

COMPUTING **CPC**

WITH THE

AMSTRAD



The independent magazine for Amstrad CPC users



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Graphics: Dazzling dynamic displays



Vol. 2 No.9 September 1987

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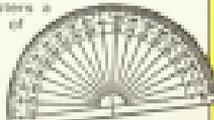
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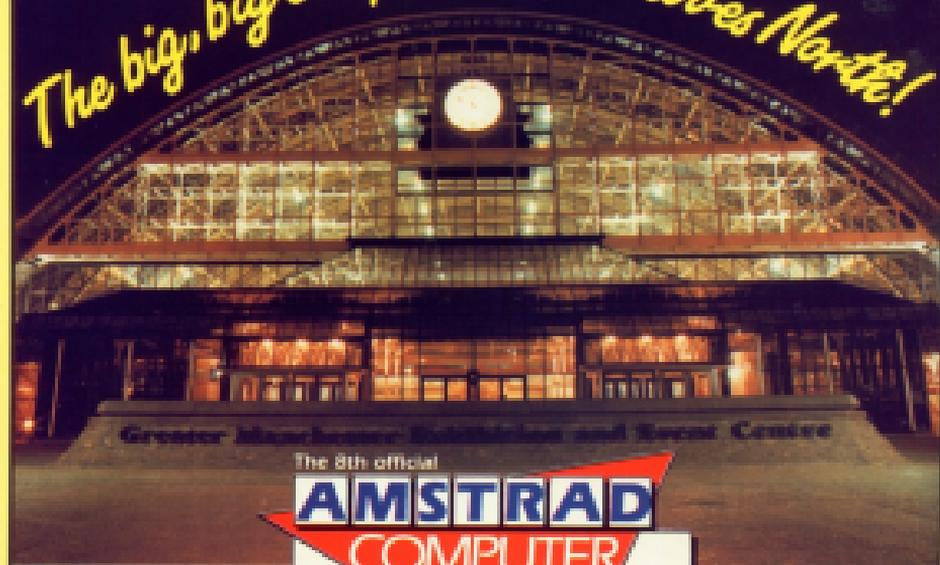
Means of absorbing entertainment - it looks simple but there's more to this puzzle than meets the eye.

63 ANGLER

Nothing to do with fishing, this educational game will teach youngsters a degree of angle games.



The big, big computer show moves North!



Greater Manchester Exhibition and Sport Centre

The 8th official

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SHOW**

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The fastest growing computer show of them all is now moving North – to the most innovative, prestigious exhibition centre in Britain.

This magnificent building will play host to all the major companies in the Amstrad market – including Amstrad themselves, showing the complete range of machines.

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We've set aside a huge area to meet the heavy demand for seats during the non-stop presentations. You'll see demonstrations of new products, hear about all the latest developments, and be able to grill the experts.

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Situated in the heart of the city centre, G-MEX is only one mile from the M602, and there's ample parking space beneath the roof. Within easy reach of Victoria and Piccadilly railway stations.

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Software firms help stop child abuse



CPC users are being asked to help a new national campaign against child abuse. The UK software industry, which raised over £300,000 for the worldwide Live Aid movement through Softaid in 1985, is behind the plan.

This year the software houses have decided to concentrate their efforts within this country and offer a helping hand to the NSPCC/NSPCC.

The campaign is called BACK - Battle Against Cruelty to Kids - and it has

its own super hero spear-heading the fight against abuse of children.

The aim is to raise money through sales of donated entertainment software for a network of special child protection teams being set up by the NSPCC/NSPCC.

Each team, providing 24-hour specialist services, costs £200,000 to create.

Focal point of the fund-raising scheme is the BackPack series - compilations of games selling for under £10 which will go on

sale this autumn.

The Amstrad CPC version contains Keno, Deactivators, Night Gunner, Tempest, Marston, Monty on the Run, Starlion, Nomad, Starstrike and Knightsare.

"The software industry is a unique vehicle for bridging the gap between the fortunate and unfortunate within our younger generations", said BACK spokesman Iul Thomas. "We need the support of CPC users to make BACK a success".

BACK

BATTLE AGAINST
CRUELTY TO KIDS



CLAIMED to be the most advanced and authentic simulation of the F16 fighter plane, *Combat Pilot - Fixed Wing Simulation*, has just been released for the CPCs by Digital Integration.

The player must use a complete set of instruments to

search, locate and destroy targets irrespective of weather conditions.

The weaponry includes missiles, laser-guided bombs and cannon.

Other recent games from Digital include *ATP (Advanced Tactical Fighter)* which portrays the low flying and virtually undetectable Lockheed KP-234 in a real landscape, and *Bobafish*, the water sport application.



Italy, here we come!

THE CPC is helping Amstrad's bid to capture a slice of the rapidly growing Italian computer market.

A wholly owned subsidiary, Amstrad Spa, has been formed with headquarters in Milan. The new company will be staffed by Italian nationals.

All Amstrad branded products - including its entire range of CPC, PCW, and PC computers, printers and peripherals - will

be distributed throughout Italy via multiples and independent specialist retailers.

This year's Italian computer sales are expected to top the 800,000 mark - 200,000 in the home and hobby sector where the CPC is targeted, 200,000 in the business and professional area, and the rest in education, science and technology.

Amstrad chairman Alan Sugar said: "We recognise that the Italian market offers an exciting opportunity to increase our European sales which in the twelve months up to June 1988 were worth nearly £140 million".

Dash for the CPC

FROM Leisure has released the maze game *Revolver Dash* for the CPC, to coincide with the launch of a coin-operated game in the arcade based on the game's star Rodford.

More "physical" apply except that unlike most,

this one has jewels which tumble with the rocks.

Revolver Dash contains guards, fireballs, arrows, enchanted walls, tankam walls and boulders.

The tape versions are £2.99 and disc versions are being prepared.

NEW for the Amstrad

EASIART software

An excellent icon menu driven drawing package using a tracker ball, joystick or a mouse, which enables you to draw or produce masterpieces. Some features:

Copy, pattern fill, colours, zoom, cut and paste, erase, circle, triangle, rectangle, text, grid, line thickness, save, load, printer dump, icon generator. (Tape or disc £16.95 inc. VAT, p&p.)



EASIDRAW software

A superb menu driven package using a tracker ball, a mouse or joystick which allows you to sketch or draw to size.

Some features:

Coordinate display, copy, blend, next, zoom, hatch, linetype, delete, text, circle, arc, box, move origin, save, load, printer dump. (disc only £16.95 inc. VAT p&p.)

Marconi RB2 Tracker Ball

The RB2 design incorporates Marconi's many years of experience in making Tracker Balls for the Military and for Air Traffic Control which demand maximum performance and reliability. The RB2 is designed as a quality device for the serious hobbyist, for educational uses and for low cost CAD/CAM applications. (£29.95 inc. VAT p&p.)

EASIPUBLISH

A new and exciting menu driven package which enables you to create your own page of text and graphical information.

In addition to its superb text rotations and many other features the EASIPUBLISH can work in combination with EASIDRAW and EASIART, converting drawings created on both packages into screen dumps suitable for further manipulation or the adding of text.

(£39.95 inc. VAT p&p.)

EASILABELLER

The program is command driven.

Full on screen text editing facilities allow for quick data entry and data correction.

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Show ace – that's the CPC

The CPC range refused to take a back seat to its more well publicised cousins – the PCWs and PCs – at the seventh Annual Computer Show.

It once again proved to be a major drawing card for visitors to the three-day event and was vividly represented at the exhibition front itself.

Despite the fact that temperatures were in the vigthies in London at the

time, attendances broke all previous records. With flow through the Alexandra Pavilion's turnstiles on the first day almost double that for any previous event, it more than justified organiser Database's move to a 50 per cent larger venue.

So important has the event become in the computer calendar that it attracted journalists from around the world.



MEET THE PLONKER

SOME of the world's best ideas have often been the simplest like the corkcreeper, ring pull cans, sliced bread – and now the Plonker box from Merit Computers 0242 488211.

The product is one of those inventions that makes people wonder why no one has thought of it before.

It is a small plastic disc holder that sticks to the side of the computer keyboard or monitor and was designed to prevent discs from being covered from the add cap of tea or coffee that sometimes gets spilt on the desk.

Plonker's designer is Merit's technical director Bill Edgar. He came up with the

idea while stuck on a cold train last January.

Ray Stevens, the marketing director, initially said no to the Plonker box as he thought it wasn't viable.

He couldn't have been more wrong.

Unwielded for the first time at the show, it was to sell more than 1,000 units within three days.

And such was the interest generated among overseas visitors that Merit reached agreement for distribution with representatives of companies from France, Belgium, Switzerland, Scandinavia, Australia and America. Price of the Plonker box is £4.99.

All go in Tokyo

A JAPANESE magazine received instant updates of what was happening at the Annual Computer Show – thanks to MicroLink.

Jeff Gearing, the UK correspondent of the publication known as *CR4*, regularly uses the electronic mail service to file his Tokyo-based copy from his office in Bristol.

So he couldn't resist the opportunity to use the on-the-spot world wide facility available on the MicroLink stand in the Alexandra Pavilion.

"There is a great deal of interest in Japan about Amstrad products and they want to know all the news as fast as possible", he told *Computing* with the Amstrad CPC.

"And MicroLink just happens to be the most efficient and quickest way of getting the information back to them."

"Even more so this time as I didn't even have to go back to my office to use it."

Jeff first switched to MicroLink after several of his stories fell foul of first

the British then the Japanese postal service.

"MicroLink has proved to be the ideal answer to all of the problems we have faced in the past", he says.

It's the BIG show

BRITAIN'S most impressive exhibition centre outside London – 6 Miles in Manchester – is the setting for the next Annual Computer Show.

The 100,000 sq ft Greater Manchester Exhibition and Events Centre took £20 million and three years to develop from the shell of a listed former railway

station in the city. From October 23 to 25 it will house the country's biggest computer specific show ever to be held outside London.

The venue was chosen for its ability to accommo-

date and reflect Amstrad's current dominance of the UK micro scene.

There will be no shortage of attractions for CPC enthusiasts – including all the latest hardware and software and lots of bargain buys.

Money-saving advance ticket orders are given on Page 4.



CPC for the USA

LEADING UK computer retailer Dixons will take the CPC along when it enters the US market this autumn.

The High Street chain will become America's second largest electrical goods retailer when it takes over 164 500 stores.

Managing director Mark Scatena has said he intends to market the entire range of Amstrad monitors in the US and expects to place orders "significantly in excess of £18 million" in the first year.

Dixons will get its stocks from Video, the American distributor Amstrad appointed at the beginning of this year to boost its flagging US presence. This company is said to be currently selling about 9,000 Amstrad computers a month in the US through its 20,000 retailers.

Dixons, which has close ties with Amstrad dating back to 1985, is expected to take 20,000 units initially.

Amstrad chairman Alan Sugar described the new US venture as "a marvellous deal".

He said it could lead to Dixons becoming "our number one force" in the US in the next twelve months.

Have a heart . . .

FIRST find your grave-robbing equipment. That's the opening instruction for the new CPC horror game *Bride of Frankenstein* on Aristonsoft's 38 Steps labels.

The idea is to revive Frankenstein before his wedding.

The player must disturb graves and crypts to find a pair of lungs, kidneys, a liver, a brain and a good heart.

The game has 60 rooms, seven keys to find, lost souls, hellish ghosts, zombies and a scrofulous angel feature.



Games under fire

THE quality of new games for the CPC has been criticised by Amstrad's software subsidiary.

Amsoft has just released its first three titles for the machine this year as sales manager Mike Mordecai bemoans the lack of quality material.

"We didn't have what we felt was good enough for long enough - and then it just quite some time to convert it", he said.

"Nobody's coming up with anything good any more - just the same old rubbish".

Spy Hunter, *Triple Gold 1* and *Zaxxon* will sell at £71.99 on disc (£39.99 on cassette) - which has brought another gibe from Mordecai.

He said that because the price of 3in discs had dropped firms should be cutting the price of their disc games, as Amsoft had done.

THE GALLIP CHART TOP 20 CPC SOFTWARE

THIS MONTH	LAST MONTH	TITLE (Software House)	PRICE
1	▶	GRAND PRIX SIMULATOR Code Masters	1.99
2	▶	BMX SIMULATORS Code Masters	1.99
3	▶	GHOST HUNTERS Code Masters	1.99
4	▶	BARBARIAN Palera	9.99
5	▼	SIX PAK Air Pak	9.95
6	▼	FEUD Building	1.99
7	▶	BIG 4 Dartall	9.95
8	•	DESTRUCTO Building	1.99
9	•	STRIKE Mastertronic	2.99
10	▼	NINJA Mastertronic	2.99
11	▶	ARMY MOVES Imagine	8.95
12	▼	HEAD OVER HEELS Oxon	8.95
13	•	BALLCRAZY Mastertronic	2.99
14	▶	GAUNTLET US Gold	9.99
15	▼	KONAMI'S COIN-OP HITS Imagine	9.95
16	▼	FOUR GREAT GAMES Milton Value	3.99
17	▼	FOOTBALL MANAGER Addictive	2.99
18	•	BRAINACHE Code Masters	1.99
19	•	JACKLE AND WIDE Building	1.99
20	▼	180 Mastertronic	2.99

Compiled by Gallup/Microscope

Not a great deal of movement in this month's chart, with Code Masters holding the top three positions. Budget games are well in evidence though three non-budget games are in the Top Ten.

ZYNAPS

Hewson
£8.95 case,
£14.95 disc,
joystick or
keys



A PLANETARY system is overflowing with psychotic aliens. Somewhere hidden deep in the stars you'll see the alien base.

Encased in a M1 Scorpion, it's your job to locate the base and destroy it. Simple enough it would seem, but first you must make your way through swarms of space where danger and destruction lurk behind every asteroid.

You start the game in an alien space station. Scrolling right to left in the space station tunnel along which you must travel if you are to escape.

Determined to keep you imprisoned are alien spacecraft, contact with which is deadly. Some of these merely block your way. Others, loaded with mines and firing missiles, are more dangerous.

Along the surface of the tunnel are various grooved installations which send up missiles in your direction. Like the spacecraft, these can be destroyed by a single hit.

This is just as well - there are hordes of alien craft, and you

are useful for the destruction of ground-based targets. Often these will be located along the ground till they collide with the target.

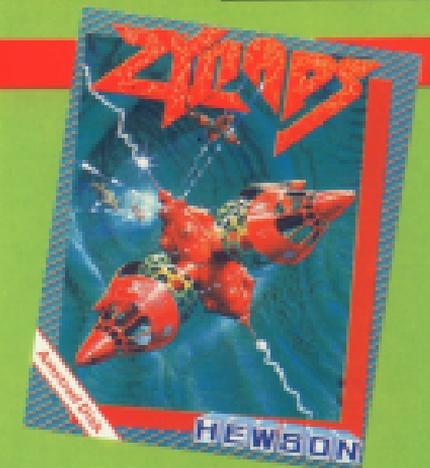
Firing missiles - again in the shape of small white clouds - are even more effective. These can identify potential targets and track them down, often destroying more than one enemy spacecraft at a time.

Space missiles fulfil a similar function but are more selective in their choice of target and will follow and destroy any they are capable of obliterating.

Explosions are suitably dramatic both in terms of colour and sound. Collisions, with one or two exceptions, are very precise - which is essential in a game of fast reflexes and perfect timing.

The Scorpion has four main propulsion levels. Level two is preferable in confined spaces whereas in open combat higher levels are better.

The most important feature, however, is the Scorpion's built-in fuel scoop. When



window bottom right of the screen.

There are five icons which in turn can increase speed, or laser power, activate the bomb thrower, or enable missile targeting and seeker missiles.

These are activated by holding down the fire key whilst collecting the main blue gem. Successful art feature is signified by an accompanying jingle.

The enemy craft come in a variety of forms, some more difficult to deal with than others. In the first level most alien ships are fairly predictable in their movements and are always in front of you.

In later levels they have an uncanny knack of getting behind you or springing on you at great speed. Nearly all are equipped with a variety of missiles and mines. Fortunately, most craft can be disposed of with just one hit.

Less easy to destroy are the alien command ships. These are large and well-protected though firing missiles and sustained laser fire will destroy them. Mother ships are larger still and are consequently much harder to destroy.

There are 16 levels in all and about 450 screens, which is a great deal to get through. As well as alien ships you'll meet a range of natural objects, from huge asteroids that look like giant balls, to multi-coloured space bubbles.

The game is colourful and well-presented, with smooth scrolling and slick craft movement. The Scorpion responds well to both joystick and keys, which is just as well in such a fast game.

Particularly attractive are some of the space sequences where the movement of aliens and asteroids provides a 3D effect. Here things can get decidedly tricky as you try to work out whether the asteroid is heading straight for you or will pass behind.

There's also an impressive array of spot effects, jingles and appropriate noises, all of which add excitement to a game that is already high on thrills.

A game for one or two players, Zynaps is certainly a superior shoot-'em-up and one that will provide hours of fun and frustration in equal quantities.

If this is the kind of game you like, Zynaps is a must!

Tony Hanger



are restricted to three lives, though more can be won providing you gain sufficient points.

The Scorpion has four main weapon systems, each with a specific purpose. The most useful are the pulse lasers with which you do most of the jumping.

Bombing bombs come in the form of small white clouds and

enemy ships are destroyed many of them leave behind a small blue gem for you to collect. As the fuel scoop functions automatically, this is simply a matter of firing directly into the gem.

These gems give your ship the necessary power to activate its main systems. Each time a gem is collected a different icon appears in the

Presentation 90%

User-definitable keys, two-player option.

Graphics 91%

Colourful, and smooth scrolling.

Sound 92%

A good range of spot effects and jingles.

Playability 90%

Easy to get into - difficult to leave.

Additive qualities 90%

90% keep you dipping well past midnight.

Value for money 90%

Some great value for your cashless coin.

Overall 91%

Wicked!

THE LIVING DAYLIGHTS



Demarc
£9.95 cass,
£14.95 disc,
joystick or
keys

DEMARC describes itself as the master of marketing. Anyone who can make a living out of the files of its last Bond film, *Octopussy*, is certainly justified in making such a claim. As the CPC noted in the latest issue I scanned the instructions and read of press material. According to the file, the eight levels are based on locations from the film and your job is to guide 007 as he completes a mission on each.

The tasks are appropriate to the equivalent point in the story, but as I haven't seen the film I'll take Demarc's word for it.

After making your choice of joystick or defensible keys, level one is served up. Bond is leading Kissinger's defences, and a head with a point pellet gun has been placed against the SAS.

As Bond runs to the right Kissinger scolds off to the left. This is very well done, the backdrop shifts at different rates to heighten the realism and 007 is nearly arrested.

Well, wouldn't you be if the SAS kept peeping up from behind rocks and bushes for a job shot? Actually they're only supposed to have paint pellets as well, but one may be a Russian assassin armed out without slugs.

As he runs 007 must negotiate rocks which can trip him up and leave him a sitting duck for a few moments.

Between one level and the next Bond has five seconds in 007 workshop to pick a weapon

from those presented to aid to the Walker FPC he always carries. Only one from the selection will be effective, so some trial and error is in order.

As the game progresses Bond has to contend with a hostile helicopter, a mechanical miliner, killer balloons, guards and the villain of the piece, East Whizzer.

If *The Living Daylights* has a failing it's the fact that the gameplay is almost the same on each level. The scenery changes but basically you're always contending with the similar hazards in different guises and combinations.

More variety could have made it a very good game. As it is, it's a lot better than I expected, certainly good graphics but only average playability.

Andy Jackson

Presentation 80%

Neat, but no high score table or two-player option.

Graphics 90%

Nicely done, a good scrolling and animation.

Sound 78%

It's there, but I'm rarely impressed by games sound FX.

Playability 70%

Tends to get repetitive; some levels too easy.

Addictive qualities 60%

Lacks long term stickiness.

Value for money 65%

Games at this price level need more content and saving points.

Overall 80%

Lacks good; falls down on the all-important playability.

SAMURAI TRILOGY

Gremlin
Graphica
£9.99 cass,
£14.99 disc,
joystick only

In the retro-cool past the computer games market was crawling with martial arts games. These offered 101 ways to punch, kick and hack your opponent to bits for the comfort and safety of your armchair.

It would appear that Gremlin is trying to resurrect this trend by releasing the *Samurai Trilogy*, a compendium of three martial arts.

While displaying your abilities during combat you were spotted by a talent scout, and as a result you are now about to begin training under the watchful eye of the Supreme Master Chu To with a view to becoming one of them.

Now you are ready to allocate combat points to attack and defence tactics. Five points are distributed between the four strategies. The attack and defence routines are repeated before every one minute bout, and the bouts continue until there is an outright winner.

From the graphics point of view *Samurai Trilogy* is not particularly impressive. The characters are large, chunky, and sparsely detailed. Animation is a little better, being smooth and flicker free.

The action sequences are varied and refined; the different styles of the three disciplines are well. The Karate jumping cut is particularly impressive.

The ability to modify your own characterisation is quite novel, but that aside, I'm afraid *Samurai Trilogy* is not the game to rekindle the martial arts flame.

Steve Brock



Presentation 87%

Very useful practice option.

Graphics 78%

Large but simple.

Sound 78%

Reasonable tone, but limited sound effects.

Playability 78%

The combat sequences are varied, but nothing exceptional.

Addictive qualities 75%

The save game facility means you don't have to fight the lesser opponents every time.

Value for money 75%

Fair for the content.

Overall 78%

A very average game.

Your training programme encompasses the disciplines of Karate, Karate and Samurai sword fighting.

Once the main program has loaded you are given the opportunity to practice any of the disciplines, which are held as three separate groups of data files on the flip side of the cassette. When you are satisfied with your performance you can play the game for real.

You are presented with a list of six names from which you choose your first opponent. Once selected, a brief description of your opponent's background is displayed, and from this you can formulate a plan to combat his strengths and weaknesses.

There follows a section in which you specify your own strategy - skill, speed, stamina or strength.

WONDER BOY

Activision
£9.99 cass.
£14.99 disc.
joystick or
keys

DESCRIBED as a cartoon adventure, *Wonder Boy* has you directing the efforts of the hero in his quest to rescue girlfriend Lina from the clutches of the evil King.

The game starts his mission clad only in a pair of trousers - jumping the gun a little

ahead faster but improves as *WB* moves on through a message, a needle and one forward from lots of green columns.

That's as far as it got because although the game seems easy at first, the forest is more of a maze area and things soon hot up.

The scrolling is reasonable considering the amount of work being done, but I thought a bit more imagination could have been put into the artwork - it's a bit bland in places.

The choice of colours is occasionally pretty and some of the

GALLETRON



Bulldog.
£1.99 cass.
joystick or
keys

GALLETRON has survived the intergalactic war of 200 centuries ago. Pleased well out of the retrospective marketplace, it is a glittering jewel in the decaying solar system.

All was peaceful until the arrival of the Azn's, a nation of renegades who wanted the planet for themselves. Invading an area nobody had even dreamed of, Galatron's mission they required for a full scale attack.

Over the years the Azn's have improved their technology to such a degree that it would be futile to make a direct attack upon them. So, as a lone fighter you must make your way to the heart of the Azn empire.

This is a medium paced shoot-'em-up, played over a series of flick screens. Your Tiger battle craft is controlled using the traditional method that became popular with Thrust and the Ultimate 30 games.

Instead of moving the joystick in the direction you want to go, pushing left or right rotates the craft and pushing forward moves the craft in the direction it is facing.

The actual game is not very original and mainly involves shooting aliens and picking up equipment.

The goal is to locate and destroy the communications tower. Once you have done this you are placed on another set of screens with the same goal and a few different aliens to deal with no increase in difficulty.

To make an otherwise easy game more of a challenge, your

ship requires frequent refuelling from supplies scattered around. One tank lasts for around two screens of movement, though the positioning of the containers makes it hard to reach a refuelling spot in time.

Your laser also has an energy limit, though it is not depleted at such a drastic rate as your fuel. Should it become depleted you can use a magnetron power beam, which can eradicate all Azn's weapons - but also reduces your fuel supply.

Overall *Galatron* does not live up to Bulldog's brilliant reputation, but it can provide a challenge for a few minutes.

Anthony Clarke

Presentation 67%

Well set out title screen, but little in the way of options.

Graphics 76%

Most defined Mode 1 graphics which are a little hard to make out on some screens.

Sound 15%

The music is no more than random beeps and the player's sound very simple.

Playability 45%

The controls are much too sensitive.

Additive qualities 40%

No more than a 10 minute wonder.

Value for money 48%

It may be a budget game but it would be better off as a 16 game with a better title.

Overall 47%

Only worth buying if you have most other Amstrad games on the market.



you get rid, but that's the least of his problems.

The usual inverse space territories, each made up of four levels which in turn are divided into four areas. That's 112 sections to get through and as *WB* moves eastwards the scenery won't be left revealing new obstacles to be overcome.

These include breakers, killer waves, poison traps, flamingo pits, great big spikes and drop from the roof (ouch!) and lots, lots more.

Fortunately *WB* can jump about and rotate with some ease. He doesn't carry an infinite supply of these so he must crack open the eggs he finds along the way.

Items are goodies such as more lives, a scoreboard or a guard on fire who will tag along and provide continuously a article.

Also there's food to be eaten to maintain *WB*'s vitality and his health bar. Some items can be collected for bonus points. Should he run out of energy, mess with a crater or fall off his perch, *WB* starts a subsection in the current area. The scenery starts off as a

spiral of flowers, but this doesn't distract from the game. *Wonder Boy* is great fun, heavily addictive and I'd have been happy to part with money for it.

Jon Sharp

Presentation 85%

One or two players. Tinting up points sequences fascinating, otherwise OK.

Graphics 80%

Could have been prettier at this price.

Sound 65%

Unremarkable, but who cares?

Playability 98%

Yes!

Additive qualities 95%

Excellent. A real youth responder.

Value for money 80%

A wee bit pricey.

Overall 88%

Very entertaining - worth getting.

AMAUROTE



Mastertronic £2.99 cass, keys only

The scenario for Amaurote sounds rather like a horror film: You are all alone in a city infested with killer insects.

The city's populace originally fought back, but you are now the sole remaining uninvited soldier. As such you have been selected to recapture the city by destroying the invaders.

There are several types of insect - from drones, right up to the Queen herself. You are equipped with an armoured car, radio, radar scanner, and a supply of bombs. If you run out of these you can radio for more (or for sanity after a time).

The inlay panel says that you can use joystick or keys - but I couldn't get any response from my Rembrandt sticks. This proved a real handicap since movement is mainly diagonal, so using keys takes a bit of getting used to.

One of the best loading screens I have ever seen shows that this is a game with a difference. The theme tune - well-composed, spooky, eerie music - is entirely in keeping with the rest of the program.

You begin in one of the city's 25 sections, an area of 2500 screens. You are armed with bombs which are hard to use in good effect; killing the insects is harder than killing the average alien, and although this means the game is more of a challenge, it also detracts from its initial appeal.

The graphics are reasonably detailed, but only in two colours which I found rather monotonous. Movement is slow, but smooth. The sprites are sup-

erly designed, but although they are quite large, at times it is difficult to see what is happening.

Amaurote shows a lot of technically excellent programming and design, but is missing the fundamental ingredient - fun. Trying to complete your mission requires lots of quite hard mental work with very little immediate sign of it paying off.

Despite being very impressed by the game idea, graphic design and especially sound, I don't get all that much enjoyment out of playing it - it was just too sensible.

David Lester

Presentation 80%

Very clear, complete and intelligibly written instructions.

Graphics 65%

Well-designed, but lacking colour.

Sound 90%

The opening theme is the best reason yet for stereo computers.

Playability 30%

Joystick control didn't work, keys hard to master, and very slow action.

Additive qualities 50%

Too predictable and slow to get the adrenalin flowing.

Value for money 85%

Technically superior to loads of full-priced software.

Overall 70%

Much more worth £2.99, and the game has depth if you are willing to persevere.

ULTIMA RATIO

Firebird £1.99 cass, joystick or keys

DESPITE the implications of the name, Ultima Ratio has nothing to do with the nuclear disaster genre of computer games. Instead, this is a fast and furious, smooth-scrolling shoot-'em-up.

Instructions are sparse, but it

can be shown on one screen. So as soon as you reach the border the display switches you to the next section in one jump, leaving you entirely disorientated. If you're in the middle of a fight this can mean the difference between life and death.

Without this annoyance, the game would be much more playable. Even so, once you've got the hang of the quirk, you can still enjoy the blasting.

Sound effects are limited to



appear that you have just volunteered to attack the Ultima Ratio - a nice stage battle platform, complete with all the latest gadgets and weaponry. If you fail, Mother Earth could be doomed - yes, again!

Once loaded, there is a refreshing set of introductory screens, complete with the humorous, "If you want you can press a key, but you don't have to". The scrolling also has a background as very impressive, more so since you can get rid of them if you prefer.

You man a fairly standard spaceship armed with a laser cannon. There are lots of small quips on the screen when you start - some move around, shooting at you, while others just sit there. Some things can be destroyed, but not all. Yet nowhere is it explained what the graphics represent.

As usual you have several lives but you need them all, and none - in every game I played, I lost a life for no apparent reason. When you hit the enemy, there is a slight delay before you both explode.

The graphics are colourful and bright, and certainly move very smoothly.

Unfortunately, each stage of the battle platform is larger than

explosions and laser fire, but since these are so frequent there would be no room for anything else.

Ultima Ratio gives a slightly new perspective to space shoot-'em-ups. It's a shame the screen switching and mysterious deaths spoil it.

David Lester

Presentation 95%

Usual options, and some interesting intro screens.

Graphics 80%

Superb smooth sprites lit down by the screen defects.

Sound 60%

Noise effects, but nothing special.

Playability 75%

OK for a quick blasting session.

Additive qualities 40%

Let down by the sudden deaths.

Value for money 70%

For the quirk, nicely finished for a budget game.

Overall 58%

Nice idea, shame about the hassle.

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THE FIFTH QUADRANT

Bubble Bus
£8.95 case,
£12.95 disc,
joystick and
keys

The crew of the Orion spaceship arrive from a form of suspended animation only to find their craft captured by a mysterious alien force, the Zimen.

They find the ship's com-

and, but you should be restless if you considered this game an animated shoot-'em-up.

It is, in fact, a very intelligent problem-solving game, one of the small number that can genuinely call themselves arcade adventures.

You have all the traditional arcade adventure puzzles and features, such as locked doors and power replenishing points spread over the game's 230 locations. But you also have the alien code to crack and the

THE FEAR



Mastertronic
£2.99 case,
joystick or
keys

UNAIDED, the acolyte of evil, has acquired an ancient artifact of incredible power — the Fear. Princess Silver and Prince Iron set out on a journey across many lands, only to find a dying Lisa Carr — but not the case containing the artifact.

Your task, as Fred or Silver, is to locate the Fear and place it within the sacred circle of holy stones in the nearby monastery.

Such is the stuff of great quests, but on actually playing this masterpiece offering I started to believe that the Fear was in fact something as horrible as an infinite loop (see below).

Every upon screen of text, graphics, and very pertinent it is too, check-full of domains, creatures, quests, lot swords and the like. Now this is fine but it would have been far more readable and effective to print all this in a booklet which could be read while the program loads it.

At least the game controls could have been outlined on the jelly card. I can see people having to wade through the text every time they want to refresh their memory as to the controls — slightly annoying.

The Fear started off itself an arcade adventure as it relies more of exploration and problem-solving than on manual dexterity. You control one of the two characters, both being examples of colourful, chunky graphics.

Such, the environment Fred or Silver must explore, and the creatures they meet, light, are

not of the same quality.

The game's most interesting feature is undoubtedly the option where the two characters are controlled individually and simultaneously.

The programmers have opted for the sensible solution of allowing both players to function while on the same screen, but alternating between them when they lead their different ways.

This feature aside, the program is uninspired. The graphics are flat and most aspects of the game are plain.

But where that would have guaranteed big sales in 1988, it's just not enough, even with a budget price tag, in today's highly competitive market place.

Clive Gifford



puters reprogrammed in some alien language and the craft swimming with deadly energy eaters. Your task is obvious: Regain control of the Orion.

You're put in charge of one of the four robot droids, very nice relatives of Star Wars' R2D2 down to their revving heads. Given such inspiring names as Bolt and Slog, these droids all perform specific tasks aboard ship. In attempting to defeat the Zimen, one must be taken of their different attributes. One is good at solving puzzles and playing 3D chess, another is mechanically gifted and so on.

You can switch your control to any robot at any stage, and can transfer power from one to another if you can get them in the same room together.

At the beginning of the game, you'll find one robot dormant and another trapped in a room on the ship. As the game progresses you can manage to free them and use your full droid force to defeat the Zimen.

Individual Zimen attack you after you enter most rooms on the ship. These can be dispatched with your limited supply of fire bolts, but their numbers, their dogged persistence and their sapping of your power takes its toll in the

Other robots to release.

One thing that isn't plain, however, is the enjoyment derived from this game. It rates a refreshing alternative to the standard arcade adventure fare.

Clive Gifford

Presentation 71%

Selection made a straightforward task.

Graphics 88%

Graphics designed with thought, care and a touch of personality.

Sound 70%

Effective use of music and effects.

Playability 80%

Very responsive, can overcome odds occasionally.

Additive qualities 85%

That code is begging me, perhaps if I try...

Value for money 75%

Should amuse for some time.

Overall 78%

An interesting game relying a little more on the gory matter.

Presentation 65%

Character selection and two-player option.

Graphics 52%

A year behind any decent graphic adventures.

Sound 45%

The usual rpg and mini explanations.

Playability 50%

Control of characters is reasonable but the monster's movement is very basic indeed.

Additive qualities 33%

Might turn you to coffee; a possible cure for insomnia.

Value for money 51%

Nothing special.

Overall 53%

Shouldn't put The Fear into Mastertronic's competition.

STRIKE

Mastertronic
£2.99 case,
joystick or
keys

YOU just can't keep a good game down. Tempest Bowling – the real thing – distilled in the '80s format for yourself provided – hot and new we

slice or bowl across the lane. The nice thing is, I suppose, that if you release the ball on the very edge of the lane it stays there all the way to the pins. These are four levels of difficulty and the computer can play a pretty mean game. Though after getting a couple of strikes it can quite easily drop the ball on its own's face – the wall! This is one for temper aficion-



have a computer version.

You can play against the computer or a friend – or an enemy. Both players see the same lane – though he does change his shot – and he plays change his shot – and he plays change his shot for both sides.

The screen shows the bowling end of the lane and an inset shows the pins. The view is rather strange – a sort of 2D representation of a 3D isometric perspective. It's much rather than had a view down the lane – it feels as if you're looking uphill into the house head door.

You move your man left or right to aim, then press fire to swing the ball and release it to bowl. There are no little marks on the floor to help you position your man correctly – as a guide I used the frame numbers at the bottom of the screen.

Instead tells you to release the ball when your man's arm is straight to form, but it's too late to drop the ball on his foot and flog up and down – it's funny the first couple of times.

If you release the ball too early he drops it. So the tendency is always to release the ball too late, but with a little practice you should be able to get the timing right most of the time. There's very little leeway allowed here.

You can't induce a hook or a

roll, only I think, it's not bad. But then it's not particularly good. Still, it makes a change from climbing ladders and popping aliens.

Ian Hough

Presentation 70%

It looks good, for high-wire table.

Graphics 78%

Nice graphics. Weird perspective.

Sound 80%

Makes the most of the Amstrad's sound chip.

Playability 45%

Limited number of possible actions. Depends too much precision.

Additive qualities 40%

I'd rather watch Wogan!

Value for money 50%

Only if you're a temper fan with £2.99 in your pocket.

Overall 42%

Didn't load me over.

EXPRESS RAIDER


Data East
£9.95, case
joystick or
keys

A GREAT deal of work has gone into producing the Amstrad version of Express Raider, and Data East has quite surpassed my expectations.

As an outlaw who wants to rob the fastest train in the west you start by being attacked by the sheriff as you stand beside a motionless train.

Guns and fat lights are not the only methods of dispatching enemies – laser rooms are also available. In all there are 14 possible forms of attack and defence.

Knifing allows you to dodge bombs, knives and coal, while lying flat is the only way of avoiding bullets.

One unusual move is the lunge, which although hard to judge, will get you out of the way of big hits.

The second stage consists of knocking out dogs who run at you full tilt. Once all the mutants have been bashed, you must jump aboard the train and make your way to the engine and the gold.

Each carriage has its own danger – bottle-throwing drinkers, sharpshooters, poison gas, goldmine, water legs, band cowboys who just push you off the train, and many more which all make life hot.

There are several ways to lose a life. The most common is that your energy is depleted and you die from exhaustion. Added to this is a time factor for completing each screen, and a bomb placed between the engine and the rest of the train which goes off and leaves you

to grid to a halt.

In the last stage you ride a horse Indian-style – ducking to one side to avoid bullets. Guards defending the train pop up and wait for you to get into their sights before shooting.

Express Raider impressed me greatly – the game runs fast and fluently with great, flicker-free animation. Some of the sounds are rather basic, but this matters little when the action is heating up.

The sound ranges from nice trap effects to a rather repetitive abandoned town. All in all it's a good collection of an addictive arcade game.

Anthony Clarke

Presentation 91%

A good range of options and a fairly logical keyboard layout.

Graphics 85%

Most are good, some are one colour wonders – you wonder what they are.

Sound 75%

The train effects add greatly to the gameplay.

Playability 89%

Easy to master in the early stages, and three levels of difficulty to keep the challenge going.

Additive qualities 75%

One conversion that truly captures the addictiveness of the original.

Value for money 77%

Worth almost every penny.

Overall 89%

A good blast, but some of the graphics could be better.

EXOLON

Newson
£8.95 case,
£14.95 disc,
joystick or
keys

AS VIGOR, an alien among humans, you have been selected to challenge the might of an alien empire. Armed only with a small hand blaster and a pocket full of pulse bombs you begin this epic mission.

Successful penetration of the alien defenses is rewarded with greater fire power and sections of an impenetrable exoskeleton. This will prove invaluable as you make your way through over 100 screens of explosive action.

Exolon is played as individual screens, with 25 screens constituting one level. Each level contains several chambers where adversaries and the exoskeleton are to be found.

You start out with 99 rounds of ammo for the blaster and 12 pulse bombs. Although this appears quite generous, a dedicated player, like myself, will soon find himself looking for fresh supplies.

There are to be found in gold chests, waiting through one of these devices replenishes either ammo or bombs, depending on which is the most depleted.

Waving just lighted from your spaceship you stand firmly in the bottom left hand corner of the screen. To your right is a powerful pulse blaster.

Detecting your presence the metal monstrosity pumps blast after blast of electric doom in your direction. Guiding the first volley your return fire with the blaster.

The facility of this approach

soon becomes apparent as the shells coasted in all directions - time for a pulse bomb. An accurately lobbed bomb explodes against the cannon's support structure, shattering the framework with shrapnel. **Victory!** **1st Alive!**

Screen two contains a deserted alien missile base, and encountering an resistance you see it to the ground and go on your way.

The third screen is another easy one, but serves to demonstrate the teleport system. Teleports are always found in pairs - stand in one and press the jump button and you are transported dramatically to the second. This is a most useful technique for avoiding garbed



missiles on future screens.

About this time you encounter your first mobile alien - blue spheres which move towards you with a sine wave motion. Unfortunately, the amplitude of this motion varies quite considerably, making these simple shapes the greatest cause of ultimate demise in the whole game.

Other alien life forms are encapsulated in pulsating spheres. When breached with a pulse bomb these little pods release dozens of swimming bots.

Hang on to screen six of your path. The instant you enter you are fired upon by a double-barrelled anti-personal missile launcher.

This becomes progressively more difficult as you walk 100



of the hall of missiles, firing as you go. Success at this point earns you 2000 points for leavers.

Following a brief encounter with a couple of pulse cannons and a row of strategically placed land mines, you meet the first of the guided missiles.

These are notoriously difficult to dodge or shoot and are best dealt with by lowering and destroying the guidance system.

By this time you should have reached screen nine - walk on to the screen cautiously as you'll be caught unaware by the pneumatic ram as it rises from the floor.

Navigate this and you can enter the first of the armoured chambers, which provides you with a twin-barrelled blaster. This is a valuable upgrade as screen 10 sees the re-appearance of the anti-personal missile launcher and fighter planes.

The most potent of you will soon realise that this twin-barrelled blaster is designed to destroy both streams of missiles that emerge from a launcher.

When you reach screen 14 don't be tempted to use the teleport to avoid the missile launcher, walk straight through it - it's the easiest 2000 points in the game!

A combination of green jellyfish and guided missiles provide the entertainment on screen 15. The puzzling blast on number 16 is an unusual looking, but handily avoided, land mine.

Take the opportunity to learn yourself an screen 17, but leave to the so-called pneumatic ram. The next screen appears to have two routes through it. The first looks very easy - just teleport to a higher level, pick up the ammo dump and walk on to screen 18.

This seemed too easy, and instead told me to take the lower level which involved handling a fifth pod, jumping a land mine and destroying a

missile. I wasted my credits and primarily lost my remaining two lives. I have still to find out which is the correct route to screen 18.

Graphically Exolon is a masterpiece. There have been several games in the past which have used highly coloured, well-detailed graphics, but they have always been flawed by sluggish animation.

Exolon's graphics surpass all that have gone before, yet somehow combine that with flawless animation.

This attention to detail is maintained in the animation. The alien pulse cannon results powerfully as each bolt leaves the barrel, and there is a dramatic dematerialisation routine as your atoms leap between teleport chambers.

Even death itself occurs most dramatically, with you being blown from your feet with arms and legs flying.

Having played Exolon for the last few weeks I hardly rate it my favourite game of 1987 - ranking some close!

Jan Revis

Presentation 88%

User-definable keys and a whopping high-score table.

Graphics 95%

The best I've ever seen on the Amstrad!

Sound 87%

Good effects and a cracking title tune.

Playability 93%

A game where skill is rewarded handsomely.

Addictive qualities 93%

Go away I'm playing!

Value for money 91%

I would have paid double.

Overall 96%

The best accolade that I've ever awarded.



We looked last month at writing procedures with Logo's built-in text editor. If you don't like that you can use your favourite word processor - just make sure that files are saved in ASCII format and have the extension .log.

In fact as you write larger programs you may be forced to do this anyway because the program which runs Logo is quite large and doesn't leave a lot of memory free when loaded. The memory not taken up by the Logo program has to contain the procedures you write, variables and any text you are editing.

If you edit an existing procedure you don't want to do it directly. What happens is that the definition in memory is used to generate the text that you see.

This is stored in a separate area called the edit buffer. So when you edit a procedure first it is duplicated as text into this buffer. As Logo is short on free memory this area isn't large and you don't have to be working on a very big program before you're told "my edit buffer is full" when you try to use the editor with substantial amounts of text.

A final tip - when you suffer from an error message and want to edit the offending procedure, simply type `edit` rather than `name` and Logo will realise that you want to edit the procedure where it's just caught you out.

What I'd like you to do is to use the text editor to write a procedure `poly`. Its function will be to take two parameters and use them to draw a regular polygon with a specified size and number of sides. If you managed `pent` and `hex` this shouldn't present any problems. When you've done that, try to work out how to use `poly` to draw circles.

It will help if you know how to divide two numbers in Logo. Try this at the ? prompt:

```
1 1 4
```

and now this:

```
1 1 4
```

As you can see they both give the same result and both forms are valid. Let's now take a closer look at variables. We touched on them when passing parameters to procedures and you'll remember that they are a useful way of storing a value for use somewhere else in the program. Variables can store either a number or a string of characters. In some other languages you have to use different types of variable for the two cases but in

Let's string along with variables

IAN SHARPE continues his exploration of the wonderful world of Logo on the CPC

Logo you don't. Here are two examples:

```
to greet
  ask 'a
  ask 'b
end
```

The first statement is simply inwards the area devoted to text to fill the screen. Next you are telling Logo to put six in the variable `a`. The variable `b` is then made to store a string of four characters - `feed`.

Notice in the second case you need an opening quote to tell Logo that it's dealing with a string of characters. If it's a number like the first example you can miss out the quote because a number can't be mistaken for a procedure name - but miss on that later.

So what can you do with a variable once you've put something in it? First you'll need to get whatever is in there back out again. This is simply a matter of putting a colon before the variable name so:

```
to
```

will output 6 and:

```
to
```

will output `feed`. Don't take my word for it, type them in! When I say output I mean that `6` or `feed` are read out of the variable and delivered to the next statement in the program. In Logo this is the statement to the left, but in command mode there isn't one so the value is printed on the screen.

Within a program you need a special command to send the output to the screen, for example the primitive `pr`.

In the second line the variable `greet`

```
to message
  ask 'greeting 'hello
  pr 'greeting
end

message
```

is made to hold 'hello' and in the third its contents are extracted with the colon and given to `pr`. If you left out the `pr` statement Logo wouldn't know what to do with `hello` from greeting and would report the fact with a nice friendly error message.

The instruction `pr` isn't the only way to print information on the screen but to save confusion we'll stick with it for now.

Here's another example, this time in a loop. To make things clearer I've written the loop slightly differently from what we've used before. Instead of putting everything on one line I've listed the parts separately.

This is better practice than lumping everything together because it's easier to see what's going on. Unfortunately if you define a procedure this way and go back to edit it later, Logo will join the statements in the loop together, so unless you're working with a word processor there isn't much to be gained.

```
to countup
  ask 'a 0
  repeat 10
  (
    ask 'a ' + a
    pr 'a
  )
end
```

After declaring the procedure `countup` we make `a` hold zero. Next we

Turn to Page 28

4 From Page 19

start the loop and it's going to run the instructions between the square brackets five times. The first of these is to extract the number in `a`, add one to it and put the result back into `a` (make `a`).

You could translate that line from Logo into English like this: Make `a` equal to one plus whatever is already in `a`. The other instruction in the loop is to print out the contents of `a`. If you run it, you'll see the numbers 1 to 5 displayed.

If you left out the `make "a 0` statement before the start of the loop an error would be reported. That's because to get anything out of a Logo variable you have to put something into it first, even if that something is nothing — the number zero.

It's as if the variable is a box and the values put into it are written on a strip of paper. If you want to get the number zero out of the box it has to contain a strip of paper with "0" on it, otherwise there's nothing to get out. If you try, Logo will see that the cupboard is bare and say so.

This is what Basic (which assumed that a variable contains zero until you make it hold something else).

Whenever you put another number in the variable the original one is rubbed out and the new one substituted. When you read the number out of the variable with a colon it is just that — a reading operation, the value isn't removed, it's still in there.

A variable can be used in any position where you could also use a number or a string. If you type the following lines in you'll see what I mean and also meet some simple arithmetical functions.

```
ask '1 + 1
to
ask '2
ask '3
ask '10 + 10
to
ask '10 * 10
to
```

If you're dealing with variables holding strings you can't use arithmetic on them:

```
ask '1
ask 'hello
to + 10
```

will throw a spanner in the works and Logo will grind to a halt. The operators `+` and `*` can only be used on numbers. The only one you may want to use with strings is `+` to add two of them together. For this situation Logo

provides a special command — `word`. Type the following sequence in, it should make things clear.

```
ask '1
ask 'hello
word to to
word to to
ask 'word to to to
to
```

I said earlier that to put a string into a variable you need an opening quote or the string could be mistaken for a procedure name. What happens if you miss out the quote and `fred` is the name of a procedure? In most cases you would see another error report — "fred didn't expect to make". However there is a way of writing a procedure so that on completion it produces (or returns) a value, as if you were getting that value out of a variable.

```
to fred
pr hello
to there
end
ask 'fred
to
```

If you typed that in you'll be looking at `hello` and three on separate lines followed by the error message. The `make` is looking for something to put in a box there isn't anything.

The procedure `fred` prints a message, it isn't a value and it doesn't generate one in the way that extracting the contents of a variable does.

Now change the second line of `fred` to:

```
pr hello
```

and try again — see what happens! The `pr` command causes `fred` to finish at the point rather than continuing to the `pr`. Also it outputs `hello` from `fred`, so in this case when `fred` has finished it generates a value in exactly the same way as the variable `fred` in:

```
ask 'fred hello
ask 'fred
```

You can also make procedures output values held in a variable:

```
to square :number
pr :number * :number
end
square 4
ask 'square 4
to
```

As you can see, this is a very useful feature. Can you write a procedure

I talk to the trees . . .



Figure 1. The output from the `Trees` program using parameters 45,50,4 and 70,55,4

```
to tree :angle :length :start
to :length = 0 :start
to :angle / 2
to :length
tree :angle :length + 0.5 :start - 1
to :length
to :angle
to :length
tree :angle :length + 0.5 :start - 1
to :length
to :angle / 2
end
```

Program 1

`average` that outputs the average of two parameters?

It may seem confusing that a procedure and a variable can have the same name but I think you'll appreciate that Logo can tell which one you mean from the context and way you use it — with a colon, an opening quote or nothing at all.

This is a theme which we'll develop further in the coming months.

So now you know about variables. As with everything else we've covered so far, I haven't explained all there is about them. There are local and global variables still to discuss.

As you probably won't yet appreciate their significance it's better to pass on to something else, but for the time being, `Trees`, Program 1, shows what you can achieve using local variables to their best effect. Feel free to experiment with the parameters to obtain different effects.

Next month we'll see how to read input from the keyboard and start making decisions using `if` statements.

Up, up and away!



By **TONY LEAH**

WHILE Richard Branson was preparing to prove that what goes up must come down, another race — this time against the clock — was going on in rural Buckinghamshire.

The fledgling software house of Maxwell Technology situated in the quiet village of Shabbington had been approached by Virgin Games to design a game based on Branson's latest assault on the Guinness Book of World Records.

The task was to create a playable game around Branson, his companion Per Lindstrand, and their giant balloon Virgin Atlantic Flyer.

"Our guidelines were simple: 'Make it more of a game and less of a simulation' than the one about the Virgin Atlantic Challenger," said managing director John Maxwell.

It was the first commission of its type that Maxwell Technology, formed less than six months earlier, had received — and it had to be completed within a very tight schedule.

Dare-devil Branson's bid with Lindstrand to make the first ever Atlantic crossing by hot-air balloon was still a few weeks away.

But at the time no-one knew exactly when the epic journey would begin, or whether the game could beat the balloon to the starting gate.

The anxious waiting to take off from Maine, and the drama that was to be played out later off the Irish coast, had their own minor echoes at Shabbington where John Maxwell and his team began their project with a blank notepad and one eye on the calendar.

Fortunately they had plenty of experience and ability on their side.

Maxwell himself, now 43, was closely associated with the Darling family of Codemasters fame. And he was later responsible for producing six products a month every month for Mastertronic in its heyday.

His fellow Maxwell Technology director and design team leader David Jones, 27, started programming on the Video Devil in 1980. His first commercial success was *Readers Keepers*, which went on to sell over 300,000 copies.

"One of David's most important benefits to Maxwell Technology is his knack of helping programmers of all levels of ability to progress and solve problems", says an admiring John Maxwell.

Initially, many hours were spent trying out various ideas on paper. Several difficulties were encountered — not least the problem of designing



an exciting game based on a balloon journey. Apart from its beginning and end, crossing the Atlantic by balloon is about as eventful and exciting as a bus ride.

However, out of the mouths of babes and sucklings comes forth. A very Good idea. Like many software houses, Maxwell Technology is a magnet for eleven-clogs kids — the pink-cheeked gipsy-pink who hang around giving advice to over-the-hill programmers of 33.

Shabblington's version is called Dominic and he's 14. He and David's girlfriend Stacey worked out the idea of using a bird for the control system and — hey presto! — Trans-Atlantic Balloon Challenge: The Game came together on paper.

There followed long discussions with the programmers who had to implement the idea in various versions.

Eventually agreement was reached within the Maxwell team, the idea was presented to Virgin Games who liked it, and contracts were signed.

Coding and design on the Amstrad CPC was the responsibility of 22-year-

old Stephen Curtis. Programming since he left school five years ago, Stephen has had no fewer than 20 games published — among them *Mavis Meets the Bikers* for Autamata, *Plumber* for Interscop, *Keyfile* for Keysoft and *Nantemiquitos* for Mastertronic.

Stephen's responsibilities involved implementing the design on the CPC, and because time was so short he had to work out a punishing work schedule to complete the task.

His first job was to specify design of the graphics for Nigel Kennard, whose computer graphics have won competitions in such varied publications as the *Daily Express* and *PCW* magazine.

Stephen's second task was design of the control system for the game's balloon. This is far more sophisticated than might appear — the game includes a complex mathematical calculation involving solar energy, fuel deposition, rate of ascent and descent at various times of the day, and distance covered.

While Stephen wrestled with figures, Rob Hubbard, one of the most famous

sound experts in the business was devising music and background noises with his usual skill.

Within three weeks a prototype version of the game was submitted to Virgin for approval. A couple of requested changes were fortunately easy to implement, and the final version was completed.

Then disaster — it had a bug. "Luckily, Stephen was able to crack it overnight — but it gave us a real scare at the time", said John Maxwell later. "I know that's what programmers get paid for — and most of ours will earn in excess of £20,000 this year — but even so I have to raise my glass to their splendid efforts."

"Trans-Atlantic Balloon Challenge may not be the greatest game ever produced, looking at it from a critic's point of view.

"But given the tight schedule we had to work within, and starting from nothing, I think we ended up with a pretty creditable product and one which provides enjoyment and value for money.

"And, yes, we beat Virgin Atlantic Flyer to lift-off by more than a week!"



... and now for the game

The aim is to be the first to cross the Atlantic in a hot air balloon. In the upper half of the screen you have Richard Brunson in Virgin Atlantic Flyer and at the bottom is his unnamed rival.

As Richard's mascot eagle your task is to help him on his way and defend his balloon

against various obstacles. The rival has his own eagle who can be controlled by the computer or another player.

The left of the screen is a display of score, altitude, fuel level, eagle's energy and a map of the Atlantic indicating your position relative to the optimum course.

Should your fuel level or altitude drop to zero you're headed to the right of a deflated balloon, plunging into the tummy, bringing the game to an abrupt and sad conclusion.

On the right are four icons activated by flying over them and pressing fire. These can give a burst on the burner to

increase lift, move the balloon left or right to keep it on course (but only on the map — the main balloon doesn't move) and finally let you jump into the other playing area.

This last option allows you to interfere with the other's controls and have a rag at his eagle and balloon. Zap! Yes, these eagles are equipped with sonic beams according to the blink, or laser beam eyes to you and me.

The other hazards come in two forms. Firstly there's the plane which circles around and bombs your balloon.

The bombs can be coloured paint, heavy enough to make you lose altitude. Other types are more potent and will cause small punctures, leading to more rapid height loss.

Then there's the story itself which will inflict a full scale blow-out should it connect with your emergency.

Bonus points can be earned by releasing the children who lift off just after being carried away by the purchase of excessive numbers of hot balloons.

You must keep your eagle energized and this is achieved by sitting on top of the balloons. A de-energized bird is an

eagle and you only have three in reserve.

And that's it. One playing screen plus five main options.

This game at £2.95 on cassette and £3.95 on disc, won't do anything for Virgin's reputation, which seems to have spun thin since the heady days of *Corona*.

Andy Jackson

Presentation 45%

Nothing special. Fifty only one screen!

Graphics 45%

Unimpressive, except we expect more at this price!

Sound 45%

Fairly average.

Playability 35%

Difficult, but does that make a game good?

Additive qualities 40%

I've had as much fun from map listings.

Value for money 35%

Not at this price. More of a souvenir than a game to get into.

Overall 48%

Virgin has done better than this.

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An reviewer for *Wang* found *SCW&CPC July 1985*, Music Machine is a lot of fun and remarkable value for money.



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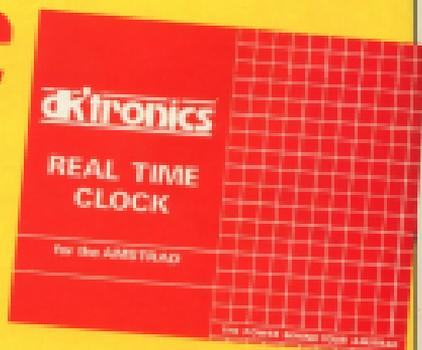
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4 From Page 27

area of memory in hex, Ascll and dis-assembled. The state of the registers and flags is also shown, with details of breakpoints and the current execution address of your program. Memory may be edited (but not in assembly mode) as with Maxem II, your program executed with slow or fast single stepping and a variety of breakpoint options.

When the monitor is invoked you are given the option of loading the symbol table produced by the assembler so your labels appear in the disassembly - a useful feature and one not found in Maxem II.

The manual is, for the most part, logically laid out and informative, containing tutorial sessions (backed up by example files on disc).

If I were planning to spend a lot of time with my assembler and price wasn't the prime consideration I'd go for Maxem II. Devpac II isn't far behind if



you make a comparison based solely on specifications, but Maxem II wins on general ease of use. Aged is much more pleasant than HDH/EDSD and Amro's assembler is more flexible in the format of your source code.

There's less to choose between the third part of the package - MCH80

ProMCH80 - and the Maxem II monitor. Both have their strong points but Amro still has the edge in terms of friendliness and features.

This applies to the whole package - as you'd expect at the price - but there is room for improvement. I'd like to see EDSD with a faster screen update and make easier for the novice to get to grips with. GEN80 should make more flexible on its source file format, even at the expense of a slight loss in speed.

If I was parting with my own hard-earned cash I'd be prepared to put up with a few rough edges and settle on Devpac80 as a cheaper and viable alternative to Maxem II which offers very good value for money.

Product: Devpac80 Version 2
Price: £29.95
Supplier: MISOFT, The Old School,
Greenfield, Bedford MK45 5DE
Tel: 0525 718187

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- A description so that you can see what each transaction was for, e.g. "New period" or "Out of 10 days".
- An optional single character mark which you may include for further identification, e.g. 10-Business, 10-personal, etc.
- The amount of the transaction, which may be plus or minus.
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THIS HiSoft version of Forth is a full implementation for use under CP/M Plus. It is also available for the PCW and the review copy contained both versions on the same disc. It conforms to the popular FIG (Forth Interest Group) standard with no extras in the basic system.

Forth, however, is an extensible language and, in the true spirit of this, HiSoft has provided many extra features in the form of support libraries. This means that you don't need to clutter up precious memory with all the features at once, but can select only those required by a particular application.

First each library is provided. The first is a utility library which extends the system to include such features as strings and arrays as well as a full CASE statement familiar to Pascal and C users.

The second, CPMLIB, allows you to access the BIOS to perform your own disc filing operations.

Then there's ASSEMBLER which, as its name suggests, is a Z80 assembler. As well as having the usual Z80 mnemonics, it supports loops and conditional statements.

Perhaps the most interesting library is GFXLIB. This opens up the full range of the CPC's high-resolution graphics and allows you to output some very impressive results.

As with most Forths, programs can be entered directly from the command line and tested right away. But in order to make development easier, use the proper Forth method of entering text into "screens". These allow you to develop very large programs using the disc as extra memory.

HiSoft Forth contains a full screen editor which makes the use of screens very easy. Each screen consists of up to 16 lines of 64 characters and using

Follow the Forth protocol

Stephen Devine evaluates HiSoft's language implementation customised for the CPC6128



the arrow keys you can move around and enter text wherever you wish in either overwrite or insert mode. You can also move freely from one screen to another without leaving the editor - not all implementations allow this.

When you've finished editing a screen it is automatically saved and you can continue on a new blank screen. Unfortunately, the editor does not have a find or search/replace facility but it is possible to step through screens fairly rapidly to find a particular item. A blank file of 50 screens is provided to develop your own programs and this can be extended.

A manual is supplied in the form of a 64-page A5 booklet in three parts. Part one contains a brief description of Forth on the CPC6128, a list of editor commands, and details of all the support libraries supplied.

This is followed by a section of over 20 pages which, although not claiming to be a full tutorial, provides a very clear and thorough introduction to

Forth. I recommend strongly that beginners read this before attempting to use the language or even before reading the first section - Forth can be very daunting to the uninitiated.

The final section consists of three appendices containing a list of error messages, a full glossary of the words provided in the basic implementation, and a useful list of books on Forth.

There's no index but this shouldn't be a drawback given the very clear layout of the manual.

There are other files on the disc, the most important of which is HIBASIC, containing essential information missing from the manual. Among the topics covered are the use of the printer, various extensions to the library files, and some important changes to the editor commands.

It also has details of three utility programs provided: WD.COM - for deleting files - similar to ERASE.COM but easier to use, WP.COM - for copying files - like RP.COM but more user friendly, and SO.COM - for listing disc directories - much better than DIR.COM and far smaller at less than 1k.

These are not public domain utilities but have been specially written by HiSoft to provide similar facilities.

If you think Forth might be the language for you and you want to use it in a CP/M environment, I can certainly recommend this version.

With its various support libraries and the extra disc utilities provided you have a complete package that is hard to beat.

the most common problems with Basic as a programming language are its lack of speed and the large amount of memory it consumes. This has led many programmers to look for faster, more compact languages such as Pascal and C.

With these you can compile programs into machine code which will then run much faster and, as a bonus, generally take up far less memory.

Such compilers, however, are usually quite cumbersome to operate. You often have to prepare a program with a separate test code and then compile it - and often like it as well - before obtaining a final executable program. This edit/compile/link/run

process must be performed each time the program is changed, even to correct a minor error.

There is, however, a language which overcomes Basic's limitations while still allowing programs to be developed fairly rapidly.

This language is Forth, which is neither a true compiler nor an interpreter like Basic.

Instead it's a compiler in which programs are written in small stages, each instance compiled and capable of being tested separately before the stages are integrated in form complete working programs. These run much faster than their Basic counterparts and will certainly be more compact.

Product: Forth
Price: £79.95
Supplier: HiSoft, The Old School,
Greenfield, Warrington, Merseyside S92
Tel: 0257 797181

ADVENTURE

TWO YEARS have passed since I started this column and in that time there has been a lot of change. We have progressed from adventures converted from other machines, notably the Spectrum (remember ST?), to original sophisticated games such as the Power.

Of course, the growing trend towards disc drive ownership has been mainly responsible.

In my first column I talked about the release of *The Hobbit* by Melbourne House and the sensation it was likely to cause. I still remember it with affection, but nowadays I could not tolerate the release of an adventure of that standard. This is born out by my comments about its sequel, *Lord of the Rings*, in the September 1988 issue.

Many of the problems with Intergrey's adventures in those early days still crop up even now. Considering how comparatively easy the games are, it says a lot for their programming quality.

I suppose the major change has to be the acceptance by software houses of the viability of supplying adventures on disc. Infocom is recog-

The shape of things to come

Go adventuring with Gandalf

nized for not making its disc-based-only games available unless the potential market is big enough.

The release of the whole of its range is a sign of the importance of Amstrad and its staying power in the market. It's also an acknowledgement that the CPCs are serious machines and their users serious about software.

I hope the recent release of the Power points to the shape of things to come. No longer can software houses say that high-resolution adventures are

beyond the CPC's capabilities.

Of course there have been significant developments - graphic adventures have become more popular - a trend that seemed to start with *Sorcery*. This was more of an adventure, yet, with very few exceptions, its standard of graphics has never been surpassed.

Icon-driven games have also appeared. The Fourth Protocol perhaps being the best example I have seen. Hopefully this is a trend that will develop. In my opinion one of the

READERS' HALL OF FAME

Adventure Quest - A solution
by Glyn White

Enter the building, get the table, go to the grate, drop the table then climb it. You are now in the steep east side of the valley.

Get and eat the onion, go S, S and you'll find yourself back at the gully. Get the central and, when the wolves appear, throw the table at them into this wherever they appear. Now go to the top of the pinnacle and take the scroll from the wizard. Read it to get information about your quest.

Go down then up and take the stick. If the stick is dropped at any time it will supply fruit for you to eat. Later on when you sit on the moor, eating the fruit helps to keep you warm.

Return to the building and leave the scroll and stick then go and find the unicorn. Give it the orchid then follow it North and take the gem pipes and meditation.

Return to the building and leave all your possessions except the table. Find and climb the oak tree to get the silver ball then return to the building. Take the keys, bottle filled from the stream, sling and ball and head for the desert.

The route through the desert is, from the edge of the fertile land: N, N, N, W, N, (Look), E, E, E. Using this route will see the death of the sphinx. When crossing the desert at any other time, LORD whenever you hear the roaring, if you become thirsty, drink from the bottle.

Find the giant and wave the sling at him - he thinks you are David and runs off. The path is now clear for you to travel and you should find and unlock the snowman.

Take him and return to the giant rocks above the cat tower and push. You can now descend the sling and enter the tower. Return down the mountain and find the canyon bisected by the slab of rock. Say OPEN

SEGAME then enter and get the sword-like leech the spalling!

Return to the building, leave the keys, take the gem pipes and refill your water bottle. Across the desert and go to the temple. The snakes will become harmless when you play the pipes, enabling you to enter the temple. Give the princess what she asks for and take the ruby. Travel to the gloomy room in the cat tower and throw the ruby at the creature and take the wedding - leave the amethyst eyes.

Travel back down the mountain to the oasis and open the bag - the djin is blown away. Go in to the oasis and get the brick. This repels sharks - useful later - and if you drop it, a spring appears allowing you to refill your bottle. Get the lamp.

You should now have a lamp, trident, bag and bottle. Go to the cave and enter after lighting the lamp. Inside you must throw the trident, bag and bottle. They land with a distant splash.

most important moves has been the introduction of the DR-Titanic ram packs.

As an owner of a CPC464, it would have been impossible for me to play the original Infocom games as they only ran under CP/M Plus.

Now, of course, with one of these neat add-on Infocom's games will run on any CPC.

Hopefully, the next two years will see more adventures like the Pawn and, possibly, a software house to challenge Infocom. I'm keeping my fingers crossed.

Lu Bushaw has written for advice about the format of reviews entered for the competition I announced in the June issue.

The points she made have prompted me to extend the competition closing date to the 1st December 1987.

Any review you send should feature only an adventure game and be intended for publication, not simply your brief opinion of it.

To see the sort of article I want, study my reviews and those published in the Amiga section. Try to adopt the style, but be sure to use your own words. And don't forget the marks - several reviews sent in



recently have omitted these.

The winners of the competition will be the three readers who, in my opinion, submit reviews most matching the magazine's style, and who manage to make their writing interesting. It will also help if I don't have to correct your spelling or punctuation (like what I do with yours - Ed).

It also asks whether it is necessary for her to send in all the packaging. The answer is no, I only read the game.

I should have made these points more clearly when I originally announced the competition. So if any reader who has already submitted a review wishes to change it, please go ahead.

Now start writing. The amount of software I'm giving away gets bigger every day. As you now have more time to produce your reviews it should encourage you to submit more than one.

FEEDBACK

Alex Hood has come to the aid of John Ellis in *Hitchhiker's Guide to the Galaxy*. To open the toolbox, get the key from under the seat in the speedboat. You don't need to remove the mesh from the floor of the hatch maintenance space.

Whether do you need to hit the cushion sense particle. Remove it then go to the drink machine and make real tea using the interface from the bugliester's lab.

When you have made it GET TEA AND NO TEA. Then go to the screen door and shove them both. It will open. Drink the real tea to avoid dying of depression when entering Marvin's party and when in there get him to open the hatch. He will tell you to meet him with the right tool.

If you have the flowerpot and the four pieces of fluff, place the fluff in the flowerpot and go into the sauna. Eat the fruit of the plant to get a glimpse of the future that tells you which tool to give to Marvin. Now hand him the tool and he will open the hatch.

The Pawn - A solution by Graham Wheeler

Go East to meet Kronos and wait. He will ask you to deliver a note. Get the note and ask him about the wristband. He will give you a chest. Continue East until you reach the palace gardens. Examine the pans and the pocket. Get the metal key and use it to unlock the door.

Lift the mat to get the wooden key then open and enter the door. Get the rake and hoe then examine the bench. Get the trowel and look under the bench. Get the pot, examine it, then plant what you find in the pot using the trowel.

Put the pot on the bench and drop the metal key. Now go to the guardhouse and give the note to the guards.

Now visit the guru. Before entering his hut, remove the shirt and use it to cover the wristband. The guru will give you a bowl and ask you to per-



form a task. Go to the foothills and find the boulder that blocks your way.

Use the rake and hoe together with the shirt and use it to level the boulder. The adventurer appears at about this time. Give the chest to him but do not take him as Kronos asked - it is a task. Untie your shirt, wear it and, dropping the rake and hoe, head for the planetar.

To get past the rocks you should climb them and then fill the bowl with snow. Make your way back to the guru's hut and, using your shirt again to cover the wristband, enter it. Give

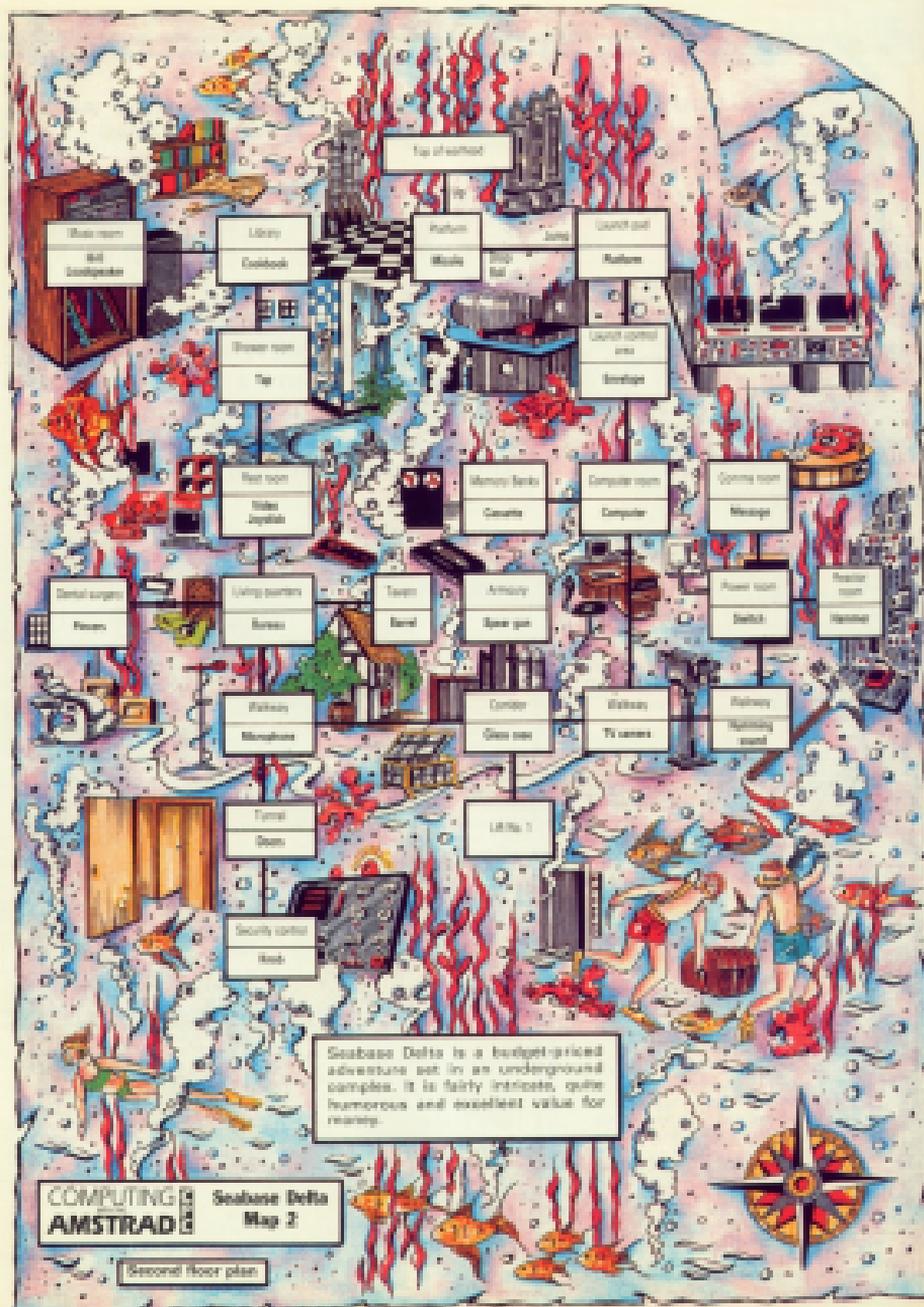
the bowl to the guru to get a clue about a light source and take the rice.

Dangerous Amalgams, Alchemists & Everything - M. Jackson

Go E, E, get the sword then go W, S, W, W, W. Take the key then E, E, E, N, N, E. Open the case and take and drop the vase. Take the chunky key then W, S, E, and open the door. You are now outside the dangerous complex and should move E, E, S, and kill the dragon.

Take the potion from the knight and go N, E, N, N, N, N, E and take the bellhop. Then W, S, S, E, E and give the bellhop to the man. Take the wreath and go W, W, S, E, W, W and give the wreath to the man.

Take the ladder and move E, E, N, N, W and climb to the pan. Examine it to get the amalgam then climb up and go E, S, W. Drink the potion and turn the handle then go W and give the wreath to Penelope.



Music room
and
Synthesizer

Library
Cookbook

Top of world

Pattern
Music

Janis
Lizard pit
Ruders

PHOTOCOPIERS

Printer room
Tap

Lizard sports
arena
Bicycle

Beer room
Video
Apples

Memory banks
Cassette

Computer room
Computer

Control room
Messages

Demolition
Phone

Utility quarters
Bicycle

Teapot
Bowl

Artillery
Space gun

Power room
Switch

Printer
Printer

Barbers
Microphone

Control
Glass case

Wallpaper
TV camera

Memory
Washing
board

Wooden
door

Teapot
Dish

Library 1

Security control
Book

Scasebo Delta is a budget-priced adventure set in an underground complex. It is fairly intricate, quite humorous and excellent value for money.

COMPUTING  Scasebo Delta
AMSTRAD  Map 2

Second floor plan



Link your Amstrad CPC to the outside world with...

MicroLink



Electronic mail - The cheapest and fastest form of communication possible. It costs the same to send a message to one mailbox as to 100!



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All you need - apart from your Amstrad - is a modem, which plugs into your telephone wall socket, an RS232 interface and suitable communications software.

We have provided a list of possible combinations (left), ranging from the very cheapest to one which can automatically dial the MicroLink telephone number and connect you directly to the service - all you have to do is type in your personal security password.

Whichever equipment you use, you will be able to call MicroLink, open your mailbox, see to deal any messages waiting for you, and disconnect in as little as two minutes.

Typical options packages

- A) **Desk** - Amstrad 452 modem + RS232 interface + tape or disk communications software £25-40
- B) **EEC** - Modem 127, 132 serial/modem + RS232 interface + camera run £280
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- D) **Flex** - Line 127, 132 serial/modem + RS232 interface + Comstar 100 £2710



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Please send the full details about MicroLink, and information sheets about the following hardware and software options (where relevant).

A B C D

Name: _____

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Postcode: _____

Send to: MicroLink, Europa House, 68 Chester Road, Heath Green, Stockport SK1 1NR.

1987

Hollywood Hijinx

Infocom/Activision
£24.99 disc

BRING one of the best pack 'em party these days. The high living, fast cars and all-night partying make a large hole in your income.

So the news that your aunt Milligand has died, though very sad indeed, has a clear ring when you discover you are to inherit the millions that she and your uncle Buddy accumulated as heads of Burbank studios.

They had always preferred you, to all their other nieces and nephews, and now they have left everything to you – on one condition: in the course of one night you have to find 10 treasures that they have hidden in their house and gardens.

Should you fail to find them, one of your cousins will be given the same opportunity to inherit. You may have been the favourite but you still have to prove that you are worthy.

The treasures aren't going to be easy to find either. They are all props from your uncle's films, and the house is full of such memorabilia.

Your only advantage is a knowledge of the house gleaned from many happy summers spent there as a child and the clues that your uncle has left you.

Well, it's eight o'clock and the executor of your aunt's will has dropped you at the gate of the house – the real is up to you.

Your first inclination is likely to be to explore.

Well, no, you find you can't enter the locked house, you will doubtless set off to find a key. I'll bet you into a 66666 – you don't need one.

If you read the poems your uncle wrote on the back of the photograph he left you, you will find directions which, when applied to an object that seems to move of its own accord, will open the front door.

But before you enter the house, have a good look around the gardens. You'll find there are only 10 locations open to you.

A ladder is found, though you can't carry it, it can't climb – hopefully someone will write in with a solution here.

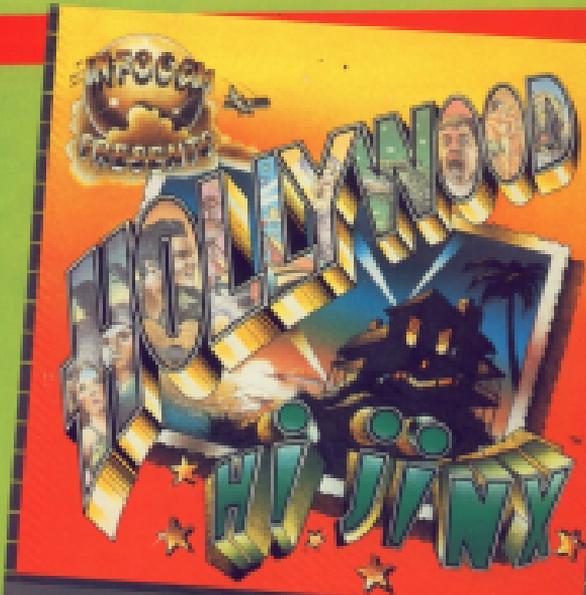
A maze is also close at hand. However, since it has 180 locations and I couldn't find anything to share, I suggest you forget about it for the time being.

I have the feeling that the shovel and the yellowed piece of paper may provide an answer – yet another problem I couldn't overcome.

To move quickly on to some of my successes, you should now enter the house. Getting up the stairs may be a problem but you should be able to pull it off if you enter the door.

A treasure is now in plain sight, but you should hesitate a minute and think carefully about what will happen if you simply open the window.

Returning to the ground floor could see



INFOCOM

INTERACTIVE FACTORY

IN "HOLLYWOOD" EVERY WEEKEND

you visiting the living room. The mantel is rather long to leave just a fire and if you emulate a chimney sweep you should rise far enough in the world to discover your second lesson.

Having pointed you in the direction of two treasures, I shall leave you. If you happen to visit the games room and see a bemused adventurer standing in front of an atomic dog, surrounded by the severed wreckage of half of the Japanese army, it's me.

I'm trying to figure out how to use the dog to get the diamond ring. Anyone got any suggestions?

What can I say? Infocom has done it again.

All the problems are logical – except the ones I can't solve, of course. Such is almost obvious, but has you struggling to find the final part of the solution.

For instance, you find a strip of film and a projector. The problem is how to run the film and get back into the screening room to see it before the film runs out. I'll bet you work it out.

The packaging is so to the usual high standard and holds some very useful clues.

Overall, I can't fault it. If I had to write any criticism it would be that Activision doesn't supply the hard books with review copies – and there are something I couldn't do with on this game.

Presentation 100%

Impossible as usual.

Atmosphere 100%

Got a knife handy?

Frustration factor 100%

After four weeks of playing this game I have only got five treasures – that's frustration.

Value for money 100%

The software justifies the price.

Overall 100%

Will Infocom EVER produce a bad game?

Murder on the Atlantic

Infogrames
£19.95 disc

THE is a graphical detective story set on a French luxury liner at the end of the 1980s. Your job is to solve two murders.

To aid you there are a vast number of clues – too many in fact. Among many other things, you have a map of the Roubignone life ship on which the murders take place, a French newspaper, information about all radio telegrams sent and received, various notes, letters and photographs that may or may not have any relevance, and the passenger list.

And you have various pieces of evidence including a bullet case, an ink cartridge, various business cards and a marriage certificate.

As you may well imagine, your first task is to try and make sense out of all this information.

The ship is represented graphically on the screen with small windows showing each location you visit. A flashing dot serves to indicate your position in the ship – you move around using the cursor keys.

A text window is used to report on any objects found and to display messages about the locations you visit and the characters you meet.

Other actions are initiated by predefined keys. The main options available are: Look at the characters involved, search a location, open an object, perform an action, interrogate a suspect and call the life – this last being necessary if you want to move between decks.

The game itself is not easy. It is necessary to visit all the locations on the ship, interrogate the characters you meet and searching thoroughly as you go.

To make matters even more complicated, packaged with the game is a top secret envelope which you must only open

when told to do so, yes, I received the temptation, and also a coded message.

To understand it, you must find an algorithm hidden somewhere aboard the ship. To decode it, use it in a program you have to write. You really have to work to get your money's worth.

You should seriously expect to take a few weeks just getting the feel of the program and absorbing all the data. There are over 60 separate programs in the package, including a demo that sets the scene and a test program to see how far you have got.

Overall, I won't begin to pretend that I can give an accurate review of a product this complicated. All I can do is give you a taste of what's involved.

It is undoubtedly fascinating, absorbing – and likely to take you many weeks to solve.

Presentation 84%

The plotting guide could have been better implemented, but you couldn't ask for more clues.

Atmosphere 84%

The graphics aren't that good and don't truly reflect the atmosphere the program is trying to create.

Frustration factor 82%

Not so much frustration as concentration.

Value for money 88%

It is expensive, but you do get a lot for your money.

Overall 75%

A good program – but will it sell at the price?

Sharpe's Deeds/Black Fountain

Incentive
£7.95 cassette

THE is one of Incentive's new budget series of adventures from the Double Gold range.

The aim is to release the best games produced using the Graphics Adventure Creator (GAC) at a two-for-one price. This means that each cassette released has two adventures on it, but is sold at the normal price for one.

In Sharpe's Deeds, you learn that your great uncle has died. His estate has been left to you on certain conditions, one of which is that you must visit the village where he lived.

On travelling there, you discover that it is less a case of inheriting his estate – more a case of finding it. You set off to search the village armed only with your wits and a newspaper clipping that holds a few clues.

I'm only going to give you a couple of clues here – use your wits and visit the cemetery and pay your last respects to your late great uncle if you want the steedmaster to help you.

The other side of the tape contains Black Fountain, a two-part adventure set on the planet Bunk. An evil scientist, Robinson, has created a black liquid that he is using to contaminate the river Nil.

Your two elder brothers have already ventured forth to combat this evil scientist but as no word has been heard from them, they are feared lost.

Your High Chancellor, Aguro, is reluctant to let someone as useless as you get involved. But, tired by your constant pleading, he reluctantly allows you to follow in your brother's footsteps.

Your first task, is to prepare for the ordeal to come. A search of the castle should find you well prepared, though helping the chef and sweet-baking the

patissier will provide further rewards.

Both games are quite sophisticated and worthy of release separately. The fact that they are released together makes them excellent value for money.

Presentation 82%

A bit simple, but what do you expect for the price?

Atmosphere 75%

Both games are very atmospheric.

Frustration factor 75%

Some of the puzzles were easy – some hard. A good overall balance.

Value for money 85%

Excellent for the price.

Overall 75%

Well worth buying and an excellent introduction to the series.



Top Secret/Mountains of Ket

Incentive £7.95 case

There is another Double Gold release from Incentive and here's a new game and a GARD version of an old Spectrum favourite.

Top Secret finds you in the role of a newspaper reporter who has been given a hot tip.

The Government is denying claims that it is building a new missile in the country that could alter the balance of World power.

The instigator of the rumour, a scientist has disappeared and the matter would probably have died out but for a chance encounter that you have witnessed.

It seems that the scientist motivated by his revelation at the idea of the missile, has gone into hiding because he fears for his life.

Feeling that you are the only honest reporter left, he has telephoned you to give you the full story. He arranges to meet you later to give you information that will get you into the base to verify his story.

Your mission then, is to penetrate the base and prove the rumours to be true, is that all it is. But you'll have to get in there to discover the rest.

Again, I'm not going to give too much away. I'll merely say that dogs and rats share the same motivation.

I liked this adventure — mainly because it baffled me for so long.

The other offering, Mountains of Ket, is a graphical version of a game first released some years ago. It is the first part of a trilogy — presumably the other two parts will form the third release in the series.

Your mission is to reach the far side of the mountains alive. To do this you must first locate the secret entrance at the base of the mountains. This, you are told, has written a sham horse race East of your village.

You play the role of a villager, framed with a murder and sentenced to death. On the eve of your execution, you were offered a pardon if you would undertake this mission. Of course, you chose to accept.

To ensure your continued loyalty, a magic amulet ring, Edgar, has been placed on your neck. His orders are to kill you if you show the slightest sign of attempting to renege on your mission. Edgar will provide a sun-down on all you need, and may even be able to provide help at certain stages in the game.

Well, that's what the documentation

says. Unfortunately, I couldn't verify any of this for myself as the side of the cassette that should have had this game on was completely blank.

I am informed that the problem will have been solved by the time you read this but I would advise any prospective buyer to check the game is actually there, just in case.

Hopefully, Incentive will send me the game so that I can report back on it at a future date.

The marks are for Top Secret only.

Presentation 82%

A bit stumpy but OK for the price.

Atmosphere 84%

Scores well.

Frustration factor 86%

Baffling in places.

Value for money 85%

Excellent.

Overall 88%

Must be worth buying, particularly in a pair.

The Big Sleaze

Piranah £9.95 cassette

Put back your ears and let me tell you all about this great new detective adventure set in the 1930s.

Like to hunt for a PI in the Big Apple these days. Seems like Sam Spade and Mike Hammer get all the lucrative cases and even Sam Spenser makes out better than me. Somewhat, I seem to get the cases that nobody else wants.

Take the other day. There I am, checking to see if I've got enough dough to buy some dough for my piece, when it walks this dame. Did I say walked? More like waddled. The dress she was wearing was so tight she couldn't find it in a damn house.

"Are you Sam Spade—the private investigator?" she asked.

"That's what it says on the door, sweet-beast", I replied.

"I need your help", she continued. "My father was supposed to meet me at Joe's diner two weeks ago and he hasn't turned up yet. I'm worried that something may have happened to him".

"Maybe he got delayed", I responded. "but for a 100 bucks I'd find him for you soon".

To my surprise, she didn't argue about the price but simply dropped a cheque on the desk and told me she'd be in town.

Without thinking about the job, I could make about that last sentence, I grabbed the cheque off the desk and sets out to look for my good-luck and man.

But, before I can even get my man out, a pouch of bolts in and drops some papers on

the floor and beats it.

I gave the papers a quick eyeball and discovered another cheque, a bit of a torn up photo and a note in some kinda code.

Just being the dumb schmuck that some people think, I quickly decodes the note and finds I gotta "mother job". I figure it's time to move my butt down to Joe's diner and case the joint. I walk down a lobby to my car and gives it a quick eyeball and finds some paper has wind some dynamite to the ignition. I gets the dynamite off the car and then an idea percolates in my brain.

I tucked my piece in the safe a while back to keep it from getting lifted and then lost the key. Maybe I can use this to blow the safe and get it open.

Well let me tell ya, no matter how I got the idea that I had to try it out. And I sure hit the jackpot. Now that I was properly dressed, I tied for my car, fiddled the ignition and then high-tail it over to the bank to pop in the cheque and blow on it. Joe's.

And what a sleaze bucket the place is. I pick up one vital clue by examining the wall in the joint and head over to Harold's, at the corner at 8th and 41st.

I heads up to the guy's place and gives it the once-over and discovers another piece of the photo. All I had to do then was bang around until the bars shut and confront the owner of the joint with the evidence. Sure enough, he splits the beans and gives me another clue.

Half an hour later, I pull up in front of this sleazy office block and heads in for a sabbay.

I gets the brush-off from the receptionist

but finds a statue that's a push-over for a guy like me. Luckily, I've brought my skeleton key and pronto, so I manages to get into this weird system to case the joint. I finds this info and gives it the once-over. I don't find so much, so I figure it's time to shoot the breeze with Commandant Sulphur at police headquarters.

Back to you did see what I've managed to come up with so far, so I reckon it's time for you to follow up the leads. I've given.

As you can see, this old period piece of a health detective adventure looks like an AI game to play.

I reckon Purgus McNeill has hit the jackpot yet again. All I can say is that if you don't get this game, I've got a slug in my gut with your name on it.

Presentation 85%

It's nothing special.

Atmosphere 92%

There are just enough graphics to set the scene and the brilliantly funny text does the rest.

Frustration factor 90%

Part easy — part hard. A good overall balance, but how are you supposed to know that you have to examine the graffiti in the man's room?

Value for money 95%

A 2-part adventure with humour as a bonus. It's got to be worth the price.

Overall 88%

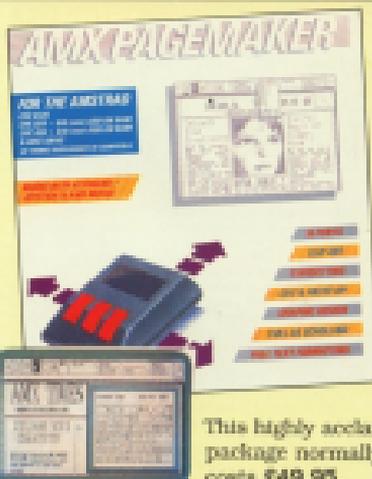
A very funny, intricately woven adventure. I loved it.

STOP PRESS!**Desktop Publishing
comes to the
Amstrad CPC**

Now you can design your own magazine or newsletter - using either keyboard, joystick or mouse.

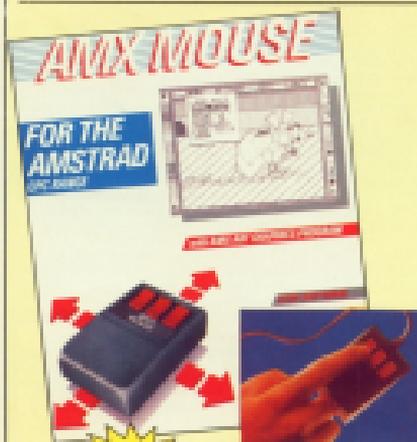
AMX Pagemaker is overflowing with features:

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- Zoom option for detailed editing
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£10**

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**Bring the power of the
mouse to your CPC**

This is what reviewer Gabriel Jacobs said in the June 1988 issue of Computing with the Amstrad:

“The bundled software is magnificent. I can't think of another add-on in the same price range which will give you as much enjoyment combined with as much practical potential.”

... and it's the perfect complement to AMX Pagemaker

Here's what you get:

- Top quality mouse with solid rubber ball-bearing
- Interface to connect the mouse to your CPC
- AMX Art, AMX Control, Ico-Designer and Pattern Designer software included - on both cassette and disc
- Comprehensive user manual

TO ORDER, PLEASE USE THE FORM ON PAGE 69

QUARTERS

By **KEN GOODMAN**

QUARTERS is a micro-simulation of a well known table-top board game. Played on a 9 x 9 grid using square dominoes, it demands both skill and strategy in order to achieve a high score.

The tiles are split into quarters across their diagonals - hence the name of the game. Each quarter is randomly picked out in one of four colours.

Ordinary dominoes, which use the seven numbers 2 to 6, produce 28 different tiles. With the new design we get 70 possibilities using only the numbers 1 to 4!

We could draw these dominoes on the screen showing spots or numbers - but there is an alternative. Instead of printing the number on each quarter we can use it to produce a colour. This gives us squares which can show up to four different colours.

The tile in play is displayed above the board and can be rotated about its centre using the R key while you decide the most valuable location to place it.

When positioning the tile, just as with ordinary dominoes when the numbers must match, so in *Quarters*, colours should match on touching edges.

To select the tile's location you move a flashing cursor around the grid using the arrow keys. Pressing P will place the tile at the selected location and you are then awarded points.

You score every time you can place a tile on the board, gaining more points if you can match more than one edge with neighbouring tiles. If it is impossible to play, abandon your turn using the Del key.

There are three different ways to play - solo practice, against a human, or against the computer and the game ends when all 70 dominoes have been used.

Whichever game you choose, *Quarters* will keep you entertained for hours.



MAIN PROGRAM

80 Load data into memory
160 Set up variables
200 Create title page
400 Load domino array
480 Main menu
680 Draw the screen
780 Main play loop
800 End of game

MAIN VARIABLES

xx,yy: Starter's position
col: Domino's colour
compri: Computer's coordinates
domri: Domino's coordinates
domri: Domino's markings
n: Domino numbers
tsa0: Each player's total score
gs0: Highest score
is: Spot's coordinates
w/c: Player's choice
pl: Player number
x1,y1: Test location pointers

SUBROUTINES

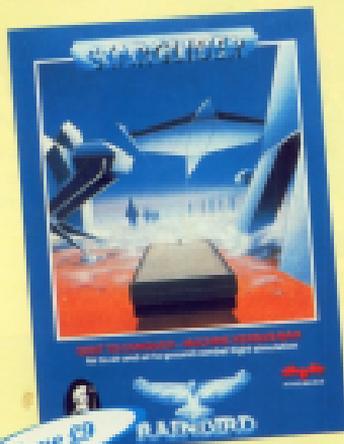
1100 Draw rectangle
1210 Split domino code into digits
1260 Print a domino
1480 Keyboard input
1620 Rotate display domino
1670 Rotate display domino
1670 Moves marker spot
1800 Prints marker spot
1806 Checks for valid entry
1880 Updates scores
2040 Delay
2086 Reprints scores
2150 Computer's play
2280 Title detail
2330 Draws main grid

Turn to Page 41 P



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subscribers to* **COMPUTING
AMSTRAD**



Starfighter is "simply the best arcade game seen on any 68000 based machine" (Popular Computing Weekly).

It's the first ever game to feature stunning, fully animated vector graphics – and the first to include high-quality digitised sound... even messages from the ship's computer throughout your hair-raising fights are in digitised speech! Thrill to low-level flying, exhilarating defence and attack manoeuvres – it's all here, and much, much more!

The package includes a 64-page novel that sets the scene – and gives you vital information to help you succeed in every quest!

Save £9

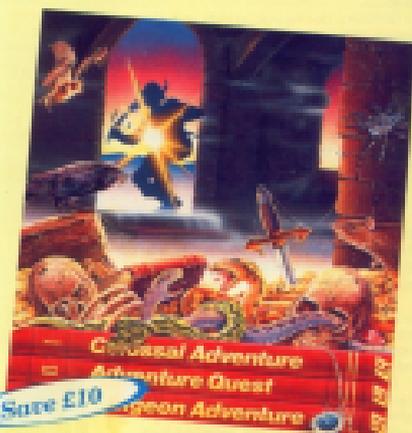
Plus JEWELS OF DARKNESS
...three great adventures in one!

Three classic adventures from Level 9, now totally rewritten to incorporate the latest innovative adventure-writing techniques, with a huge 1,000-word vocabulary, over 600 illustrations and ultra-fast response times.

You start with *Colossal Adventure*, containing all the treasures, creatures, rooms and puzzles of the mainframe original.

Next is *Adventure Quest*, where even greater perils await you. Finally *Dungeon Adventure* challenges you with the ultimate struggle against the forces of darkness.

Also included in the package is a 64-page novel, with a 10-page playguide.



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Subscribe for	Product	Format	RSP	Special reader offer	YOU SAVE	Other (including subscription)	YOU SAVE
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10PC Range	Starfighter	Tape	£14.95	£13.95	£1	£17.95	£4
10PC Range	Jewels of Darkness	Disk	£19.95	£16.95	£3	£21.95	£5
10PC Range	Jewels of Darkness	Tape	£14.95	£11.95	£3	£18.95	£3

TO ORDER, PLEASE USE THE FORM ON PAGE 69

As easy as falling off a logon...

Peter Davidson looks at getting free software over the telephone

As we have seen, sending and receiving text using services such as Telecom Gold is very easy. Computer programs are made up of text, so it is not surprising that many electronic mail services, bulletin boards and other communication services now contain software that you can obtain free.

First a couple of technical terms which keep appearing. We usually refer to software available from remote sources such as Telecom Gold as telesoftware, and the process of getting it from there into your computer as downloading.

Downloading telesoftware from the various sources falls into three main areas, depending whether the system you are using is text (such as MicroLink), videotext (such as Prestel) or teletext (such as Comtel).

This month I'm going to concentrate on MicroLink, and among the many programs you'll find there are ones from the *Computing with the Amstrad CPC*.

It is very easy to obtain programs from MicroLink. To demonstrate this I'm going to download *Ab-Bod*, the game from the August 1986 issue.

The first thing to do is to logon to MicroLink in the usual way. This month I'm going to use Comnet, but the sequence of events will be similar, whatever your software.

When you are online you can look at the telesoftware section by keying TS at the prompt.

You are then presented with the menu shown in Figure 1, which allows you to select which computer the software will be for.

As the program we want is for the Amstrad, pressing 4 will take you to the correct section and a list of programs will be displayed. Figure 2 shows the first and last few titles.

If the program you want is not shown keying 25 will take you to the next screen containing further programs.

```

.....
Telesoftware
.....
1) Database Publications

1: BBC (A-M)
2: BBC (N-Z)
3: ELECTRON
4: AMSTRAD
5: APPLE
6: ATAN

1-25 Flipdisplay Quit
Select : 4
    
```

Figure 1: MicroLink telesoftware menu

It's a good idea to get any extra details and instructions that may not be in the program itself. You do this by selecting H for Help followed by the number of the program.

Ab-Bod is number 1 on this list, so if you type H1 you'll obtain a brief description of the program and any extra instructions necessary.

If it's the one you want, you're ready to download it. Key 1 and you'll be prompted what to do next, as shown in Figure 3.

At this point you have a choice: The aim is to get the program from the MicroLink computer on to your disc or tape, but it is possible to receive it into your computer's memory first. The

```

.....
Telesoftware - Amstrad
.....
1) Database Publications
For program details key
H and then the number

1: * Ab-Bod
2: * Archive (part 1)
3: * Archive (part 2)
4: * Archive (part 3)
5: * Blitz
6: * Breakpoints
7: * Candle
8: * Castle of Fear
9: * Chipstone Faces
10: * Circle
11: * Claustraphobia
12: * Co Bells
13: * Cripser
14: * Dirty Starline
15: * Droogs
16: * Egg Blitz
17: * File Cramper
18: * Fear in a Row - 3d
19: * Fruttes
20: ... continuation ...

* H for HELP
1-25 Flipdisplay Quit
Select : 1
    
```

Figure 2: Part of the program selection menu

NOW PREPARE YOUR DISKETTE/ CASSETTE TO ACCEPT DATA, THEN PRESS RETURN WHEN READY
(press RETURN when file transfer is completed)

Figure 3: The message before downloading

place where it will go is called the buffer.

If you download into memory first you run the risk of the program being larger than the memory you have available. I prefer to go straight to disc — but always ensure that there is sufficient room there to accommodate the program.

With this in mind press Control-F and select file to spool to disc.

In reply to the prompt for a filename answer BOD and press Return twice — once to enter the filename and again to fulfil the request you had from MicroLink (in Figure 3).

Now it's just a matter of waiting while the program downloads. You'll see it being written on to your screen as it comes over, and the drive will start occasionally as another section is stored.

When you see that the complete program has been downloaded, press Control-F, select spool to ram and the final section will be saved to your disc. The program is ready to use so you can log off MicroLink.

You now have the program on disc, but you may have odd bits at the start or end of the file, depending on the exact points where you opened and closed the buffer. These will generate error messages and must be removed using a word processor or Ascl text editor.

When the file is clean remove it, then run it as normal.

As you can see, downloading telesoftware from MicroLink is easy and can save you hours of typing.

Next time I'll be looking at some of the other sources of telesoftware, and at the various ways of downloading it.

AT LAST!

Small ads in...



We've received a growing number of demands from our readers to include a Sales and Wants section in *Computing with the Amstrad CPC*. Now you can advertise your unwanted CPC products to our 100,000 readers — all of whom are always looking out for a bargain.

CPC Classifieds

Ads will be accepted under the following conditions:

- This service is EXCLUSIVELY for the use of private readers. No trade ads will be allowed.
- To avoid encouraging software piracy, all ads will be carefully vetted before they are accepted.
- Ads can only be accepted on this form (or a photocopy of it).
- There is no maximum to the number of words you include. If there is insufficient room on the form, continue on a separate sheet of paper.
- The cost is 30p per word, with a minimum of 18 words.
- We GUARANTEE your ad will appear in the October issue (or sale September 21) providing it is received by August 10.

AN ADDED BONUS

Free bonus! We will send you a complimentary copy of our new book, *How to Write a Successful Advertisement*, with your ad. This book contains over 100 examples of successful ads and shows you how to write your own. It's yours free of charge. Simply fill in the coupon below and we'll send you your copy today!

PLEASE PRINT THIS AD IN THE NEXT ISSUE

Charge enclosed for £..... (minimum £1 for 18 words), payable to Database Publications Ltd.

Name.....

Address.....

POST TO: CPC Classifieds, Europa House, 68 Chester Road, Hazel Grove, Stockport SK7 5NF. ACR3

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TAPE TO DISC MADE SIMPLE

STAND ALONE SOFTWARE NOW AVAILABLE

If you are planning to purchase a hardware base tape to disc utility then look no further. *Disc Wizard* is the only product of its type that will allow software to be relocated independently of the hardware. No wonder it is not approved by Amstrad. Tests conducted by ourselves and independent users have convinced us that *Disc Wizard* offers all these advantages over all other similar products...

- **EASE OF USE**, very simple to operate and using *Disc Wizard* to make screen conversions, etc. is far easier than other methods.
- **SUCCESS RATE**, at least as good, probably better than other products in normal mode. PLUS 99.99% can be converted to stand alone. i.e., total independence of hardware.
- **PRICE**, a substantial saving over comparable products.
- **STABILITY**, new injection moulded case.
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PARROT'S PLUS

- The unique and highly used domestic drawing and design program.
- The most versatile graphics software available for the CPC. A survey of users found nearly all used it as much as or more than other graphics packages, and to create many more.
- Works in portrait/landscape mode, with screen set packages to accommodate the vast variety sizes, including only enables it to reproduce design lines by line to create fine image graphics displays, but also provides many other features.
- Achieves screen-to-disc space savings — average file length only 4k.
- All designs can be digitised from within your own basic programming Factory Plus (the ideal tool for adding objects to your software. Designers can also be used to create screen designs).
- Includes Data Handling and screen manipulation designs in all sorts of ways, e.g. the Change Size command not only changes the screen designs by ANY factor, it can work independently horizontally and vertically AND on any or several of the design.
- Factory Plus can change the Mode of a design, repeat copies of designs any number of times and can readily produce simple Animations.
- Over half of Parrot's users have already updated to Factory Plus which now includes a command menu in text.

THE PARROT'S PLUS LIBRARY

- A really useful complement to Factory Plus, containing a wealth of ready drawn three screen-to-disc screen designs to save hours of repeat rework.
- Merge into other designs or use alone for titles.
- The characters can be used in all modes, changed to any size, mirrored, inverted, screen POF and even "rotated".

Parrot's Plus £19.95 The Library £8.95 or both for £16.90



18 copies in limited quantities only £1 extra please! Supplied on disc for the CPC 504 & 512 (UK) V.



Computing with the Amstrad CPC has been an outstanding success - more so since we welcomed many thousands of new readers following the takeover of Amstrad! Now we need your help to make YOUR magazine even better. We want to know all about you and your likes and dislikes. So we've devised this simple questionnaire that should give us all the information we need. Please complete it as best you can and return it to us as soon as possible. If you don't want to tear out the page you can send a photocopy.

Help us to help you - and you could win one of EIGHT SUPER PRIZES!

If you fill in the name and address panel in our Reader Survey you will be included in a Draw for these prizes:

FOR TAPE USERS

- 1 Marconi Track Ball + EasiArt
- 2 Four assorted games

FOR DISC USERS

- 3 EasiPublish + EasiDraw
- 4 Four assorted games

There are TWO lots of each prize - making EIGHT prizes in all.



The Marconi Tracker Ball, supplied by sole distributors Metrotec, is a precision-made input device we reviewed in our June issue.

EasiArt, EasiFill and EasiDraw are all professionally produced software that work just as well with keyboard, joystick or mouse.

The games, donated by Metrotec, are Nemesis the Warlock, Pulsator, Taran and Catch 22, Metrotec's latest release.

Reader Survey

Simply answer the questions below and overleaf and post the whole sheet for a photocopy of the two pages to:

CPC READER SURVEY
Database Publications,
68, Chester Road,
Hazel Grove,
Stockport SK7 8NY.

Age group:

- 1 Under 15
2 16-19
3 20-29
4 30-39
5 40-49
6 50+

Sex:

- 1 M
2 F

Occupation:

- 1 School
2 Further education
3 Unemployed
4 Manual
5 Office
6 Prof/Technical

You only need to complete this panel if you want to be included in the competition.

Name: _____
Address: _____

If I win I would prefer to receive Prize No.

How long have you been reading Computing with the Amstrad?

- 1 0-6 months
2 7-12 months
3 1-2 years
4 2 years+

How often do you buy the magazine?

- 1 Every month
2 Most months
3 1 in 2
4 Occasionally

What type of game do you like?

- 1 None
2 Strategy
3 Adventure
4 Arcade

Please continue overleaf →

How often do you type in a listing?

- 1 Every issue 3 Occasionally
 2 Most issues 4 Never

What is the maximum length of listing you would type in?

- | | Game | Utility | Other |
|----------|--------------------------|--------------------------|----------------------------|
| 1/2 page | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> 1 |
| 1 page | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> 2 |
| 2 pages | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> 3 |
| 3 pages | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> 4 |
| 4 pages | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> 5 |

What equipment do you own?

- 1 CPC404 5 Printer
 2 CPC404+disc 6 Serial interface
 3 CPC404 7 Modem
 4 CPC6128 8 Room board

Which piece of hardware are you likely to buy over the next 12 months?

- 1 None 3 Printer
 2 Disc drive 4 Modem
 5 Other _____

Which of the following types of programs do you regularly use?

- 1 Communications 4 Graphics
 2 Games 5 Database
 3 Word processing
 6 Other _____

Are you interested in programming?

- 1 Yes 2 No

How do you rate your knowledge of Basic?

10-11

How do you rate your knowledge of assembler?

10-11

Which languages are you interested in?

- 1 None 5 Pascal
 2 Basic 6 C
 3 Assembler 7 Fortn
 4 Logo
 8 Other _____

How do you buy products for your Amstrad?

- 1 High Street store 3 Computer shop
 2 Mail order 4 Club

Approximately how much will you spend on software in the next 12 months?

- 1 Games 2 Serious

If you buy games, even on disc, what equivalent cassette price range do you normally go for?

- 1 Less than £2.00 3 £7.00 - £9.99
 2 £2.00 - £5.99 4 £10.00+

How do you buy Computing with the Amstrad?

- 1 Subscription
 2 Regular newsgagents order
 3 Newsgagent
 4 Other _____

How many people including yourself read your copy?

- 1 2 3 4+

Which other magazines do you read?

- 1 ACU
 2 Amstrad Action
 3 Popular Computing Weekly
 4 Your Computer
 5 Personal Computer World
 6 Other _____

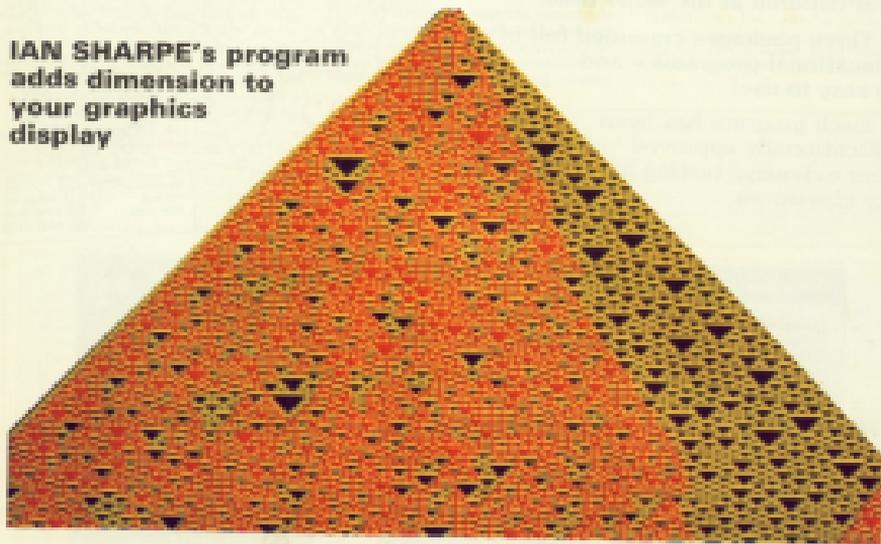
Which subjects would you most like to see us cover?

Have you any general comments about the magazine?

Please indicate your level of interest in the following 10 - 11

- 1 News
 2 Amstrad including Amstrad
 3 Serious/business software reviews
 4 Hardware reviews
 5 Advances
 6 Communications
 7 Skills
 8 Freezing
 9 Type-in games
 10 Type-in utilities
 11 General interest topics/listings
 12 Machine code tutorials
 13 Basic tutorials
 14 Construction projects
 15 Educational topics/games
 16 Logo
 17 10-frees

IAN SHARPE's program adds dimension to your graphics display



The Generation Game

THOSE who typed in Chris Ratcliffe's fractal program in the May 1987 issue of *Computing with the Amstrad* will have spent many happy hours watching it draw superb graphic displays.

Automata is another program which produces spectacular graphics and you don't have to wait long for the results. The principle is similar to the Game of Life we published in October 1986.

The screen displays a colony of cells and the Amstrad produces successive new generations by applying a set of rules to the latest generation. In the Game of Life a generation is taken as a

two-dimensional grid but in Automata each is a line of cells represented by a row of pixels on the screen.

The latest generation is at the bottom of the screen and in each cycle of the program all the old generations are scrolled up by one line and the new one drawn at the bottom.

A pixel on the bottom line represents one cell in the latest generation. The program adds together the link numbers of the three dots above it (above left, directly overhead and above right) and uses the result with a table of rules to obtain a value for the new cell.

You can select two types of operation. One adds three pixels as I've

just described and the other adds two pixels — above left and above right leaving out the one in the middle. The left and right edges wrap round so each line is really a circle and the screen is effectively a cylinder.

The scrolling, calculation and plotting are all done in machine code to produce a fast display and about two screens scroll past every minute.

All the available options in Automata are selected from a menu which will usually lead to another screen. From most of these the operator will take you back to the menu. In the case of loading or saving

Turn to Page 53

Learning CAN be fun

- Use your Amstrad to teach and amuse your children at the same time.
- Three packages crammed full of educational programs - and so easy to use!
- Each program has been educationally approved after extensive testing in the classroom.

ONLY
£5.95 tape
£8.95 disc



Ages 2-5

Alphabet
Colours
Counting
House
Magic Garden
Machinemaker
Numbers
Pelican
Seaside
Soup



PELICAN

Teach your children to cross the road safely at a Pelican crossing.

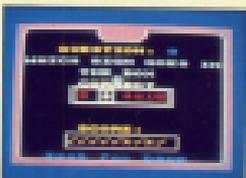


HOUSE

Select the colours to draw a house - hours of creative entertainment.

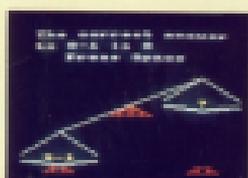
Ages 5-8

Balance
Castle
Dorick
Fred's Words
Hilo
Mafia Test
Roses
Number Signs
Seawall
Super Spell



NUMBER SIGNS

Provide the correct arithmetic sign and aim to score ten out of ten.

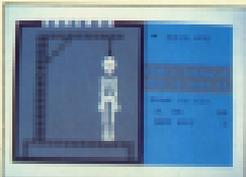


BALANCE

Learn maths the fun way. Type in the answer to balance the scales.

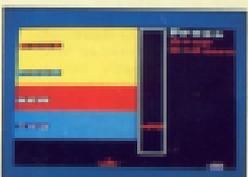
Ages 8-12

Asparagus
Cauliflower
Dog Duck Corn
Guessing
Hangman
Mafia Mike
Nim
Odd Man Out
Politeness
Towers of Hanoi



HANGMAN

Improve your child's spelling with this fun version of the popular game.



ODD MAN OUT

Find the word that does not fit - before your time runs out.

TO ORDER, PLEASE USE THE FORM ON PAGE 69

4 From Page 81

a window, if you want to abort the operation just press Enter when asked for a filename.

The rules and colours can be changed to give the most striking effects and the screen window can be saved with the current settings including the seed. The first line must be seeded with cells so there's an editor which allows you to generate a line of random pixels or plot specific points.

From this section you can also turn the seeding off so that you can carry on generating from where you left off if you have returned to the main menu.

The automata, so called because

they are self-replicating, are stored in a separate window held lower down in memory. So if you exit to the main menu, maybe to alter the colours, the display will be preserved and you can return to it.

The number of possible patterns is huge, ranging from regular structures based on triangles to growths with an organic appearance. Automata can be treated as a pretty pattern generator

but it is based on a branch of mathematics and can be a rewarding source of study.

The program is set up with a default set of rules and a random seed which produce an interesting effect and Table 1 lists a few more for you to try. If you see any good colours write in and tell us the rules, seed, type and colours and we'll print the better ones in the next pages.

Rules	Colours	Seed
0012112130	0,8,26,17,0	-,0,26,0,0,26,0,26,0,17,0...
0000000100	10,24,6,0,0	Random
0000000100	10,24,6,0,0	Random
0012112020	10,24,6,0,0	-,10,24,10,24,10...
0010000001	10,26,28,0,0	-,10,26,10,26,10...
0010000001	10,26,28,0,0	-,10,26,10,26,10...

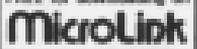
Table 1
Some interesting rules to try.

```

10 REM *** Theoretical Automata ***
20 REM by Ian S. Hargre
30 REM *** Consulting with the Manual ***
40 REM ----- 101 Only -----
50 IN DIMEN 2000 : DIM JRM (100000)
60 HPRINT "***** 10000 *****"
70 IF PEEK(10000) <> 0 THEN GOTO 1700
80 REM TYPE(0)=00000011,100011,0000011
90,1100
10 TYPE=000000000000000000000000
100 GOTO 100000000000000000000000
110 FOR I=0 TO 40000 : GOTO 100000000000000000000000
120 FOR I=0 TO 40000 : GOTO 100000000000000000000000
130 FOR I=0 TO 40000 : GOTO 100000000000000000000000
140 FOR I=0 TO 40000 : GOTO 100000000000000000000000
150 FOR I=0 TO 40000 : GOTO 100000000000000000000000
NEXT
160 TYPE=000000000000000000000000
170 TYPE(0)=000000000000000000000000
180 TYPE(0)=000000000000000000000000
190 TYPE(0)=000000000000000000000000
200 TYPE(0)=000000000000000000000000
210 REM ----- option screen -----
220 WHILE 10000 < 1
230 GOTO 100000000000000000000000
240 FOR I=0 TO 40000 : GOTO 100000000000000000000000
250 HPRINT "***** 10000 *****"
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1000 HPRINT "***** 10000 *****"

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This is one of hundreds of programs now available FREE for downloading on



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111
120 GOTO 100000000000000000000000
130 HPRINT "***** 10000 *****"
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1950 HPRINT "***** 10000 *****"
1960 HPRINT "***** 10000 *****"
1970 HPRINT "***** 10000 *****"
1980 HPRINT "***** 10000 *****"
1990 HPRINT "***** 10000 *****"
2000 HPRINT "***** 10000 *****"

```

From Page 84



AM tips

Anthony Clarke

POKE FAIR

I'M grateful to Simon Rockman of Amstrad Computer User for pointing out another apparent rip-off that slipped through the net. This took the form of a Celine poke from Daniel Gilson of Jerusalem and was no similar to the one in the Hairy Hacker column in his April issue, that we are suspicious to say the least.

Unfortunately Daniel has already had his prize, so I'll leave it to his conscience as to whether he returns it. Sorry, Simon.

I hope everyone out there heads my warning against pirating hints and pokes. These tips are just as copyright as any other material in a publication, and copying is not on.

Festive editors have been known to use foul words and pull out what little hair they have left when it happens. I hope this is the last that needs to be said on this matter, and I'll move on to more pleasant topics.

Have you noticed how Amstrad games are getting better? In a survey of computer shops in the Nottingham area, I found that sales of Amstrad software have been over 38%, Spectrum 26%, Atari ST 44% and Commodore nowhere in sight.

The title has turned drastically, but why? If you've bought any of the latest software you will know - Amstrad sales go up as the games get better.

The graphics are faster and smoother, and Rob Hubbard and David Whittaker make the Amstrad sound chip do cartwheels. Things really are looking up and the future is looking rosy for the CPC gamer.

Now on to these tips...

MERCENARY II

(Novagen)

Here's how you get the cheese in Mercenary II. First drop all your objects on the surface of the planet and go to the Rabbits briefing room. Board the table and press the Esc key.

You will appear with a Dominion Dart at location 5008. Take off and look for the objects you left behind. Collect them and take to the air again. A quick sweep of the landscape should reveal an extra object.

Fly to it and you will find the table is now on the surface. Drop the Dart and board the table. You now have the cheese.



COVENANT

(PSS)

Do you remember the days of high adventure when games like The Covenant graced our screens? For those who found it impossible to complete the entire picture, here is a little poke to get you through. It makes you invulnerable to all enemies and opens all doors.

This little gem was supplied by John Hall of Selby. Wield past the first two blocks of the program before running it.



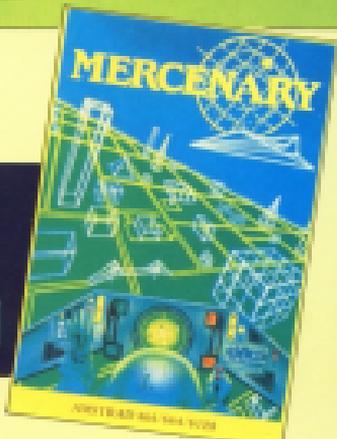
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SABOTEUR

(Durell)

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Rising Pirjas may find this poke quite useful. It doesn't stop the linear going down but will give you infinite strength. Thanks once again to John Hall of Thorpe Willoby, in Selby.



DEATHSCAPE

(Starlight)



Always have at least one missile spare because you may find you haven't the energy to teleport to the mother ship and need to destroy a fuel dump.

The best idea is never get into a situation where you

haven't enough energy to teleport.

Wait until your energy is three quarters full before returning to the mother ship. To save energy, don't use the autopilot system.

All good things come to an end and many of you will be disappointed to learn that Anthony Clarke has decided to hang up his boots and move to pastures new. We thank him on your behalf for all his efforts in helping to produce a lively, interesting feature.

But fear not, your favourite Amstips column will continue next month, as poles as ever under new management. We've recruited a delightful young lady by the name of Tiffany to carry on Tony's good work.

We'll also start paying up to 40% for every pole we publish dependent on its length and quality - and there'll be £10 for the best one each month.

All contributions must be original material and accompanied by the form below.

I certify that the attached submission is all my own work and has not been submitted to any other publication.

Signed _____

Name _____

Address _____

Postcode _____

If you do not want to cut the page, you can copy out this form to a separate sheet of paper.

The address to write to is: Tiffany, Amstips, Computing with the Amstrad CPC, 88 Chester Rd, Marsl Grove, Stockport, Cheshire SK7 5WY.

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information as to whether it is possible to use the Amstrad to control a 55 watt/240 volt lamp. How do I connect it to the computer and use it from within a program? — **R. Bubb, Coaley.**

■ It is possible to do the sort of thing you describe. You require two things: An interface to plug into the expansion port which will probably need to operate a relay if you want to use it with mains devices, and software to control it.

We haven't the space to publish details of how to construct such an interface as you could try buying a ready-made unit.

Contact Infotec Design, Unit 11B, Cleveland Court, Salford Road, Corby, Northants NN17 1BZ or KDS Electronics, 18 Hill St, Runcorn, Wirral CH69 6BB who should be able to help you further.

Oriental offers

THE Singapore Amstrad User Circle, of which I am a member, would like to assist and exchange information with readers who are interested in the use of a second 5.25in disc drive.

Anyone with or without the details of how to configure a 5.25in drive to work with the CPC is welcome to write. We would also like to correspond on any Amstrad related subject. — **Chris G.L. Chep, Block 34, #B1-123, Strathmore Ave, Rep. of Singapore 0214.**

■ If you write to Chris it would be polite to enclose an International Reply Coupon.

The key to it all

I HAVE been talking your magazine since I bought my CPC in late March 1985 and must write to thank you for the interesting and helpful articles that are printed.

In the user manual it says "There are 28 keyboards expansion characters in the

range of 129-187. I know about 129-143 the ones on the keyboard, but where are the others?"

My brother has just obtained a Sharp M2700 computer, is there any way he can load Locomotive Basic as used on the CPC604 so that we can share our interest and help each other? — **Colin Hensley, Birmingham.**

■ Glad you like the magazine. As you rightly say, expansion characters 129-140 are assigned to the numeric keypad. The others from 141 onwards are not assigned to the keyboard until you put them there with the KEY DEF command like this:

```
01 141 8,1,1,1
```

This assigns expansion character 141 to the Tab key (number 8) and the 1 specifies that the key map reset.

If you type that in and press Tab you won't see anything happen because although expansion character 141 is now on that key there's no string attached to it, so enter:

```
01 141, "1" 0000
```

which will assign the string to the expansion character. Now press Tab and you'll see the message printed.

As for your brother's Sharp, Locomotive Basic is specific to the Amstrad CPCs and their hardware, it is not supplied to run on other machines.

Presumably your brother has a dialect of Basic running on the Sharp and you may have some success typing Amstrad Basic programs into it, but these will need some adaptation.

The only practical way to transfer Basic files is by RS232 link, but this will cause further problems. RS232 interfaces are quite expensive and it will take a certain amount of trial and error to sort the wiring out.

Then you'd have to transfer your Basic files in ASCII format and load them into Basic on the Sharp—but will it accept ASCII files?

SLOBB

Corner

The South Locomotive and Compendium Bulletin Board

My kingdom for a game

Dear Sir,

Sorry for the delay in answering your mailbox, but we've been working hard all week trying to turn the complete works of Shakespeare into an arcade game for the CPC range.

We managed the motor boat race in the *Melancholy of Menace* without too much trouble — but the grand old feast for the winter caused one or two problems. Ports looked decidedly localized when we took it off line, so we compromised by taking a chunk out of Richard III's ham.

We then tried Julius Caesar, but marketing must have got him confused with Skylock. The cassette title shows a gentleman spinning a top and head fall of laurel leaves about the words: "I come, I see, how much is it already?"

Two gentlemen of Verona got the Monte strain because the boss didn't like the way they walked, and *The Merry Wives of Windsor* failed because he realised there's too much of that sort of thing going on. The implementation of *Jean of Arc* was going really well until he reminded us who the author was.

We asked Edward — our rather strange graphics chap — to design the sprites for all the games. You know, all the little characters that move around the screen. You should have seen what he came up with for *Bottom in A Midsummer Night's Dream* — I ask you!

On top of that we've been driven out of our local, the Clock and Fuller, I told Phil not to connect his CPC to the electronic cash register but, you know what he's like, he'll try anything once.

Well, it was nice having beer at 3p per pint all night. We use the keyboard and Mouse now, just a bit further down the road.

Anyone, enough of the chat, let's get down to your little problems. I'm going to have to look it up and get back to you but, I'm fairly certain that the "for sleep things with the shiny legs" do have to go just into the same socket that they came out of. I agree that it's difficult to tell one from the other as they do all look the same.

As for your second query, I'm at a loss as to why you should want to take your CPC under cover. But if you must, the keyboard is fairly easy to manage — a large plastic bag would do the trick and should suffice. The monitor is a bit more difficult though — for one thing it needs a much bigger bag, but that distorts the picture something terrible.

So unless you've already bought that Submarine game, I really think you should forget the idea.

See ya soon.

Arthur Brain

Arthur Brain,
Technical Help,
SLOBB

◆ From Page 81

Be bold

EXPLORER This year I had problems loading some Firebird tapes into my Amstrad CPC624. In frustration I returned them all to Firebird and within two weeks I received unsolicited replacements with an apology for any inconvenience caused.

Fantastic, and I've had no problems since. My message to anyone having problems loading Firebird tapes is: Don't mean to be outrageous feeling sorry for yourselves, contact Firebird Mail Office, Unit 2, Southbank Riverside Way, Southdown, Herts. SG8 1 8PQ, who will be only too willing to help.

Now I need help. I have a Silver Reed EXP620 which I use with Pretext. On this printer the bold print facility works perfectly.

I have just bought an EXP620 and unbelievably the codes are different from the EXP620 and it seems impossible to use this feature. Is there any way I can use a short Basic program with Pretext to enable the use of bold print? — Owen Kitchener, Leicester.

◆ It's nice to see Firebird being so helpful, and it's an example that some other companies could learn from. We're sure that the goodwill and favourable publicity generated by such an attitude does more for overall profits than ignoring people in the hope they'll go away.

As for your Silver Reed, not having one we're afraid that we can't answer your problem. Has anybody been successful in printing bold characters with the EXP620?

Underneath machine code

WHenever you mention the 286 microprocessor you say that it only understands machine code and instructions in any other language are automatically translated into it.

I have read that machine code is not the lowest level understood by a micro-processor, but there is an even lower language called microcode.

If this is true shouldn't it

be possible to write programs in microcode? You would be able to create new and specialised machine code instructions and programs would run a lot faster. — S. McMurphy, Dublin

◆ You are correct in that the 286 chip is programmed in microcode to recognise and execute machine code instructions. This is not true of all microprocessors because some have hard wired instruction sets which run faster than those executed by a micro-program.

Unfortunately you can't alter or add to the existing micro-code program inside your 286. It is in an area of read only memory inside the chip and is fixed at the design stage.

The truth about TELEX

How much does it cost to go on Telex?

You could go the conventional way and buy a dedicated Telex machine. The cheapest will cost you £1,604 (inc VAT), the cheapest £2,892 (inc VAT). You will also need a separate telephone line, costing £191 to install, plus £40 a year rental, that's a total outlay over the first year of a minimum of £2,009. (All prices include VAT.)

Or you could do what more and more Amstrad users are doing — use your computer to double as a Telex machine. And just use your ordinary telephone!

How do I turn my Amstrad into a Telex machine?

All you need is a modem and appropriate communications software (see the Advertisements in this issue), a telephone, and a subscription to BSCOLink. Telex is just one of a growing number of services available to Amstrad users on MicroLink. With it you can send read the news as it happens, go shopping, create your own dated user group, send telegrams and electronic mail right round the world, download free instructional programs directly into your micro... and much more.

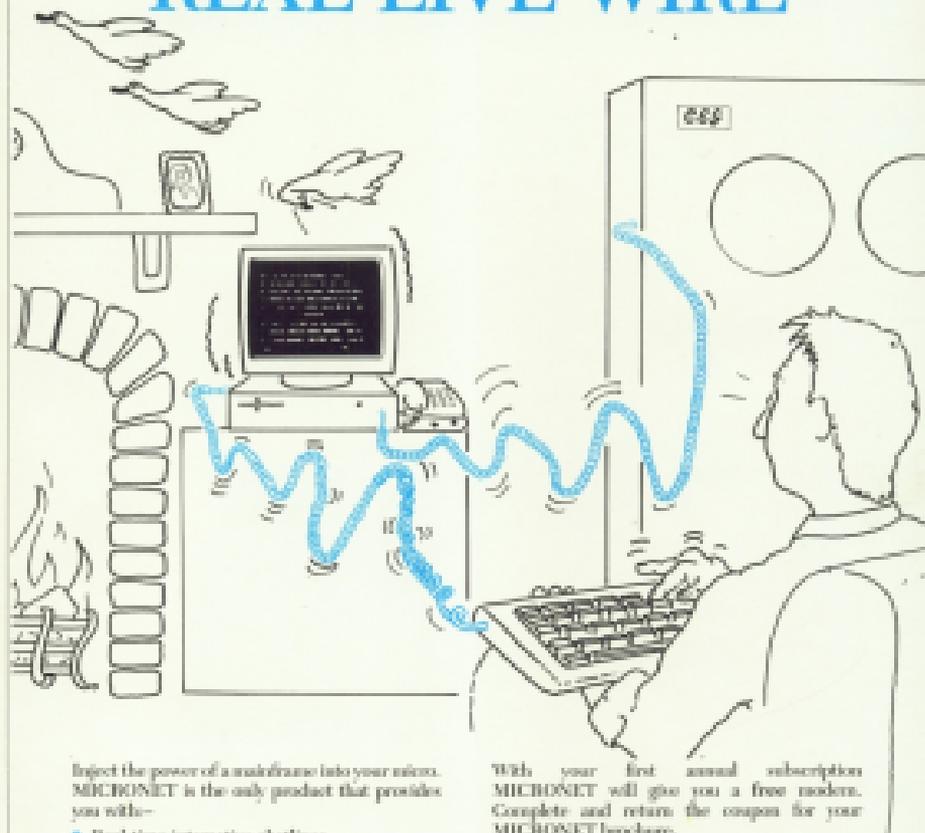
But why use Telex?

Because it's a standard element of instant communication between businesses. Today there are 150,000 Telex machines in use in Britain — and more than 2 million elsewhere. It's so dramatically speed up business communications — just as quick as sending the phone but far more efficient, because you have a hard copy of every "conversation" for your records.

But there's a big bonus you get when you use MicroLink for Telex. That the conventional way doesn't offer. With MicroLink you don't HAVE to be in your office to send or receive Telex messages. You can send it easily use your computer at home (or turn a portable) — to receive you can check whether there are any Telex messages waiting for you — anywhere, anytime. How's that for your business efficiency?

Circle 106 please
See Page 88

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Mini Office II offers the most comprehensive, integrated suite of programs ever written for the Amstrad – making it the most useful productivity tool yet devised.

A team of leading software authors were brought together to devote a total of 26 man-years of programming to the development of Mini Office II. What they have produced is a package that sets new standards in home and business software.

The sample screenshots above illustrate just a few of the very wide range of features, many of which are usually restricted to software costing hundreds of pounds. Most are accessed by using cursor keys to move up and down a list of options and pressing Enter to select.

Is it that easy to use? Several leading reviewers have

already sung its praises on this very point.

Yet possibly the best advertisement for Mini Office II is that it comes from the same stable that produced the original Mini Office package back in 1984.

That was so successful it was shortlisted in two major categories of the British Microcomputing Awards – the Oscars of the industry – and sold in excess of 100,000 units!

It was up to Mini Office II to take over where the first Mini Office left off, with 32 extra features, two additional modules, a program to convert existing Mini Office files to Mini Office II format, and a 60-page, very easy to follow manual.

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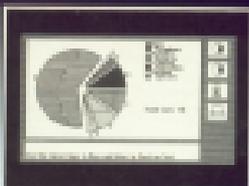
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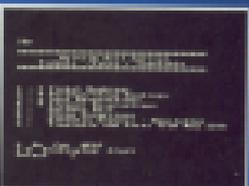


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Here's what some independent reviewers say about *Mini Office II*:
"None throughout the program were absolute and well structured, allowing complex choices to be made with fairly a pleasure, the particular spread sheet manual and offering a wealth of spreadsheet facilities... All the more it really is extensive, detailed word processor, graphics and communications packages may offer some advantages, but none are as full of features and bells and whistles that *Mini Office II* has in its manual or that are using half of their power... That you get with *Mini Office II* is a unique package in providing all embracing word features, package at a price to split price. It fulfills all its promises, and there's nothing you can do about the facilities it provides." — *Software/Reviews 288*

Voted Business Program of the Year - 1985 AND 1986
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This package is incredible value. It includes a word processor, database, spreadsheet, a mail program, label printer and sheet, graphics display, text editor and communications module. You could well spend over \$200 to get the same range of features if you bought separate programs from other firms.
Only Mini Office Computing Guide.

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DATABASE SOFTWARE

Order form on Page 68

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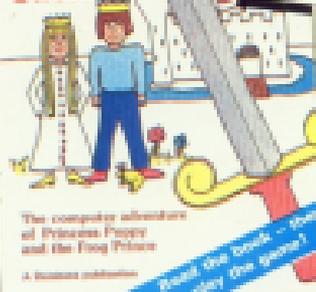
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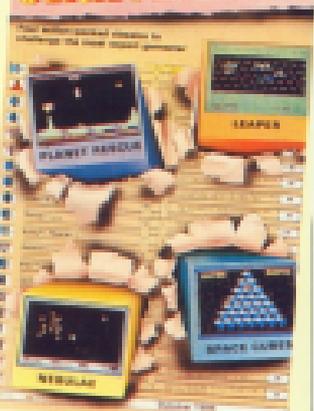
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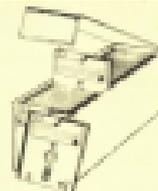


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