated into French. The graphics are neatly executed, the programming is clearly thought out, and there's a test to measure your progress.

GENERAL SCIENCE - QUESTOR/QUESTSET

by Computeristic Software

Cassette. 1 player. Price: £8.95.

There are two programs on this cassette. The main program, 'Questset', allows even the least computer-minded parent to put in up to two hundred and fifty questions and answers. Either Mum or Dad can find these in good text books, or even out of their heads. The simplest source of supply would be the child's own school questions and answers. This helps with revision for those everlasting tests. The child builds up a database of useful knowledge which can then be stored on a spare cassette. Then a further tapeful of questions and answers can be prepared. This can go on indefinitely, with each file being custom-fitted to those areas of schooling which require most attention. The other program, 'Questor', is designed to show the method of laying out the questions and answers. These are broken down into blocks of ten so as to retain the child's interest. Both programs assist with spelling and provide hints before giving the correct answers.

GERMAN IS FUN

by C.D.S. Micro Systems

Cassette. 1 or 2 players. Price: £9.95.

This part of the same suite of programs as 'French is Fun', 'Italian is Fun'

and 'Spanish is Fun'. This German program may not teach you the language to 'O' level standard, but it will provide you with a very sound basis for a trip abroad. After all, most everyday conversation does not require heavy-duty vocabulary, so you'll have little problem making yourself understood, especially since an audio cassette is available for each program. At the earliest level, you associate words with pictures. You can choose your location – the street, beach, cafe or whatever. The computer gradually draws a picture of the scene and tells you the name of each object that it adds. Then some simple phrases are translated into German. The graphics are neatly executed, the programming is clearly thought out, and there's a test to measure your progress.

GETSET

by Griffin Software

Cassette. 1 player. Price: £9.95.

This is part of an extensive range of educational software for children of all ages from a company that has been in the educational supply business for many years. The package offers a modern maths approach to learning addition and subtraction. Two programs are included – 'Set' and 'Partition'. Both use the more concrete approach of counting a group of objectives (a set) rather than manipulating numbers in an abstract way. The objects include cats and cuddly bears. Number sizes can be set to match the skill level of the user. 'Set' is an open-ended program where objects are added or subtracted from an initial set. The equivalent sum is shown in numbers on the screen. 'Partition' involves solving an addition sum generated by the computer and shown on the screen as a set of objects which have been split and which must be added together. This program is designed for children aged four and over.

'GOTCHA' MATHS

by Channel 8 Software

Cassette. 1 to 5 players. Price: £6.95.

There are four games on this program to assist with early maths. 'Gotcha Maths' features maths problems of different types and difficulties and requires speed in answering. The sums are printed on the reels of a one-arm bandit. When they stop spinning, the player types in the answer. The games cater for up to five players, and each has the

choice of up to four difficulties. In 'Turns, Rounds and Gotchas', the first player continues to play until a wrong answer is given or he decides to play safe and bank his score for that round. If a 'gotcha' symbol appears, the player loses all the points in that round, and if two come up on the reels, all points scored in the game will be forfeited. 'Maths Derby' is a multiplication and division horse-race for up to four players. In 'Maths Invaders' you blast a falling invader craft only after getting a sum right, and 'Drag Race' is an addition and subtraction equivalent to the 'Maths Derby'.

HIDE AND SEEK

by A.S.K.

Cassette. 1 player. Price: £9.99 (2 cassettes).

The games in this program are variations on Pelmanism and the age-old Kim's Game. They are designed to develop short-term memory and other skills that are important for learning to read. In 'Hide It' and 'Seek It', objects are put into boxes, which then close, and the player has to remember where the different objects are hidden. There are lots of different objects, ten levels of difficulty, and good accompanying music. In 'What's Missing', the objects are again put into boxes, but this time the boxes open and their contents are found to be missing. The player has to identify which one, then type in or read its name. A dictionary is provided for assistance in the program's accompanying booklet. Pairs or small groups of children can play, taking turns at guessing and using the keyboard. In the first option, the player has a caterpillar who must eat the lettuce, but this only happens after ten games have been completed successfully.

HOT LINE

by Chalksoft

Cassette. 1 player. Price: £11.25.

The telephone Hot Line link between The White House and The Kremlin must be kept open for the sake of world peace. But there are breaks in the line, and the player must repair these by getting his answers right in this unusual quiz game. To do this he answers questions correctly from the lists supplied. These can be general knowledge, or they could be questions on maths, English, French, history or whatever as set by a parent or teacher. Your task is to answer twenty questions. Each correct answer repairs another section of the

Hot Line until the two Great Powers can speak to each other again. Each question is presented along with four possible answers. Even if you get two answers wrong, you may still win through because some answers carry hidden bonus points, adding to the interest of this game. It comes complete with full instructions, samples of question formats and scores are shown by the lengthening Hot Line.

ITALIAN IS FUN

by C.D.S. Micro Systems

Cassette. 1 or 2 players. Price: £9.95.

This part of the same suite of programs as 'French is Fun', 'German is Fun' and 'Spanish is Fun'. This Italian program may not teach you the language to 'O' level standard, but it will provide you with a very sound basis for a trip abroad. After all, most everyday conversation does not require heavy-duty vocabulary, so you'll have little problem making yourself understood, especially since an audio cassette is available for each program. At the earliest level, you associate words with pictures. You can choose your location – the street, beach, cafe or whatever. The computer gradually draws a picture of the scene and tells you the name of each object that it adds. Then some simple phrases are translated into Italian. The graphics are neatly executed, the programming is clearly thought out, and there's a test to measure your progress.

JUNIOR WORD SPLITS

by Sulis Software

Cassette. 1 player. Price: £9.95.

This program is designed to increase a child's familiarity with more difficult words and spellings and helps to expand vocabulary. Six words come up on the screen at a time – but only their first halves. Then, one by one, the endings appear. The child has to move each word ending up or down until it stands opposite its other half, then shoot the word in. If the answer is right, the complete word lights up, but if it is wrong, the ending is thrown out. Each section contains three sets of six words. At the end of a round, the user is told how long he or she took to complete it. There are five hundred words in this program. They have been selected because they often cause spelling problems, having suffixes or prefixes that are easily confused. They are grouped under

two headings – those with tricky prefixes, and those with problematical suffixes. The game is designed to be very easy to use, even by four-year-olds.

LET'S COUNT

by A.S.K.

Cassette. Price: £9.99.

This is a program which introduces young children to simple counting and the numbers up to nine. An adult or an older child is needed to help get the program loaded, to select an appropriate episode for the young learner to work on, and to explain what to do. Once all this is completed, both parent and child can work together. When the child has gained enough confidence to get going on his own, he can be left to get on with it so long as help is close at hand in case of problems. There are four different episodes to choose from: matching numbers of objects; matching numbers of objects to the numerals 1, 2, 3 etc.; putting numbers into orders; and an introduction to the ideas of more than, less than, and equality. These four different screens can be chosen from the menu, and there are four levels of difficulty to add interest and to retain the child's attention as he becomes more skilled at the different episodes.

LOOK SHARP!

by Mirrorsoft

Cassette. 1 or 2 players. Price: £7.50.

The aim of this program is to sharpen observational skills and visual memory. With two very different themes, and three games in each program, there is plenty of fun and variety. 'Old MacDonald's Farm' features sheep, geese, pigs and cows in three amusing games. The first, 'Memory', challenges the player to remember and then recreate a farmyard scene. 'Odd-One-Out' tests observation by presenting three sets of animals that seem the same – but are they? 'Snap' is an old favourite, and this version challenges the players to be quick on the button. 'S.O.R.T.' – the Space Observer Recruitment Test – measures the player's readiness for a space mission. Scenes of rockets, space stations and aliens feature in three games where quickness of eye and hand ensure success. Playable at practice levels, the ultimate challenge runs all three games one after the other under test conditions. The highest scorer wins with contest.

MATHS TUTOR

by Channel 8 Software

Cassette. 1 player. Price: £6.95.

The four games on this program are designed to provide a thorough grounding in the skills of multiplication, division, addition, and subtraction. In game one, the program sets single-column multiplication sums of two levels of difficulty. In game two, the program sets simple division sums (1 to 81 divided by 1 to 9) where the numbers are chosen to leave no remainder. As in the previous game, the sum is displayed together with a graphic representation of the answer or the sum alone is displayed. In game three, the program sets column addition sums in three ranges of hardness. Carry to the next column is well illustrated and any wrongly added column is shown as a separate single-column sum. In the final game, the program sets two levels of subtraction sums. As in the previous adding game, there are three ranges of hardness, and you can select how many problems are set in each session, with a mark being rewarded at the end.

NUMBER CHASER

by A.S.K.

Cartridge. Joystick optional. 1 or 2 players. Price: £9.99.

Calculators are now inexpensive items, and most households have at least one. With fewer people resorting to pen and paper, or doing arithmetic in their heads, children are now less likely to develop a feel for numbers. There are particular problems with multiplication, in that the child may have no idea of what size the result is going to be. An extra nought inadvertently introduced may mean the answer is ten times larger or smaller than the correct one. This program is designed to develop those skills of estimation that children may not acquire when frequently using a calculator. The game is a race, with four different screens and four levels of difficulty, between the player's vehicle and an opponent's vehicle, which chases the former. In fact, both vehicles are controlled by the player's performance: enough correct answers and the player wins – too few and the vehicle behind crashes into yours. And all to music!

NUMBER PAINTER

by A.S.K.

Cartridge. Joystick optional. 1 player. Price: £9.99.

'Harry' is given a target number and a total number. His mission is to

paint out the numbers on the screen, and his total number is affected by the values of the numbers that he paints out. The object is for the total to match the target. There are 12 levels of difficulty in this game, and the player progresses to the next level when he has got two or more 'Harrys' home. But he then has to contend with the clock. This is simulated by a bucket moving up the screen. The player has to move 'Harry' over girders and ladders, dodging holes at the same time, to get to the numbers. Many vital mathematical concepts are involved and are constantly being reinforced; for example, the relationship between addition and subtraction, and that repeated addition solves multiplication sums just as repeated subtraction solves division. A special feature of this machine code program is a self-test option for children to check their progress.

NUMBER PUZZLER

by A.S.K.

Cassette. 1 or 2 players. Price: £4.99.

This game is very similar to good old-fashioned noughts and crosses, except that it is played in three dimensions and with numbers instead of the usual cyphers. The two players compete against each other to produce a winning streak. Their lines of numbers, however, must match on all three dimensions – vertically, diagonally and horizontally. There are no moving graphics, but the players have to complete the puzzle frame that appears on the screen. There are two levels of difficulty, just to add spice to this interesting three-dimensional game, and there is also a self-test facility which enables players to test their powers of mental arithmetic. When either of the two parts of this program are in operation, the players can choose from four different screens, and the package comes complete with music to win – or lose – by. It is written in both BASIC and machine code.

OPEN SESAME

by Sulis Software

Cassette. 1 player. Price: £9.95.

This is part of the same series of vocabulary and spelling games as 'Besieged' by the same publisher. The difference is that this program is aimed at children aged ten and over. 'Open Sesame' is based on the story of Aladdin's Cave. You have to recognise the words from their definition, along with the jumbled-up letters that are put on to the

screen to help you. Your mission is to spell the words correctly. There are over four hundred and eighty words in this game that are frequently misspelt. Most of them will be familiar from everyday use. Their pitfalls are subtleties like double consonants, words with the same pronunciation but two spellings and different meanings (for example, 'principle' and 'principal'), or words whose pronunciation is no indication of their spelling. Several rounds with correct answers are required before Ali Baba can find the spell which reveals the treasure.

PRIMARY MATHS TUTOR by Channel 8 Software
Cassette. 1 player. Price: £6.95.

There are four games on this program, and each one is designed to teach young children the first steps of mathematics. In the first game, 'Addition Tutor 1', there are two levels of difficulty in a single-column addition program. At the easier level, when the first number is displayed, a group of dots is printed alongside it. When the second number is shown, another group of dots appears, but with both patterns grouped into tens and units. At the harder level, only the sum is shown. In 'Subtraction Tutor 1', the same format is used as in the preceding game, but for subtraction. In 'Addition Tutor 2', a second column of figures appears on the screen, and again the program offers an option with a graphic display to facilitate understanding. Because this game is for two-column addition sums, the carry option is shown in great detail. And in the final game, 'Subtraction Tutor 2', the same format is used, except that borrowing is emphasised.

QUICK THINKING! by Mirrorsoft
Cassette. 1 or 2 players. Price: £6.95.

There are two programs on this cassette, 'Sum Vaders' and 'Robot Tables', and just in case you think they are for the very young, have a go at playing them, whether you're six or sixty. In 'Sum Vaders', armed only with mental powers and nimble fingers, you must eliminate invading alien robots by adding or subtracting vital numbers. But the alien forces continuously speed up their invasion, and you'll often wonder if you'll be able to survive and save the world from an invasion by robots. Several levels of difficulty and a two-player game make this a program for all the family. In 'Robot Tables', you control a machine

which processes raw material into perfect robots, testing your arithmetical skills to set the machine to the right process. The automatic factory won't stop at a wrong answer, but will turn out an ugly and deformed robot instead of a sound, healthy one. Several levels of difficulty and a choice of speed add extra interest.

SPANISH IS FUN by C.D.S. Micro Systems
Cassette. 1 or 2 players. Price: £9.95.

This is part of the same suite of programs as 'French is Fun', 'German is Fun' and 'Italian is Fun'. This Spanish program may not teach you the language to 'O' level standard, but it will provide you with a very sound basis for a trip abroad. After all, most everyday conversation does not require heavy-duty vocabulary, so you'll have little problem making yourself understood, especially since an audio cassette is available for each program. At the earliest level, you associate words with pictures. You can choose your location – the street, beach, cafe or whatever. The computer gradually draws a picture of the scene and tells you the name of each object that it adds. Then some simple phrases are translated into Spanish. The graphics are neatly executed, the programming is clearly thought out, and there's a test to measure your progress.

STARTER WORD SPLITS by Sulis Software
Cassette. 1 player. Price: £9.95.

Four- to eight-year-olds will have fun using this program to increase their familiarity with words and spellings which are selected to enrich their vocabulary. Six words at a time come up on the screen – but only their first halves. Then, one by one, their endings appear. The child has to move each word ending up or down until it stands opposite its other half, then shoot the word in. If it is right, the complete word lights up. If it is wrong, the ending is thrown out. Each group has three sets of six words, and at the end of a round the child is told how long he or she took to complete it. The two hundred and fifty words in this program will be familiar to children in this age group. They are grouped under twelve headings: movement, people, food, sounds, time, body, water, kitchen, animals, nature, places, and what is it like? This grouping of

themes makes it easier for children to remember the words and to use them creatively.

TIME TRAVELLER

by Sulis Software

Cassette. 1 player. Price: £9.95.

Here you have an intriguing and difficult journey through time and space – almost like an adventure game, except that this program tests and teaches a general knowledge of five major periods in British history. You are stranded in the past. In order to return to the twentieth century, you must know your history. At the beginning of each age you have to answer a ‘Gateway’ or general question. Next you must escape from pursuers through the Time Gate and finally answer three detailed questions before moving on through the time-warp to the next age. Each age has its own maze game. In the Bronze Age there is a forest with savage wolves. In the Roman Age, a fort with ruthless legionaries. In the eleventh century, a cathedral with enraged bishops. In the sixteenth century, a ducal palace with hostile courtiers. And in the nineteenth century, a sewer with horrific rats, giant spiders and germs.

TODDLER TUTOR

by Channel 8 Software

Cassette. Joystick optional. 1 to 3 players. Price: £6.95.

There are several games on this program to teach the alphabet and numbers and the ability to remember and to match. In the first game, ‘Learn the Alphabet’ the program runs through the alphabet – both capitals and lower case. In the next section, the child is able to select letters and to have prompts, if required, to write the alphabet. Any letters missed will be shown at the end. In the next section the program will show four letters in a group and wait for the child to type in the missing one. In the next game, ‘Number Tutor’, various toys have to be counted. The child selects two different ranges, with a maximum of twenty items. In ‘Rainbow Run’, a coloured block, letter, or number is moved to the right place in order to complete part of a rainbow. This must be completed twice to finish a game. The final game, ‘Match ‘em’, is a four-option game for up to three players who have to find pairs of hidden objects.

WORDS AND PICTURES

by Chalksoft

Cassette. Disk. 1 player. Price: £9.95.

This early-learning program was designed by teachers to help children aged three to seven years to develop their reading, matching and counting skills. Four pictures are shown on the screen, together with a word which matches one of them. By pressing a single key, the child moves an arrow around the screen until it points to the picture that matches the word. If the answer is correct, part of the popular song 'Five Little Speckled Frogs' is played and a speckled frog gulps one of ten juicy red bugs that buzz at the top of the screen. The reading continues with four more pictures and another word. Once all of the bugs have been eaten, the scene comes alive. Frogs really do sit on a speckled log and jump into the pool. Music plays and full lyrics appear on the screen. There are two programs which use single words only, two more which use the same words in easy sentences, and a booklet full of ideas for parents and teachers.

WORD WOBLER

by Longman Software

Cassette. Joystick optional. 1 player. Price: £7.95.

This program, for kids aged eight and over, covers the major spelling rules and problem areas. There is a choice of difficulty level, and help is readily available. The program has a ready-made vocabulary of 1500 words and offers you the option to load in your own choice of words. The player controls the gridrunner on a series of fast-moving conveyor belts to grab the letters which spell out a given word. The jolting and jerking belts sweep the gridrunner up and down, left and right – in every direction but where he wants to go. And if the gridrunner can't keep his balance, there are word-wobbling aliens waiting to whisk him into their force fields. This program is designed for use by the child alone, or with some initial help from parents. It caters for children with a wide ability and age range. It is intended to complement rather than compete with school learning, and comes with clear explanatory notes.

3D HYPERMATHS

by Longman Software

Cassette. Joystick optional. 1 player. Price: £7.95.

Space odyssey maths practice is offered by this package to children

aged eight and over. It helps children to practise addition, subtraction, multiplication and division. The number range is from one to ninety-nine, with a variety of levels of difficulty. Three-dimensional graphics enhance the game. Using wit, dexterity, quick calculation, and a cool nerve, the child steers the Hypermaths Spaceship through the paths of the Black Hole, dodging fiery meteors as he goes. He must increase or decrease speed to match the answer to a maths problem and leap through hyperspace into new paths, new dangers, and more difficult maths problems. A completed mission earns players the exalted rank of Galactic Commander. This program is designed to be used by children on their own after initial parental guidance. A brief manual is supplied which answers all queries which may arise in the least computer-minded household.

5

Educational Software (14+ years)

The computer has proved itself an excellent storage facility for information. This can be located, retrieved, manipulated and edited at will. More and more people are coming to realise that this facility is ideally suited to higher education. In this chapter are several programs which have been written specifically for particular subjects. However, this doesn't mean that a standard database type of program cannot be adjusted to suit virtually any subject on the school curriculum.

One of the problems that students encounter while revising for examinations is the pile of papers containing notes, old essays, formulae and so on. Much of this is repetitive and needs to be waded through. However, the right program has all the essential information neatly stored, and is written in such a way that revision is more fun and much less of a slog than it used to be. Programmers have taken a great deal of care to make their academic material as interesting as possible.

The trend towards interactive academic software also benefits the transition of the computer into the classroom. In many programs the student isn't taught, but learns by being prompted to think about a subject rather than to absorb a mass of ideas and concepts. In many cases a little game is thrown in to add an extra dimension of interest, and some programs have bar charts at the end of a series of tests to assist you in pinpointing those areas which require further revision.

Educational software may still be in its infancy, but there can be no doubt that the computer is an extremely useful tool for this purpose, as the following programs clearly demonstrate.

BAILIFF

by Sulis Software

Cassette. 1 player. Price: £9.95.

There are over 1300 words in this program which have difficult and

confusing beginnings and endings. These prefixes and suffixes often cause problems. Does a word begin with 'des' or 'dis'? Or end in 'er', 'or' or 'our'? The only way to get them right is to learn them. You are shown part of the word, and you have to key in the whole word correctly, using the beginnings or endings shown on the screen. Before you begin, you are tested to assess your skill level, and you are scored on the basis of this. There is also a game. Every time you spell a word right, a guest arrives at your hotel. If you make a mistake, you lose a guest. If you lose too many, the bank sends in the bailiffs. If you do well, you move to a better hotel. The big question is – can you spell well enough to run a four-star hotel, or will you have to be content with a simple hostel? The program also has a practice option, an analysis of mistakes, and a survey of words.

BEGINNER'S BASIC FOR THE CBM 64

by Honeyfold Software

Cassette. 1 player. Price: £14.95.

A hefty manual and a cassette comprise this package which is designed to help the complete novice to understand the BASIC of the Commodore 64. The book will nurse you through the early stages of BASIC, and by Chapter 2, you will be writing your first program, a number-guessing game. Even though this is carefully explained step by step, a computer-aided learning program acts as a safety-net. As you progress, you will become adept at learning the new commands. Each of these is introduced with a brief explanation followed by a short teaching program. Before long it is seen playing its part in one of the many games and utilities developed in the book. The cassette has the serious stuff on side A and the games on side B. These include a number-guessing game, hangman, a reaction tester, 'Breakout', 'Balltrap', 'Blockade' and 'Composatune'. The later chapters in the book explore the darkest interior of the CBM 64.

BESIEGED

by Sulis Software

Cassette. 1 player. Price: £9.95.

Advanced spelling is what this program teaches. It contains over four hundred and eighty words which are difficult to spell because they have unusual consonant or vowel clusters, they are of Latin or Greek origin,

or because they are technical. You are asked to recognise each word from the definition and then key it in correctly. Each correct word means that a knight can cross the bridge and go into the besieged castle. Each mistake helps an infidel to mount the castle steps. After three mistakes, the castle is lost to the infidels and the round ends. There are three levels of difficulty. At the easier levels, you are given the jumbled-up letters which form the word, plus extra letters – the ones that most people get wrong. At the difficult level, you just have the definition. The words come up randomly so that no two rounds are the same. An example: Definition is 'bring back to life'. Letters: SSSCTTRAAEEIU. Word: Resuscitate.

BIOLOGY

by Commodore

Cassette. 1 player. Price: £9.99.

This program is a planned revision course towards the G.C.E. 'O' level and C.S.E. examinations. Both it, and the notes that accompany it, help revise the biology syllabus, offering both tests and explanations. The program covers aspects of the nature and variety of living organisms, their nutrition, respiration, circulatory system, excretion, nervous system, movement, reproduction, and the biology of the environment. There are three types of questions which cover the above topics and which are timed to simulate examination conditions: multiple-choice questions, true/false questions, and others which require a written answer. The program ends with a bar chart which shows those areas where further revision is required. This permits a swift assessment of progress. An example of one question is: Which of the following is not an anthropod? (1) Scorpion, (2) Woodlouse, (3) Earthworm, (4) Centipede. Did you guess answer (3)?

CHEMISTRY

by Commodore

Cassette. 1 player. Price: £9.99.

This program is designed for students who have reached the end of an 'O' level G.C.E. or C.S.E. chemistry course, although it will also prove to be of value to anybody with more than a passing interest in the subject. Notes in the booklet which accompanies the program assist in the understanding of basic techniques, the periodic table,

structure, bonding and energy, redox reactions, acids, bases and salts, reactions and their rates, analysis, heating, gases, flame tests, solubility, and organic chemistry. There are three types of question in timed tests which simulate examination conditions. These are: multiple choice questions with four options, true/false questions, and others which require a written answer. The program ends with a bar chart of the results to the tests, allowing the student swiftly to assess those areas which require further revision. Did you know that pure ethanol cannot be made by distilling mixtures of ethanol and water?

CHEMISTRY

by Longman Software

Cassette. 1 player. Price: £7.95.

Each of this series of revision packages contains five programs – about 128K in total. They should make you more thorough and effective in your C.S.E. or G.C.E. 'O' level examinations. The program's syllabus is divided into four topics. 'Principles' deals with rates of reaction, nuclear chemistry, electrochemistry, apparatus and equipment, laws and physical properties, measures and units, states, energy, and constants. 'Properties of Compounds' considers groups 1, group 2, transition metals, halogens, inert gases, other elements, raw materials, and miscellaneous. 'Carbon Compounds' deals with hydrocarbons, nitrogen compounds, alcohols and ethers, acids and derivatives, aromatics, biological compounds, carbon, tests and properties, industrial products and processes, polymers, and halogen compounds. 'Calculations and theory' considers bonding, ions, solutions, industrial products, water, acids, bases and alkalis.

COMPUTER STUDIES

by Longman Software

Cassette. 1 player. Price: £7.95.

Each of this series of revision packages contains five programs – about 128K in total. They should make you more thorough and effective in your C.S.E. or G.C.E. 'O' level examinations. The program's syllabus is divided into four topics. 'Computer Hardware' covers developments, types of computers, components, memory, operations, logic circuits, other calculating devices, and manufacture. 'Software' considers types of programs, programming theory, flowcharts, languages, machine

code, data processing, and programming terms. In 'Peripherals and Media' you encounter input devices, output devices, storage media, intercommunications and broadcasting. And in 'Applications and Theory' you find out about commercial applications, home and education, number theory, number handling and computer jargon. Deep in this useful database lies a game in which you play the computer to find out just how much you know about the subject.

ENGLISH LANGUAGE

by Commodore

Cassette. 1 player. Price: £9.99.

This program is designed for students who have completed an 'O' level G.C.E. or C.S.E. English language course, although it will be of value to anybody who has a serious interest in the subject. Timed tests, comprised of basic questions, simulate examination conditions and assist revision. There are multiple choice questions, true/false questions, and others requiring a written answer. Six pages of notes in the accompanying booklet deal with those topics covered by the program. These are: composition, summary, comprehension, punctuation, spelling and vocabulary. The program ends with a bar chart which clearly shows the results of all tests completed and highlights those areas which are ripe for further study. An example of one of the tests is: Which of the following should be avoided when writing an essay? (1) Synonyms, (2) Clichés, (3) Similes, and (4) Antonyms. The correct answer is number two. Press the space bar for the next question.

GEOGRAPHY

by Commodore

Cassette. 1 player. Price: £9.99.

This program is aimed at students who have reached the end of an 'O' level G.C.E. or C.S.E. geography course, though it will, of course, prove valuable to anybody with an interest in the subject. Notes in the accompanying booklet are intended to assist in the understanding of basic geography. Most of the program is devoted to the United Kingdom, its relief, weather and climate, its farming and rural settlement, its industry and power supplies, its transport and trade, and its population and towns. A smaller section deals with the rest of the world, its relief, climate and natural vegetation, its industry and trade, and its development and under-development. Timed tests, comprised

of basic questions, help with revision. These are multiple choice questions, true/false questions, and others requiring a written answer. A bar chart, which measures the success of your answers, pin-points those areas which require further revision.

THE GRAMMAR TREE – NOUNS AND ADJECTIVES by
Sulis Software

Cassette. 1 player. Price: £10.95.

There are three programs in this suite, each of which is available in a separate package containing two cassettes – one dealing with theory, the other with exercises. A sixteen-page booklet provides extra help. The suite is designed for use by children aged fourteen and over. Each program uses the latest research in theoretical linguistics to clarify a difficult subject. Instead of analysing sentences in the traditional way, it shows how they are built up, organising all those bits of basic grammar information which people acquire haphazardly during their school years into a cohesive, straightforward system. Computer visuals combine with explanations and examples to make each stage clear and simple. In the first of this suite of programs, ‘Nouns and Adjectives’, sentences, subjects and predicates, noun phrases and verb phrases, nouns, articles, adjectives, clauses and phrases are considered in detail.

THE GRAMMAR TREE – SENTENCES by Sulis Software

Cassette. 1 player. Price: £10.95.

Like the other two programs in this suite, each is available in a separate package containing two cassettes, one dealing with theory, the other with exercises. A sixteen-page booklet provides extra help. The suite is designed for use by children aged fourteen and over. Each program uses the latest research in theoretical linguistics to clarify a difficult subject. Instead of analysing sentences in the traditional way, it shows how they are built up, organising all those bits of basic grammar information into a cohesive, straightforward system. Computer visuals combine with explanations and examples to make each stage clear and simple. In this program, ambiguity, explicit and implicit sentences, copulas, active and passive sentences, clauses, quantifiers, pronouns, avoiding repetition, and types of sentences are all dealt with in detail.

THE GRAMMAR TREE – VERBS AND ADVERBS by
Sulis Software

Cassette. 1 player. Price: £10.95.

Like the other two programs in this suite, each is available in a separate package containing two cassettes, one dealing with theory, the other with exercises. A sixteen-page booklet provides extra help. Each program uses the latest research in theoretical linguistics to clarify a difficult subject. Instead of analysing sentences in the traditional way, it shows how they are built up, organising all those bits of basic grammar information into a cohesive, straightforward system. Computer visuals combine with explanations and examples to make each stage clear and simple. In 'Verbs and Adverbs', verb phrases, verbs, noun phrases, objects, adverbs, adverbial phrases and prepositions, sentence adverbs, intensifiers, transitive and intransitive verbs, auxiliaries, hidden auxiliaries, suppressed verbs, 'have', 'do' and 'get' are dealt with at length.

HAMLET by Sulis Software

Cassette. 1 player. Price: £10.95.

This is one of the 'At Home with Shakespeare' suite of programs which is designed to help you master the bard's plays. Each play is summarised using a powerful database. Scene by scene, details of characters, locations and key quotations are held in this database, together with a summary of the action. These analyses are invaluable by themselves for really getting to know the play and learning quotations. However, the real power of the program becomes apparent as you choose from the options available for detailed work. You will be asked to complete quotations, identify speakers, locate acts and scenes, give the meaning of particular words and phrases, and – hardest of all – supply quotations to match paraphrases. You decide which act or scene to work on. If you wish to be tested on the whole play, there is a quiz of a hundred questions. The program provides a sound basis for thoughtful interpretation of the play's meaning.

HENRY IV PART ONE by Sulis Software

Cassette. 1 player. Price: £10.95.

This is one of the 'At Home with Shakespeare' suite of programs which

is designed to help you master the bard's plays. Each play is summarised using a powerful database. Scene by scene, details of characters, locations and key quotations are held in this database, together with a summary of the action. These analyses are invaluable by themselves for really getting to know the play and learning quotations. However, the real power of the program becomes apparent as you choose from the options available for detailed work. You will be asked to complete quotations, identify speakers, locate acts and scenes, give the meaning of particular words and phrases, and – hardest of all – supply quotations to match paraphrases. You decide which act or scene to work on. If you wish to be tested on the whole play, there is a quiz of a hundred questions. The program provides a sound basis for thoughtful interpretation of the play's meaning.

HISTORY: 20th CENTURY

by Commodore

Cassette. 1 player. Price: £9.99.

This program is designed for students who have reached the end of an 'O' level G.C.E. or C.S.E. history course, with timed tests to simulate examination conditions when revising towards that end. Notes in the accompanying booklet deal with those topics that are covered by the program. These are: the two World Wars, the peace settlement and the democracies and their problems during the period 1919–1939, totalitarianism and international relations during the period 1917–1939, overseas empires, the Commonwealth and Asia, the post-war world in the Communist Bloc, the post-war world in the Capitalist Bloc, great power relations and world organisations, and a general section on minority problems, race relations, and emergent nations. Three types of question prompt revision: (a) multiple choice questions, (b) true/false questions, and (c) others requiring a written answer. The program ends with a bar chart which highlights areas requiring further revision.

JUST A MOT

by Sulis Software

Cassette. 1 player. Price: £9.95.

Here is an effective way to learn French vocabulary. 'Just a Mot's' five hundred words with their English equivalents cover a far wider range than those which are generally used in the classroom. Even advanced

students will find the program stimulating. It also encourages more fluent spoken French, helping during those moments when the non-native speaker hesitates while searching in his or her mind for the *mot juste*. Five areas of French life are covered: people, food and drink, shopping, travel, and essentials. These categories should prove to be equally useful to travellers and to students preparing for examinations. You decide whether to work from English to French or vice versa. In two of the three options, a word has to be matched to its pair. The third is more difficult. Here you have to spell the word correctly and know whether nouns are masculine or feminine. Scoring adds extra zest to this learning aid.

MATHEMATICS

by Longman Software

Cassette. 1 player. Price: £7.95.

Each of this series of revision packages contains five programs – about 128K in total. They should make you more thorough and effective in your C.S.E. or G.C.E. ‘O’ level examinations. The program’s syllabus is divided into four topics. ‘Geometry and Sets’ covers axioms and definitions, properties of sets, functions and operations, solids, angles, circles and curves, triangles, other planar shapes, and transformations. ‘Numbers and Arithmetic’ covers units and constants, numbers themselves, statistics, bases and moduli, laws and definitions, sequences and series, approximation methods, equipment, and complex numbers. ‘Graphical Methods’ covers co-ordinates, charts and diagrams, laws and definitions, vectors, matrices and networks, loci, straight lines and mechanics. ‘Methods and Processes’ covers laws and axioms, operators, trigonometrical functions, powers and exponentials, polynomials, functions, algebraic methods and more.

MATHEMATICS II

by Commodore

Cassette. 1 player. Price: £9.99.

This mathematics program tests those areas of the G.C.E. ‘O’ level and C.S.E. courses which are not covered by ‘Mathematics I’. Students are advised to make full use of both these programs when revising for their examinations, although the programs are also fully useful to anybody who simply wants to brush up on their knowledge of this subject. The program, like the accompanying booklet, covers six sections:

arithmetic, equations, progressions, functions, calculus, Pythagoras' Theorem, and trigonometry. Three types of question assist with revision. These are multiple choice questions, true/false questions, and some requiring a written answer. These are timed to simulate examination conditions. The program ends with a bar chart which students will find reassuring when it shows those areas which they have mastered, but of great use in pin-pointing topics which require further revision.

PHYSICS

by Commodore

Cassette. 1 player. Price: £9.99.

This program is designed for students who have reached the end of an 'O' level G.C.E. or C.S.E. physics course, with timed tests comprised of basic questions to assist with revision. Seven sections in the program deal with charge and circuits, electricity and magnetism, forces and motion, waves and sound, light, matter and heat, and with electronics and nucleonics. Three pages of notes in the accompanying booklet provide guidance. Questions come in three types: multiple choice questions, true/false questions, and others which require a written answer. These tests can be timed to simulate examination conditions. The program ends with a bar chart which pin-points those topics which require further revision. The program is also of value to anybody who has an interest in brushing up their knowledge of physics and it is simple to operate. Did you know that the resistance of the plates does not affect the capacitance of a capacitor?

PHYSICS

by Longman Software

Cassette. 1 player. Price: £7.95.

Each of this series of revision packages contains five programs – about 128K in total. They should make you more thorough and effective in your C.S.E. or G.C.E. 'O' level examinations. The program's syllabus is divided into four topics. 'Electricity and Magnetism' considers magnets, electromagnetism, electricity, cells and circuits, applications, measurements and equipment. In 'Heat, Light and Sound', the program deals with heat, states of matter, passages of light, optical instruments, light waves, sound, measurements and equipment. In 'Force and Matter' you find out about mass and energy, machines and

friction, motion, properties of matter, density, pressure, measurements and equipment. In 'Electronics and Atoms' you brush up on electronics, nuclear energy, atoms and isotopes, radiation, atomic theory, measurements and equipment. There is a game which allows you to test your knowledge against the computer.

TENSE FRENCH

by Sulis Software

Cassette. 1 player. Price: £9.95.

This is a really useful program for students of the French language, helping with the laborious business of mastering verbs – the 'grunt work' of learning a language. The program lists, translates, tests and revises twenty basic French verbs, both regular and irregular. These are: être, avoir, aller, venir, faire, parler, finir, vendre, voir, vouloir, savoir, connaître, manger, ouvrir, dire, boire, croire, suivre, devoir and dormir. These are dealt with by the eight tenses: present, perfect, imperfect, past perfect, past historic, future, conditional and present subjunctive. You select the verb you want to practise. As well as working through the listings of each tense for each verb, you can opt to work on an individual verb, a group of verbs, or on them all. Once the test is complete, an analysis reveals exactly where mistakes have been made. The program simplifies and systematises the chore of learning verbs.

TWELFTH NIGHT

by Sulis Software

Cassette. 1 player. Price: £10.95.

This is one of the 'At Home with Shakespeare' suite of programs which is designed to help you master the bard's plays. Each play is summarised using a powerful database. Scene by scene, details of characters, locations and key quotations are held in this database, together with a summary of the action. These analyses are invaluable by themselves for really getting to know the play and learning quotations. However, the real power of the program becomes apparent as you choose from the options available for detailed work. You will be asked to complete quotations, identify speakers, locate acts and scenes, give the meaning of particular words and phrases, and – hardest of all – supply quotations to match paraphrases. You decide which act or scene

to work on. If you wish to be tested on the whole play, there is a quiz of a hundred questions. The program provides a sound basis for thoughtful interpretation of the play's meaning.

WORDPOWER

by Sulis Software

Cassette. 1 player. Price: £9.95.

This is a demanding word game which helps you to put more colour and variety into your use of English. Many people suffer from a restricted code – they use the same words and sentences again and again because they don't know how to say or write the same idea in different ways. The twelve hundred words in this package will enrich your English effectively and quickly. Fluency in reading and writing depend on a wide vocabulary, and this program helps you especially with those difficult Latinate words which so often cause confusion. You may work with this program in the way you want, with a choice of two timed and scored games, or the more demanding key-in option for when you feel you have mastered the words. The words are grouped into various types: opposites, synonyms, collectives, similes, nouns and adjectives. Start with 'Lines', which is easier than 'Shooting', then, when you are sure you know the words, move on to the writing option.

6

Business Programs

The Commodore 64 is widely used in business, and once you have sifted through the programs in this chapter you will see why. There is some very professional software here to help you keep control of stock, maintain your books in perfect order, write a management report – or a book – and keep a clear view of everything that happens in your business.

Many of these programs were originally written for more powerful Commodore computers and have been adapted to this machine. So they offer facilities which are not always available on cheaper programs. However, they come with hefty price tags. Even so, and assuming that you're not running a business, many of these programs have useful applications to the everyday running of a home, in which case you can be more economical in your purchases.

Anybody who does a lot of writing will appreciate the range of word processing packages that are available. The sheer pleasure of watching a perfect piece of copy chunter off the printer has to be experienced to be believed. You can adjust all your grammar, spelling, format and even how many spaces to leave after a full-stop before pressing the 'print' command. So there is no need to retype anything just because you want to make a few changes.

If you require regular access to statistics, you will find a program or two here which will simplify the means whereby you manipulate the information in your database. However, because nearly all of the programs in this chapter have such a wide variety of features, you are advised to obtain complete details from the publishers before deciding on which ones to obtain.

CASH BOOK ACCOUNTING by Gemini Software
*Cassette. Disk. Printer optional. Price: £59.95 (cass);
£64.95 (disk).*

This is just one of series of business software from Gemini. It allows the CBM 64 to be used as a powerful business tool. It takes the drudgery out of bookkeeping and the production of accurate and comprehensive management information. In its simplest form the program will replace your cash and petty cash books. But it does more. In addition to recording cash and bank transactions, the program will allow you to enter credit sales and purchases. For all of these entries it will automatically complete the double-entry routines to ensure that records are always in balance. Sales and purchase ledger control accounts are included, which permits the program to be integrated with an existing manual or purchase ledger system. The program deals with VAT, records balances at the bank for up to five separate bank accounts, petty cash in hand for up to three separate cash accounts, a listing of all nominal account titles, and more.

DELPHI'S ORACLE by Adda Software
Disk. Printer required. Price: £90.85.

This sophisticated database management system allows you to create, edit and delete files; to redesign the layout of files without having to re-enter all the data; to sort files into any order that seems relevant to you at the time; to use a number of different search criteria for swift access to your records; to sort and sub-sort information using a maximum of nine fields; to sort an entire diskful of data in less than fifteen seconds; to maintain thirty-six accumulating registers for calculation; and it provides you with full four-function arithmetic, allowing for category and page sub-totals, report totals, and statistical analysis. The program can be protected by a simple key which is plugged into joystick port one, and there are four levels of security to keep your information from the eyes of the unwelcome. This allows partial access while retaining the master level of security which permits only yourself to modify records or files.

DIARY 64 by Handic Software
Cartridge. Printer optional. Price: £29.95.

This diary program will help you to keep track of telephone numbers,

addresses, appointments, books (and other items) that you have either lent out or borrowed, birthdays, anniversaries, and just about everything else that it is often so hard to remember. The program will help you to organise your daily life both at home and at the office. Because it is so easy to use, the 'Diary' enables you rapidly to find information in the small database that you have created. It has a printout routine which enables you to print address labels from your personal friends file. This can save you a lot of time when Christmas comes around and you have to send out a lot of greetings cards, both to friends and to business associates. The program will also enable you to follow up telephone calls about a week after sending a prospective client your brochure, which could help you to clinch a deal. 'Diary' won't allow any important date to slip your mind.

EASY CALC RESULT

by Handic Software

Cartridge. Printer optional. Price: £78.35.

This is a program for those who deal with complex calculations and simulations. It will quickly prove its value and speed up work because the manual comes with a tutorial which will be of benefit to the inexperienced. The program uses a worksheet that can be divided into rows and columns. The intersections between these create thousands of positions or co-ordinates. You can enter numbers, words or formulae in every one of them. The format commands allow you to give each co-ordinate an individual character format. You can edit and change practically everything with ease and precision. Once entered, a formula can be repeated anywhere on the work sheet. The program can also sum, calculate the mean value and manipulate chosen rows, columns or co-ordinates and interprets formulae according to the normal mathematical rules. It prints bar charts with user-defined scales. All in all, this is a neat, friendly, practical program.

EASY SCRIPT

by Commodore

Disk. Printer required. Price: £75.00.

This is a full-function word processing program that has been designed so that it is easy to use, even by those who have no experience of word processing. The program can carry out all the normal functions of a word processor, including automatic mail merge, file linking, automatic locate and replace, and transfer of words, sentences and

whole paragraphs inside the text. The program also carries a feature which allows you to create forms using tabulation and measured blocks. This permits the printing of standardised invoices. You can also compile documents from standard paragraphs that you have already stored on file. A comprehensive guide is included. This is divided into two main parts – training and reference. The former is designed as an introduction to the type of work that can be carried out with the program. The latter, in the form of an encyclopedia, lists the program's facilities and how to carry them out.

FIGARO 64

by Saxon Computing

Disk. Printer optional. Price: £86.25.

This program allows the user to enter statistical data which can then be displayed in colour in a variety of graphics styles. These may be bar charts (either single or two combined), line graphs (ditto), pie charts, or a combined bar and line chart. These facilities allow the user to perform forecasting that is based on historical or other data, to compute arithmetic, geometric or harmonic means, moving totals and averages, growth rates, standard deviation, correlation coefficients, comparative percentages and indices all with speed in high-resolution machine code graphics. In case all this sounds a bit frightening, the program comes with an easy-to-follow manual. This is a professional-quality program and one which is currently in use in quite a few high-powered places. Data security is provided by back-up routines to protect valuable information. The program does more than any simple spreadsheet ever could do.

HIGH FLYER

by Commodore

Disk. 1 player. Price: £11.99.

This is more of a business game than a straight business program. It helps you discover if big business is your strong point by offering you the opportunity to manage your own air company. Like all the best pioneers, you start at the bottom with a small going concern. You develop this small company through astute dealing into a multi-million pound enterprise. The decisions are all yours – plane schedules and routings, what type of aircraft will turn in the best profits, when is the best time either to extend your fleet of aircraft or to make

improvements to existing stock, whether or not you need to borrow money from the bank, and which banks will give you the best rates of exchange and charge the least interest. And when you feel that you have made enough major decisions for one day, you can save the position you have reached until the next time you wish to join the high flyers. This program is a realistic simulation of the big business.

INTEGRATED ACCOUNTS

by Electronic Aids

Disk. Printer required. Price: £344.42.

This is a powerful, professional-quality, accounting program with a wide variety of features. It comes complete with a forty-two page manual which clearly describes each of the program's functions. It provides a purchase ledger with aged creditors, a sales ledger with the facility to invoice on forms designed for the user's own stationery, statements, aged debtors, daybooks, VAT analysis, stock control, semi-automatic double entry to the nominal ledger, nominal journals, trial balance, complete audit trail, management reports, profit and loss and balance sheets. It does not include a payroll system, but it can read the files of 'Payroll F64' by the same software publisher. The system can handle up to thirty 'live' invoices on each supplier's or customer's account. The number of customers and suppliers and the number of transactions on each account depends only on the type of disk drive in use. The system automatically checks this.

INVENTORY 64

by Practicorp International

Disk. Printer required. Price: £29.95.

This is an inventory-tracking program that is designed to be easy to use because it is menu-driven. It is a complete inventory system. The program allows storage of up to six hundred and fifty items. The user is prompted to provide complete information on each item. Data such as the location of goods, the vendor, the unit of measure and so forth are all included in the item's description. Reorder points and minimum quantity to be ordered are also entered, allowing for reports to be printed which note the costs and quantities of all in-stock items which should be reordered. It is also possible to update an item with current information. Inventory lists, price lists, and reorder reports can be printed, as can any on-screen display. This might include the

description of a specific item. The program also keeps track of sales to date and allows year-to-date sales to be reset to zero without redoing any of the inventory.

LABEL PRINTER by Bubble Bus Software
Cassette. Printer required. Price: £6.99.

This program allows you to compose and print any size of labels from one to nineteen lines long. These you can then store to tape or disk, and later recall, or amend them. The program also allows you to print selectively, as the need arises. The first screen asks you how many lines are required for each label. The smaller this number, the more labels you can create in any one batch. You also have to enter the number of lines necessary for the printer to realign with the next label. The second screen shows you the program's operating instructions, and provides you with the option to move on to the label menu screen. You can design up to nine separate types of label each time you use the program, though your working disk or tape can hold very many more than this, of course. The program comes with full written instructions, so you'll have no problem in making full use of it wherever an efficient labelling system is found to be beneficial.

MAGPIE by Audiogenic
Cartridge. Printer optional. Price: £99.95.

This is a new concept in information storage, retrieval and manipulation. It is completely programmable by the user, enabling it to be tailored to particular needs. In order to enter information, a form has to be designed. You merely define the names of the fields and how long they should be – up to six thousand characters, if necessary. Information is entered into the fields and stored as a file on disk. You can program a series of operations that you want Magpie to perform on the information from a file, and create another form to put that information into. This permits sophisticated field searches to be made. To get started, pre-programmed templates are available on disk (at £19.95 each) for applications like stock control, mailing list, sales ledger, bought ledger, and so on. The pop-up menus of this program make it most user-friendly. You can have a whole string of them on-screen at once, if you so wish.

MULTIPLAN 64

by Kobra Software

Disk. Printer required. Price: £99.95.

This program is easier to use than many other electronic spreadsheets. A worksheet is presented on the screen with a four-line menu beneath it. This lists the functions that are available to the user. If you want to print a worksheet, simply select the print option. If you want to insert or delete rows or columns, simply select those two options. The program presents a grid on the screen. Columns and rows are numbered and the cursor keys are used to move the cursor between cells created by the rows and columns. Text or numbers can be inserted into any cell, and cell widths may be adjusted as required. The program allows rows and columns, or any defined group of numbers, to be added together. The values of different cells can be subtracted, added, divided or multiplied as required. Quite complex formulae can be built up, with a host of mathematical functions. You can link different worksheets and share information between them.

PAPERCLIP

by Adda Software

Disk. Printer required. Price: £90.85.

This word processing program offers a number of advanced features that are unusual in packages in this price range. It offers a choice between two different types of video output – a 40-column full scrolling display and an 80-column non-scrolling display which is achieved through the use of a high-resolution graphics and mapping characters that are only half the width of ordinary characters. This is particularly useful when you wish to inspect the relative positioning of headers, columns and so on. However, the latter is not available in editing mode as this would cause eye-strain. There is a facility to load a disk directory directly into text memory, a command which will set or delete a phrase automatically, a search function which allows for precise searching for words, an instant phrase command which sets up to fifty-two instant phrases which can be called up with two keystrokes, and a calculator mode for adding and subtracting.

PAYROLL F64

by Electronic Aids

Disk. Printer required. Price: £114.42.

This program is designed to make light work for the small business and

take many of the headaches out of compiling wages and salaries. It handles seven overtime rates, which may also be used for piece-work. It controls four pre-tax adjustments, including pension contributions and statutory sick pay. It assists with six after-tax adjustments and all tax and National Insurance codes. The program comes with a twelve-page instruction manual which is clearly written and which will allow even those who are unfamiliar with computing to find their way around this program with the minimum of fuss. The program is pass-word protected so that, if you wish to keep your secrets secret, no other person can snoop into who gets paid what. Adjustments can be made during the financial year to the rates of tax and National Insurance as laid down in the Budget. And if you're not happy with the program, you can ask the publisher for a refund.

PRACTICALC 64

by Practicorp International

*Cassette. Disk. Printer optional. Price: £39.95 (cass);
£44.50 (disk).*

This spreadsheet program will carry out all specified calculations for you. It is fully equipped with twenty-two mathematical and statistical functions from straightforward addition and subtraction through to trigonometric functions such as sine, cosine and tangent. It will also perform row/column functions operating on a range of numbers. In addition, the various functions may be combined into formulae. Spreadsheets can contain up to two thousand information cells, and a 'goto' instruction allows you to specify destination cells you want to inspect. Other features include nine-digit accuracy and, if your column width is insufficient for full display, a simple instruction will show you the full value of the number. There are facilities for inserting, deleting, moving, or blanking out information. All formulae are re-referenced when they have been moved. Titles can be fixed to stay in place while scrolling.

PRACTIFILE

by Practicorp International

Disk. Printer required. Price: £44.50.

This is a versatile database program which structures data in the way you want it. It is fast, efficient, and able to handle large quantities of data. Within each record, fields are not assigned a character limit.

These are allocated as needed. Random and sequential files make possible two methods of input – single file input and batch entry. This latter accepts several records before saving and structuring the file. With your data recorded, the program structures it to your specification. Features for alphabetic or numeric sorting are included and, with multi-keyed files, you can sort them in a number of ways, even by last name, first name, and then middle name or initial. There are calculation functions for quick addition, subtraction, multiplication and division of your data. The program allows for mail label printing, selective printing of specific records, and it supports 'Practicalc' and several word processing programs.

P.S. PROGRAMMABLE SPREADSHEET

by Practicorp
International

Disk. Printer optional. Price: £69.95.

This program brings a new dimension to the electronic spreadsheet for it allows the user to program it in BASIC. With this capability, it can be used as a convenient input/output mode for even the most advanced calculations. Complete with over twenty mathematical functions, the spreadsheet includes all BASIC operations as well as row/column functions like sum, maximum and minimum. Commands such as insert, delete, and move provide for ease in moving data on the worksheet. Through the replicate function formulae, values, labels, or even blank spaces can be copied throughout a range. The program will also sort data numerically and alphabetically both from highest to lowest or lowest to highest, and will convert your numbers into bar charts for simple comparison. P.S.'s seek option will scan the spreadsheet to save the user from scrolling through each row and column. Fifteen pre-programmed subroutines are included.

PURCHASE AND SALES CONTROL E64 by Electronic Aids

Disk. Printer required. Price: £92.00.

This system is not a typical purchase ledger or sales ledger. The difference is that it does not keep separate accounts for individual suppliers and customers. Instead, it prints invoices and keeps a list of transactions, both paid and unpaid, with the name of the supplier or customer recorded against each one. This system often proves to be of

greater use for people who have a lot of one-off dealings with different companies or clients. It also provides much faster access times. The ten menu options are: enter new invoice or credit, amend details, display or print, delete a record, payments, list unpaid invoices and credits, list all transactions for a period, clear old transactions, invoicing, and exit. A standard screen format for the first five options looks like a typical invoice, with the exception that it has a status box to record the state of each transaction, and a date-due box which clearly shows how matters stand in your business.

PURCHASE LEDGER

by Kemp

*Cassette. Disk. Printer optional. Price: £24.95 (cass);
£27.95 (disk).*

This menu-driven program has a maximum capacity for about 700 entries and up to 100 accounts. These capacities are per file. At least eight files can be held on one disk. All files can be saved to tape or disk. There are at least ten different types of printout. This program is a professional quality purchase ledger. It will record the exact amount owing to each supplier, together with the supplier's name and address. It allows each purchase to be analysed into a nominal ledger category, thus simplifying bookkeeping. It performs normal bookkeeping functions such as printing ledger accounts and remittance advices. It also prints the name and addresses of suppliers. The ten menu options will find any account in one second, update existing accounts, correct the 'permanent' details of an account, create new accounts, delete closed accounts, provide full creditor listings, provide annual summaries of the values of purchases, VAT, and payments made, and other essential tasks.

PURCHASE LEDGER 64

by Anagram Systems

Disk. Printer required. Price: £113.85.

This program is as full of features and is as easy to use as 'Sales Ledger' by the same publisher. Full details are maintained of suppliers. These are referenced by name rather than account number. Purchase invoices are posted to the supplier account, and the amount can then be allocated up to six nominal accounts per invoice in addition to VAT. Year-to-date and last year's totals are maintained for each nominal

account, and these figures can be reported when required. The system also prints remittance advices, and posts payments to the appropriate supplier and nominal accounts. The number of supplier accounts that can be maintained varies according to the amount of information stored for each one. By way of example, one hundred and fifty supplier accounts and fifty nominal accounts with four outstanding invoices per supplier can be maintained. The system prints supplier names and addresses, invoice lists, and a whole lot more.

QUICK BROWN FOX

by SPT Electronics

Cartridge. Cassette. Disk. Printer required. Price: £69.50.

This word processing package includes the program on a plug-in cartridge, an instruction manual, plus either a disk or cassette to train you in the use of the program. The package has been around for some time, during which it has been honed and refined at several hundred business installations. It allows you to edit and reformat text in the usual way, and has features which aren't always available on other word-processing packages. These include boiler-plate for cobbling together a document from several standard paragraphs and 'fill in the blank' commands for the generation of form letters. The package is best suited to writing cost-effect mail shots (same letter - different addresses), sales leaflets, manuscripts, contracts, price lists, quotations, tenders, enquiries and all those other documents where repetitive typing is best avoided. It can also perform many filing and record-keeping tasks.

SALES LEDGER

by Kemp

Cassette. Disk. Printer. Price: £24.95 (cass); £27.95 (disk).

This menu-driven business program is written in BASIC and has a maximum capacity for about 700 entries and up to 100 accounts. These capacities are per file, and at least eight files can be held on one disk. All files can be saved to tape or disk. Each program has at least eight different types of printout. The range of printout provides sufficient audit trail for accountants and auditors. The program copes readily with VAT and provides a VAT total for each period, as required. This program is a simple balance-forward period accounting system. All invoices raised, monies received, or credits issued are entered to the

current active accounting period. Once a period is complete, the transactions and statements may be printed and a file then consolidated into one balance-outstanding record per account. The program caters for five rates of VAT. A demonstration version makes use of this program easy for the novice.

SALES LEDGER 64 by Anagram Systems
Disk. Printer required. Price: £113.85.

This package is designed to maintain records of customer accounts. As there are no account numbers, customers are referenced by name. You can post invoices, payments, and credit notes to each account. Each invoice remains on the account until it has been paid. Working on a monthly account, invoices which have been paid will be removed from the file at month's end, creating space for the following month's transactions. Special features include a 'suspense' account which allows you to add 'unrecognised' cheques or amounts to the file before transferring them to the appropriate account. You can also hold 'unallocated' credits within each customer account for cash or credit notes for which no invoice is available. Each customer may be added to a 'sales area' which can then be used for reports. Invoicing procedures allow for trade discounts both as percentages and line-by-line, and contain the facility for settlement discounts.

SIMPLE ACCOUNTS by Kuma Computers
Cassette. Printer optional. Price: £24.50.

Many small businesses and clubs need to keep financial records for personal, tax, and audit purposes without being large enough to warrant VAT registration. This program is simple enough to be readily understood. No specialist knowledge is required. The program caters for a twelve-month period, month by month. A maximum of fifty entries per month can be written up. There is room for up to fifteen different headings. The user can choose up to ten expenditure and ten income headings and can therefore tailor the program to personal requirements. Five payment and five income codes are available (i.e. cash, cheque, Access etc.). Entries can be sorted into date order and can be searched for and changed as necessary. Monthly summaries may be printed out – and, of course, as many sets of annual balance sheets as

you require. This, for a club, could save on the print bill for the annual general meeting.

SIMPLY FILE

by Simple Software

Disk. Printer optional. Price: £69.00.

This program, which is compatible with the 'Simply Write' word processing program, is a random access or relative file. It is designed for those applications in which information needs to be stored, found and analysed quickly under various headings. It comes with a full manual which includes a tutorial guide to sample files on disk. It sets up and maintains varied types of file, automatically indexes each entry by all key fields, finds and displays records by record number or content of any key field, prints columnar summaries of records selected by contents of any fields according to the stored formats, calculates output figures from others, total and averages summary columns if required, calculates values in selected record fields, prints labels from records, outputs sequential files from random files, accepts sequential files as input to random files, and sorts fields other than key fields for use as key fields if required.

SIMPLY WRITE

by Simple Software

*Cassette. Disk. Printer required. Price: £40.25 (cass);
£46.00 (disk).*

This easy-to-use word processing program has full screen editing, allows you to move blocks of text from location to location, permits full-scale deletion and has all the facilities that one would expect from a professional-grade word processing program. Block commands allow text to be transferred to other locations in the text, deleted, saved to disk or tape, or appended from disk or tape. Text is formatted on output. Forty-column files may be formatted for printing on eighty-column machines. The re-definable keyboard not only allows use of any key to send control characters, it even matches up characters on the screen with the signal for the same character on the printer. This is of immense value when writing in a foreign language, so you can have a French or German version on call. The program copes readily with form letters and other standard files. Being compatible with the 'Simply File' program, it has a very solid usefulness factor.

SOLID STATE DATABASE

by Kuma Computers

Cassette. Printer optional. Price: £24.50.

A database is one of the most useful pieces of software available because the storage of information is a prime application for the computer. This one is easy to use and comes with a full manual to show you around. Among the features of this program are its capacity of up to three hundred and sixty pages with up to ten lines of information per page. The program searches and prints selectively, it allows you to browse through files, to sort out different categories of information, and if a file gets too big, it can be split into two smaller files. This database could be used for a mailing list, allowing you to print address labels from it. Or it could be used for stock records or simply to store statistics for analysis. In a small business, this program could store lists of prospective and existing clients, and retrieve information on them at speed. It enables the user to keep in closer touch with how his business is faring.

STOCK CONTROL

by Kemp

*Cassette. Disk. Printer optional. Price: £24.95 (cass);
£27.95 (disk).*

This menu-driven program includes a demonstration mode on the disk version, which, because of its 43 seconds loading time is likely to be the version that most business men would prefer to use. On-screen prompts allow virtually anybody to come to terms with how the program works very quickly. It is a simple method of keeping control of stock situations, both with regard to quantity and to value. Items can be listed in detail, and summary reports are readily obtained. Reordering is a simple routine. The main menu has options for the creation of new stock records, deleting such records, updating them, altering them, and making reports. Each record contains a stock code, unit description supplier code, unit price and reorder level. Stock transactions require the date, type of transaction (i.e. in or out), quantity and unit price. Over 500 stock items can be kept on file and can be found either through supplier code or item description.

SUPERBASE 64

by Precision Software

Disk. Printer optional. Price: £99.95.

This program is termed 'the complete information control system for

the Commodore 64', and that is no exaggeration. It is a database management and information retrieval system with a user-programmable interface. In other words, it's a big filing cabinet which allows you to extract almost any piece of information, in almost any order, with multiple selection criteria. You can design your own record layouts and either work entirely from the menu options or write your own special program to meet your needs exactly. This is a powerful, professional-grade program which can be recommended to anybody with a heavy workload to keep control over. It comes with a demonstration mode, covering several options, and a manual to help you feel your way around. Applications include invoicing, stock control, customer accounts, label printing, names and addresses, sales and prospect records, general business records and a great deal more.

VIZASPELL

by Viza Software

Disk. Printer optional. Price: £59.95 (or £99.00 with Vizawrite).

The 30000 word dictionary in this program permits it to be stored inside any disk, so there is no need to change disks when you wish to check the document you are working on. A spelling check takes about four minutes for any size of document. You also have your words counted, which is valuable when writing copy to a specific length. After the spelling check, you press a single key to return instantly to your document. By using the special 'verify' command each unrecognised word is highlighted. You can stop at each such word to correct it, add it to the dictionary, or even retype the entire paragraph. You can add new words to the dictionary either automatically or manually and can delete them equally as easily. The dictionary can be searched for any word and even patterns of words. Lists are displayed in two-column screenfuls. This program is compatible with 'Vizawrite', with which it is available at a reduced price.

VIZASTAR

by Viza Software

Disk. Printer required. Price: £99.95.

This program integrates three important electronic aids to a business or home office. A fast and easy-to-use package, it is a comprehensive information processor that includes an electronic worksheet, informa-

tion filing system, and simultaneous on-screen graphics. You can extract items from your information files and include them into a worksheet for fast, powerful calculations and easy reporting. You can add or remove items from your records without having to reconstruct existing information records. You can create records up to 1000 characters long with each item up to 250 characters. The program supports most popular printers and can readily be connected to parallel printers. You can include information directly into the worksheet from 'Vizawrite' and almost any other system. You can display your worksheet and line or bar graphs simultaneously. This is a highly professional and powerful package with many useful features.

VIZAWRITE

by Viza Software

Disk. Printer required. Price: £79.35 (or £99.00 with Vizaspell).

This program is rated as the best word processing program available for the Commodore 64. It has a full formatting and command specifications and has built-in prompts and messages that make it very easy to learn and use. It comes with a seventy-page manual which permits full access to the program. You can also buy the 'Vizaspell' spelling checker and word counting program as part of the package at a much reduced cost. A sample document shows different types of text, a help document lists commands and format controls, and merge documents permit you to produce mail shots. You can interface this program with a wide range of printers. The document memory size is ample even for a short book. A full screen menu permits easy selection of print options, full justification, pitch control, automatic line feed selection, form feed selection, single sheet or continuous stationery. This program is written to a very high professional level.

WORDCRAFT 40

by Audiogenic

Disk. Printer required. Price: £89.95.

This is a sophisticated piece of software with all the features needed for practical word processing. The program is particularly easy to use. It begins with a start-up display which enables you to adapt it to the configuration of your hardware. You then need only three commands to set the screen so that you can start typing. Among the useful features,

colour codes are used to differentiate between Type and Command modes, and an indicator at the top of the screen keeps you informed about how much unused memory you have left. The program can be run with all common printers and includes an integral Centronics interface for parallel printers. With the help of the comprehensive manual, anybody can quickly learn the basics of manipulating text and producing printouts. The program also has a name and address capability with document merging facilities. This is ideal for producing mail-shots from standard letters.

WORD WIZARD

by Bubble Bus Software

Cassette. Printer required. Price: £6.99.

This inexpensive word processing program has most of the basic features required by people who would like to be able to use their computer for this purpose without having to spend big money on a program which offers facilities that they are unlikely to use yet still have to pay for. While you may find it a little troublesome were you to write a book with it, this program is excellent for short pieces of work like letters, articles, essays and so forth. It includes many features like the ability to insert and delete lines, to copy blocks of text, to move blocks of text from one part of your opus to another, to insert tabs where required, and ultimately to save your work either to disk or to tape. It gives a sound introduction to word processing without requiring huge investment. This enables the user to evaluate the system before, perhaps, graduating to a more powerful, professional-grade program.

64 – STATSPower

by Scientific Software

*Cassette. Disk. Printer optional. Price: £14.95 (cass);
£16.95 (disk).*

This package will enable you to become an expert in the use of statistics. It is intended for forecasters, businessmen, students, researchers, hobbyists, scientists, and administrators. It comes with a comprehensive manual, which shows worked examples, to guide the novice through the various statistical techniques. These include ascending data sort; means (arithmetic, geometric, harmonic, quadratic); median; quartiles; semi IQ range; variance; mean deviation; maximum and minimum values; range; measures of skewness and

kurtosis; deseasonalisation of data (weekly, monthly, quarterly); log-reciprocal time trend estimation; moving averages; linear and constant growth rate time trend estimation; chi-square test (one-way classification and contingency tables); multiple regression (with dummy variables, data transformations, artificial variables, data alteration); regression coefficients; standard errors; and more.

7

Utility Programs

The programs in this chapter are mainly about showing programmers how they can get more out of their CBM 64 by knowing how to put more into it. Most of the programs concern program *writing* – in both BASIC and machine code. Not all of them are for the advanced computer expert, either. There is at least one program for beginners who would like to get deeper into the mind of their machine, but who have been put off by the wall of jargon which often seems to surround the writing of programs.

Many useful programs are featured in this chapter. You can design your own sprites and graphics for your home-written games. You can compose the music to run with them. You can even use one of the graphics packages to design the cassette insert should you write a commercial hit.

Several of these programs have nothing to do with the writing of programs. Two of them should enable you to make a better guess when it comes to filling in your football pools coupon, and there is one which could make you the scourge of every bookie at every race-track throughout the land. One deals in astronomy, helping you to identify the stars you can see through your bedroom window when you reach the conclusion that counting sheep isn't going to get you to sleep.

This chapter is about useful programs to help you achieve something else. The light pen will be of interest to people who would prefer to draw images onto the screen rather than type them in. However, the underlying message is that these programs allow you scope for almost unlimited imagination and computing power.

ADVERTISER

by Bubble Bus Software

Cassette. Price: £6.99.

This program allows you to use the Commodore 64 as a moving-message machine, with musical accompaniment. This would generally be a string of facts, with a maximum length of nine hundred and fifty nine characters. You have the ability to alter or edit your sales message at any time and to produce a worthwhile advertising display as and when your business requires it. You can adjust the speed at which your message traverses the screen at the touch of a key. The applications of this program will depend precisely on what uses you can think to put it to. As you travel around you will probably have seen moving message machines being used in many aspects of life and you may have wished that you could use the facility to good effect in your own business. Well, here is your opportunity. It can, at a pinch, be used in a busy household to leave messages like 'Your dinner's in the oven', though this may strike you as somewhat extreme!

PATRICK MOORE - ASTRONOMY

by Commodore

Cassette. Price: £9.99.

One of Commodore's leading programmers has collaborated with Patrick Moore to bring the starry heavens onto the screen of your CBM 64. The magnificence of the night sky, for the whole year, can be made to revolve before you. Easily you can search through a dictionary of either stars or constellations and determine whether or not the star or constellation is visible at a given time of year. Either will be depicted on the screen in a dramatic way. Other features may be obtained from the menu. These include a graphics display of either the inner or outer planets, supplemented with detailed information and a host of astronomical definitions approved by Mr Moore. Finally, there is a quiz to keep all budding star-gazers on their toes until Halley's Comet next comes around. This useful package will allow you to identify all those distant gleams that you have wondered about on bright, starry nights.

BASIC AVX

by Home Computer Centre

Cassette. 1 player. Price: £12.95.

This program is designed to allow the BASIC programmer to make full

use of the advanced video and sound devices built into the CBM 64, and at the same time provides useful toolkit facilities. Using the graphics commands you can draw circles, ellipses, arcs, dots, lines, shapes and so on. Also included is an intelligent fill and the hire modes can be selected by using the hire commands. Powerful sprite commands permit easy sprite definition, movement and collision detection. Sprites can also be moved from one point to another in real time at whatever speed the user selects. Sound commands include envelope, waveform, duration, tempo, pulse, frequency and more. This allows you to enter music direct from a score. Ten commands allow the easy use of light pens, paddles and joysticks. To assist with structured programming, there are many well-known commands, error-trapping facilities, and the package contains over a hundred extra keywords.

B C BASIC

by Kuma Software

Cartridge. Price: £57.50.

This is a complete 9K extension supplied in a ROM pack. Nearly a hundred new or modified commands and functions have been added, and because they have been fully tokenised, the speed of operation is not affected. Abbreviations may be used. The main areas of enhancement are in high-resolution, sprites, text graphics, user-defined graphics, sound, machine code aids, structured programming, input/output and more. There are two high-resolution graphics modes which operate independently, allowing you to display one screen while drawing another for smooth animation. The animation of sprites is accomplished with just a few powerful commands, with a collision detection function built into the program. There are three text modes, powerful commands to define and read user-defined graphics, seventeen commands and functions to set all sound parameters, and a great deal more in this useful program.

64 DOCTOR

by Practicorp International

*Cassette. Disk. Printer optional. Price: £17.95 (cass);
£19.95 (disk).*

Everything is plugged in. Everything is turned on. But your computer won't compute, your printer won't print and the joystick won't jump. As there is no power-cut, you can't tell if it is the computer, the printer,

the keyboard or even the disk drive that is at fault. You are stuck with a system that you can't use and don't know why. This program takes the guesswork out of locating a hardware defect. It consists of a number of short, diagnostic tests for the CBM 64 system. Included are tests for RAM, keyboard, disk drive, joysticks, datasette. Instructions for the tests are given in clear, on-screen displays and are supplemented by a short manual. By testing each item separately, you can quickly discover where the problem lies. So instead of carting your entire system into your dealer for costly analysis, you pack up the single defective item. And because you bought your computer to save time and money, why waste them?

FOOTBALL FORECAST

by Kuma Computers

Cassette. Price: £19.95.

The program stores up to seven league tables containing up to one hundred and thirty teams. It allows results to be entered as required. It updates the league tables automatically. The program allows errors easily to be corrected. It enables league tables to be revised at the start of each new season. You can even follow Australian football during the British summer season, and overseas football fans can enter their own league tables and results. The author is one of the country's leading experts on forecasting techniques, and this program uses his unique system for forecasting results. You can then use your results to work out how to fill in your pools coupon with the help of the program 'Pool Perm' by the same publisher. So you should have a lot of fun matching your forecasts to the results that flash up on your TV screen each Saturday afternoon. The chapter on business programs will help you keep track of your winnings.

FORTH 64

by Handic Software

Disk. Printer optional. Price: £44.85.

This is a highly capable language that operates from ROM and is based on fig-Forth, and contains everything in Pet-Forth's Kernal, plus its standard system extensions, giving it full compatibility with the CBM Pet. It also contains a text editor and a macro assembler. Main features of this program are interactive, structured program development; the compact nature of Forth (makes 30K of memory available for your

data and programs – and this is a significant amount). It produces compact, compiled and very fast code; it works in any numeric basis; it has an extendable language structure; its data and program structures are easily defined; parts or all of the program may be coded in the assembler; and it supports cassette, disk and printer input and output.

GRAF 64 by Handic Software
Cartridge. Printer optional. Price: £29.95.

The intention of this program is to be an all-round, mathematical and educational aid for studying complicated equations and functions by their graphs. As most equations can be reformulated to equate zero, their real-number solutions can be considered as intersections between the x-axis and the graph of a function. This is defined by the left side of the reformulated equation, allowing the solutions of equations to turn into graphical analysis. The program allows you to define this function and plots the graph in high resolution within an x-axis range, which is also user-defined. The graph, within its specified range, fills out all of the display, thus forcing both axes to adapt to the graph and not the other way round. You can also enlarge a specific range for more detailed study. And move to any part of the graph and have it plotted in any size, depending on the range specified. You achieve precise answers with this program.

GRAPHICS MASTER 64 by Mr Chip Software
Cassette. Disk. Price: £7.50 (cass); £9.50 (disk).

This program allows you to define multi-colour graphics on your CBM 64. It permits both user-defined characters and sprites to be made simultaneously and then saved to tape or disk. As well as offering the usual edit commands, common to many programs, this package contains several unique commands including character scrolling, inverting, and even the ability to rotate characters. The program functions in three modes: character edit, sprite edit and display. You normally start in character edit mode. This allows you to load and save your character and sprite data, to define custom characters, and to move to and from the other two modes. Unless you have a clear idea of how to go about using this program, you will find the brief instructions enclosed with it of limited value. The publishers assume that you have

experience in the use of graphics, so there is scant guidance on how to get the best use from this useful little program.

HOME BUDGET

by Kuma Computers

Cassette. Printer optional. Price: £9.95.

This easy-to-operate program has been in use for some time and has proved of value to many people. It enables the home manager to keep track of finances by building up a file of income and expenditure and using them in 'what if' calculations. The user can choose the method of operation to suit a particular preference. Income and expenditure, both forecast and actual, can be produced in clearly-tabulated form, or as a bar chart if desired. The program allows you to print out your results. All data can be logged for both date and time. Prying eyes can be kept out of your files because they can be security-coded by the user. Requests for information are fully prompted with 'help' pages which you can call up while running the program. The program can cope with up to twelve categories of expenditure and three categories of income. These can be defined or modified by the user to suit particular circumstances.

HORSE RACE FORECAST

by Kuma Computers

Cassette. Price: £19.95.

This program is written by an expert on forecasting so you should find it of immense value in selecting the winner for the Grand National, or any other race you care to put money on. The program takes into consideration the form of each horse in a given race, using information from previous results. The weight assigned and distances of past and current races are taken into account. The races are classified into groups. This reflects the size of the prize money and the quality of the horses running. This program will allow you to store all those essential bits of information about the horses and their courses. So you will be able to dial up all the winners as and when you feel the need for some cash with which to restock the yacht with champagne and caviare. However, you still need to know precisely what bits of information to tell the program. Without the right correlation of variables, you are unlikely to get much closer to winning.

LIGHT PEN

by Stack Computer Services

Price: £25.00.

This light pen is as accurate as the computer itself. It is able instantly to inform the computer where it is positioned on the monitor screen. A touch-contact system tells the computer when you are ready for it to respond, thereby eliminating accidental readings. It is attached to the computer by a special cable. Besides the game (on cassette) which is supplied with the pen, at least ten titles of software are available to be run in conjunction with it. These include Othello, Life, Draughts, Lost in the Labyrinth, Seek and Destroy, Shuffler, Crossword Twister, Simon and free-hand drawing software. This final program allows the user to draw and colour on the monitor screen with various 'nib' widths. However, most computers can display graphical information to a finer resolution than their light-pen processing can read. The drawing software is designed to achieve this through the use of sophisticated statistical methods.

MASTER 64

by Calco Software

Disk. Printer required. Price: £115.00.

This is a complete program development package and includes eighty-five new commands for the CBM 64, BASIC IV, and a machine code monitor. It gives you a professional data-processing capability with many outstanding features. The file manager provides keyed access to disk data; full or partial key; forward or reverse access; an extra-fast sequential mode; up to 254 bytes per file entry; unlimited entries per file; up to ten files open at once; retrieval against data mask; batch or real time index update; disk data compression; compatibility with CBM DOS; utilities for index recovery; file back-up; file append; file restructure; and ASCII/HEX file dump. The screen manager provides multiple screens, either in memory or loadable from disk; screen window and plenty of other facilities. The report manager, toolkit, utility BASIC, enhanced BASIC, and CBM BASIC IV all make this a very useful package for the serious programmer.

MON 64

by Handic Software

Cartridge. Printer optional. Price: £39.95.

This is a machine code monitor designed for the production and testing

of programs written in 6510 machine code. It contains facilities for reading and writing data to individual bytes, translation from op codes to mnemonics, ability to assemble code, Seek operations of individual bytes or sets of bytes, ability to read text directly in memory, step by step execution of code, and so on. Due to the complexity of the CBM 64's memory, the monitor can be placed in RAM at locations \$8000 or \$A000 (Hex locations). This is claimed to be the only monitor available that allows the user to work in all of the CBM 64's RAM and ROM. It allows Save of both ROM and RAM if desired. So you can save RAM that exists under ROM in the computer, thus allowing you to use all 64K RAM available! The manual won't teach you all about 6510 machine code, but you will find books on this subject are widely available. The manual provides full guidance to the program.

MULTISOUND SYNTHESISER

by Romik Software

Cassette. Disk. Price: £14.99.

This turns your CBM 64 into a versatile musical instrument with which even an inexperienced user can quickly learn to produce a wide variety of sounds. Many musical instruments can be emulated, including flutes, pianos and guitars. 'Multisound' may be used as a simple keyboard or tunes may be created and stored to tape. A merge-from-tape facility assists with the creation of long and complex works. Eight full octaves are available to the user. The keyboard covers three continuous octaves at any time. These may be altered while playing or during playback. A visual display provides feedback on the keyboard operation, greatly aiding real-time playing and allowing easy entry of individual notes in the present mode. Provision is made for a repetitive background tune or drum routine of up to eighty-five notes. Ten such tunes may be entered by the user and stored in memory. A further eight drum routines are pre-defined.

PAINT PIC

by Kuma Computers

Cassette. 1 player. Price: £19.50.

This program enables you to produce outstanding pictures on your screen and save them to tape or disk. It is designed to be used easily by young and first-time computer enthusiasts, yet the program has sufficient depth for the professional artist to exploit. The manual is easy

to read and provides step-by-step instructions which should enable the user to get on with the business of painting pictures with the minimum of fuss. You may compose your picture with a pen, brush, or text. You can set the colour on the pen, bristles, brush moves, four dot colours, crosshair, border, and background. You can move horizontally, vertically and diagonally by dot, brush-width or character. And you can set your moves to the start, end, midpoint, next home and perspective. You can draw specific shapes, mix shapes, incorporate text, use brushes of a different width, adjust the perspective on your pictures, and much more.

POOL PERM

by Kuma Computers

Cassette. Price: £17.25.

This program may be run in conjunction with 'Football Forecast' by the same publisher. The latter allows you to store the results of up to seven league tables containing up to a hundred and thirty teams. This program is a must for all those punters who gamble on the pools. You can enter the number of expected score draws and no-score draws, then define your stake and the computer will use a very sophisticated algorithm to produce a set of possible permutations. If you tell it the match numbers, it will work out exactly what to put on the coupon. There is also a facility to generate random match numbers if you want to gamble. This program is suitable for Littlewoods, Vernons and Zettors pools coupons. If it can improve your chances of winning, it should be a worthwhile investment. Who knows, the mighty micro and you might hit on a way of scoring jackpot after jackpot! Just don't expect the computer to do it all for you.

POSTER PRINTER

by Bubble Bus Software

Cassette. Printer required. Price: £6.99.

This program allows you to print posters on a dot matrix printer, with the design and print size precisely to your own specifications. It permits club managers, business managers, and anybody else with a need for tidy-looking posters, to make a better job than that which is usually available from a piece of paper and a felt-tip pen. One reason for this is that you can print as many copies as you wish, with each one looking as good as the first. The program comes complete with comprehensive

instructions which can readily be followed by anybody with even the most basic ability to use a keyboard. You can draw boxes around certain sections of your poster either for emphasis or to ensure that none of your readers mistakes that section for another section. You have the option to play about with your poster for as long as you wish until you are satisfied with the result. You can print proofs to show around for comment before printing a batch.

QUIZZER

by Bubble Bus Software

Cassette. Price: £6.99.

This cassette allows you to set up your own quizzes on any subject. It can be used as an educational tool in the home or the classroom, or you could use it for revision for examinations. You can also use it as a game, setting up quizzes on general knowledge, sport, or whatever, for no other reason than to pass the time of day. The program offers you the facility to save your quizzes – or any other information that you care to use this flexible program for – to tape for later use. There is also a password facility which prevents unauthorised peering at the tests you have written. This might be of use in a busy classroom where, as a teacher, you find that the future use of computers as educational tools enables you to compose tests for your pupils. Each quiz can be reversed so that the answers become the questions. Students of languages would find this beneficial when they wish to expand their knowledge of vocabulary, or whatever.

SCOPE 64

by I.S.P. Marketing

Cassette. Disk. Price: £17.95 (cass); £18.95 (disk).

This is the improved version of the graphics and game generating language. It enables the user to write his own graphics-orientated games in a language that is between machine code and BASIC, but which converts into machine code with the subsequent speed advantage. The idea is to convert a Simple Compilation Of Plain English (i.e. 'SCOPE') into high-speed machine code, and the version for the CBM 64 has several extensions to allow you to make full use of the advanced graphics and sound features. The program gets rid of all those endless pokes to various graphics and sound control registers. Four 'Scope' commands handle all the sprites and others deal with the

music. The program will tell you if you have made a mistake. Not that a mistake is likely, is it, when you have a hundred-page manual to help you to get the most from this popular program. It assumes that you already have a reasonable knowledge of BASIC.

SIMON'S BASIC

by Commodore

Cartridge. Printer optional. Price: £50.00.

This is one of the most popular BASIC utilities, and allows you to achieve more with your programs. There are three packages in one containing a hundred and fourteen more commands than the standard BASIC. It provides a tool kit which includes such aids as 'Auto', 'Renumber', 'Key', and 'Trace', to make your programming speedier and more efficient. It also includes a wide range of commands, including 'Colour', 'Hi-Res', 'Circle', 'Paint', and 'Plot', with which to facilitate the use of graphics. Complementing these graphic facilities there are commands for creating sprites and user-defined graphics. The cartridge contains structured programming commands so that within the programs you construct routines which can be labelled and called by name. Other commands, like 'Scrsv' and 'Copy', allow you to scroll, store screen data, and produce a printout. The cartridge is a valuable extension for a programmer.

SIMPLY ASSEMBLE

by Simple Software

Cassette. Disk. Printer optional. Price: £25.30.

This program has an editor, an assembler, a disassembler and one or more loaders. It is similar to other assemblers, but each part has distinguishing features. The assembler obeys various 'pseudo-ops' which add to its range of useful features. These are not part of the program, but are instructions to the assembler. The editor has full-screen editing, allowing it to be used in the same way as a word processor. Pieces of code can be moved, copied, saved to disk or tape, appended to other files, deleted, or even printed out. The disassembler doesn't just list out each mnemonic, it labels subroutines so that the structure of the program is easy to see and modify. It file-loads directly into the editor. The loader puts the finished object code into the machine, but moves itself out of the way when loading so that one

version of the finished code can be placed anywhere in the memory. This program greatly simplifies the writing of programs.

SIMPLY TURTLE PLUS by Simple Software
Cassette. Disk. Printer optional. Price: £46.00.

The idea of this program is to steer a robot 'turtle' – and an invisible one at that – around the screen where it leaves a linear track. It is a simple means of creating graphics. You can skip some areas and write in others, and change directions by specific measurements in degrees. The whole concept makes good sense, even to children. Adults, too, find graphics a whole lot more easy to come to terms with when they don't have to work out co-ordinates. Images that are drawn on the screen can be turned into subroutines which can then be used as a basis for other images. The turtle can erase as well as draw, when required. And you can move your image around the screen so that others can be appended to, or deleted from, it. The program has the facility to display several stored images in turn, allowing three-dimensional views to be created and shown, with each dimension following the other. You can add music, polar co-ordinates, and plenty more.

TYPING WIZARD by Severn Software
Cassette. 1 player. Price: £8.50.

You will never have to hunt and peck again. This eight-part tutorial allows you to progress at your own speed while increasing your typing prowess. Continuous screen displays and sound routines keep your eyes up and away from the keyboard to develop the proper technique. The teaching method used here is on a row by row basis. The home row of keys is taught as a base, with other rows added later. The screen layout has the exercises shown at the top with the keyboard next and a graphic hands display with a key shown for each finger. At the start, any lesson may be selected. All of the lessons are displayed in sequence. You simply select from the menu options. Each lesson has letter, groups of letters, word and sentence drill. At the end of each lesson, a speed is given in words per minute, and a count of the number of errors. An endless page is available for typing practice which also gives a typing speed on exit.

Appendix

Commodore 64 Addresses

<i>Adda</i>	Unit 8, 17 Broomfield Road, West Ealing, London, W13 9AP Tel: 01-579 5845
<i>Adventure International</i>	119 John Bright Street, Birmingham, B1 1BE Tel: 021-643 5102
<i>Alligata Software Ltd</i>	178 West Street, Sheffield, S1 4ET, S. Yorks Tel: 0742 755796
<i>Anagram Systems</i>	60a Queen Street, Horsham, Sussex Tel: 0403 59551
<i>Anirog Software Ltd</i>	29 West Hill, Dartford, Kent Tel: 0322 92513/8
<i>Applied Systems Knowledge</i>	London House, 68 Upper Richmond Road, London SW15 2RP Tel: 01-874 6046
<i>A.S.P. Software</i>	145 Charing Cross Road, London, WC2H 0EE Tel: 01-437 1002
<i>Audiogenic Ltd</i>	39 Sutton Industrial Park, London Road, Reading, Berks Tel: 664646
<i>Bridgemaster</i>	P.O. Box 163, Slough, SL2 3YY Tel: 02814 3180
<i>Bubble Bus Software</i>	87 High Street, Tonbridge, Kent, TN9 1RX Tel: 0732 355962
<i>Bug-Byte Software</i>	Mulberry House, Canning Place, Liverpool Tel: 051-709 7071
<i>Cable Software</i>	52 Limbury Road, Luton, LU3 2PL Tel: 0582 591493
<i>Calco Software</i>	Lakeside House, Kingston Hill, Surrey, KT2 7QT Tel: 01-546 7256

- C.D.S. Micro Systems* 10 Westfield Close, Tickhill, Doncaster, DN11 9LA
Tel: 0302 744129
- Channel 8 Software Ltd* 51 Fishergate, Preston, Lancs
Tel: 0772 53057
- Chalksoft Ltd* 37 Willowslea Road, Worcester, WR3 7QP
Tel: 0905 55192
- Mr Chip Software* 9 Caroline Road, Llandudno, Gwynedd, LL30 2TY
Tel: 0492 79026
- Commodore Business Machines Ltd* 675 Ajax Avenue, Trading Estate, Slough
Tel: 0753 74111
- Computeristic Software* 72 North Street, Stoke sub Hamdon, TA14 6QS
Tel: 0935 824072
- Dataview* Radix House, East Street, Colchester, CO1 2XB
Tel: 0206 869414
- Durrell Software* Castle Lodge, Castle Green, Taunton, Somerset
Tel: 0823 54489
- Electronic Aids (Tewksbury) Ltd* 12 Drydale Close, Wickhamford, Evesham, Worcs,
WR11 6RZ
Tel: 0386 831020
- Games Machines Ltd* 40 Fretherne Road, Welwyn Garden City, Herts,
AL8 6NU
Tel: 07073 29444-28435
- Gemini Marketing Ltd* 18a Littleham Road, Exmouth, Devon
Tel: 0395 265165
- Griffin and George* Frederick Street, Birmingham, B1 3HT
Tel: 021-236 2552
- Handic Software Ltd* 5 Albert Road, Crowthorne, Berks, RG11 7LT
Tel: 0344 778800
- Home Computer Centre* 208 Aigburth Road, Aigburth, Liverpool, L17 9PE
Tel: 051-727 8050
- Honeyfold Software Ltd* Standfast House, Bath Place, Barnet, Herts
Tel: 01-441 4130
- Interceptor Micros* Lindon House, The Green, Tadley, Hants
Tel: 07356 71145
- I.S.P. Marketing* 15a Castons Yard, Basingstoke, Hants
Tel: 0256-79-6559

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- Kemp Software* 43 Muswell Hill, London, N10 3PN
Tel: 01-444 5499
- Kobra Micro Marketing* Unit 8, 1-7 Broomfield Road, West Ealing, London, W13 9AP
Tel: 01-997 6666
- Kuma Computers Ltd* Unit 12, Horseshoe Park, Horseshoe Road, Pangbourne, Berks, RG8 7JW
Tel: 07357 4335
- L.B.D. Software* 125 Melody Road, Biggin Hill, Westerham, Kent, TN16 3PL
Tel: 09594 75132
- Legend Trade Distribution* 1 Milton Road, Cambridge, CB4 1UF
Tel: 0223 312453
- Level 9 Computing* 229 Hughenden Road, High Wycombe, Bucks, HP13 5PG
- Llamasoft* 49 Mount Pleasant, Tadley, Hants, RG26 6BN
Tel: 07356 4478
- Longman Software* Longman House, Burnt Mill, Harlow, Essex, CM20 2JE
Tel: 0279 26721
- M. C. Lothlorien* 56a Park Lane, Poynton, Cheshire, SK12 1AE
Tel: 0625 876642
- Melbourne House Ltd* Castle Yard House, Castle Yard, Richmond, TW10 6TF
Tel: 01-940 6064
- Mirrorsoft* Holborn Circus, London EC1 1DQ
Tel: 01-822 3800
- Ocean Software Ltd* 6 Central Street, Manchester, M2 5NS
Tel: 061-832 9143/7049
- Paramount Software* 67 Bishopton Lane, Stockton, Cleveland, TS18 1PU
Tel: 0642 604470
- Peaksoft* 7 Hawthorn Crescent, Burton-on-Trent, DE15 9QP
Tel: 0283 44904
- Phoenix Software Ltd* Spangles House, 116 Marsh Road, Pinner, Middx
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So sudden has been the impact of the microcomputer on our way of life that many users are unaware of the sheer volume of good software that is currently available for the Commodore 64. A wide variety of powerful programs are there to help you in business or run your household more efficiently. There is plenty of software to help the children prepare for examinations and do better at school. An enormous number of arcade and adventure games will keep you and the family entertained, and very young children can learn to read and write in many interesting ways.

The Commodore 64 can help you in every facet of your life even if you never get around to writing your own programs. The software is available - in abundance - and this book sets out all you need to know to select the best.

The Author

John Darling started out as a writer and photographer of sports in general, but later became more interested in writing and photographing electronic sports in particular. He has written several books and is the compiler of Webster's Software Directory.

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