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The independent magazine for Amstrad CPC users

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ROMANTIC ROBOT present

1988 - THE YEAR OF THE ROBOT

Q1) WELL, THE BEARD OF THE YEAR OF THE CMC, PC, AND OTHER DEVICES - JUST THE YEAR OF THE ROBOT?

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A: Indeed, in the general and complete in the world of this - prices, and a full list of BELIEVERS in the world of the 1987-1988 season of the year and change program in your list.

Q3) HOW DO I KNOW OF THE NEW PROGRAMS OF THE YEAR?

A: You can find out about the BELIEVERS 1988 - it is in fact the 1988 program of the year which will be **TRUCKS** AUTOMATICALLY. The 1988 year program will be **DISC** in the year of the year and where you wish to make a long you just give the BELIEVERS and before and follow the year and season instructions.



Q4) HOW DO I KNOW THAT IN IT EVERYTHING IS THE SAME? EVERYTHING IS THE SAME?

A: This is a new and a great one for you. The same year that best option in the **SALES** program, to **BELIEVERS** to continue it, to **JUMP** (you in your own words - include the features and **TRUCKS** to make the BELIEVERS are of both in addition. For example, getting to **DISC** will be able you to **TRUCKS** (the feature and then you can use a **PROGRAM** or just a **TRUCKS** in **DISC**. Under the year of the BELIEVERS, continue the program or to **TRUCKS** the full amount of year in features and will be able to provide. There is a great one for you, you can **BELIEVERS** or **JUMP**, or the **TRUCKS** - a change 5, **SALES** it takes, you.

Q5) HOW DO I KNOW THE NEW YEAR OF THE YEAR, EVERYTHING IS THE SAME?

A: You can find out about the BELIEVERS 1988 - it is in fact the 1988 program of the year which will be **TRUCKS** AUTOMATICALLY. The 1988 year program will be **DISC** in the year of the year and where you wish to make a long you just give the BELIEVERS and before and follow the year and season instructions.

Q6) HOW DO I KNOW THAT IN IT EVERYTHING IS THE SAME? EVERYTHING IS THE SAME?

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AMSTERDAM, NETHERLANDS (JANUARY 1987)

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All major listings are accompanied by advertisements to help you identify typing mistakes. For full details on how they work see the article in the June 1987 issue and the comments in July 1987's posting.

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AMSTRAD CPC



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Send cheque or postal order for £8.99 (C64, Amstrad cassette), £10.99 (C64 disk), £14.99 (CCT, Amstrad disk) plus 80p P&P.
Access and Barclaycard holders telephone 01-778-0731.

CPC NEWS UPDATE

The top people read their CPC

THE world's leading financial newspaper - America's famous Wall Street Journal - is being delivered by computer. CPC users can now read the complete contents of the publication on their monitor screen.

This is the latest service being offered by MicroLink, the electronic mail service. It also offers the facility to search through issues of The Wall Street Journal dating back to 1886.

This is just one of a package of four new online database services being introduced by MicroLink to its subscribers. The other three are:

BS Informa - offering selected English language summaries of articles taken from more than 500 business newspapers and journals covering UK and overseas markets.

Marketing Week - the full text of the leading UK magazine covering the marketing and media world.

Feat Manelck McInstock Grants - a comprehensive guide to private and public sector grants and initiatives available in the UK.

Time based usage charges will be between £1 and £2 per minute.

NEW LINE IN VICARS

A NEW version of VICAR - Variables in Context Analyzer and Reporter - has been released for the CPC8128 by Amstel (01-807 5444). The package comprises a number of utilities allowing programmers to analyse and document their work. Programs can be cross-referenced over multiple files and can include a single reference listing to 100 or more modules.

The new version offers for wild card searches, support for sub-directories, faster operation, and command line control options. Price £28.95.

CPC MARKET IS BOOMING

RUMOURS that the CPC market is on the decline have been firmly quashed by the latest news from the Official Amstrad User Club. For the North East based organisation reports that new CPC owners are now joining at the rate of 500 a month.

"And that figure is increasing all the time", says club chairman Eric Innes.

The club broadly divides users into two categories, professional and leisure. CPC owners, who slot into the latter group, account for at least a third of all recent members.

Not that the CPC owners joining are simply games addicts.

"Lots of people taking up membership are new-agers, shop owners and so

on who are using their machines to help run their businesses", said Eric.

"The computer works for its living during the day, then the kids can give the games a bash at night."

The Official Amstrad User Club is becoming increasingly a major attraction for CPC users because of the level of support it offers.

Apart from a technical hotline, members can take advantage of numerous other facilities including special offers and discounts negotiated on their behalf.

"Amstrad provides the excellent machines, we provide the excellent support", says Eric.

The club chairman is convinced that the CPC has a future. "Who says the machine is dead? We can tell them different", he says.

Word processor linked to database

A DATABASE has been integrated into Brunning Software's word processor BrunWord to create Info-Script for the CPC8128.

It is possible to hold Info-Script, BrunWord and all its facilities, 1,000 names and addresses and six pages of text in memory and to switch between the word processor and database without accessing the disc.

With a Di'Tronics 256k expansion ram pack the program can hold about 3,000 names and addresses, six pages of text plus the 35,000 word spelling checker dictionary.

Info-Script complete with BrunWord and BrunSpell costs £48 from Brunning Software (2345 26284). An upgrade for existing BrunWord owners costs £22.

Big show tipped to top 20,000

A RECORD attendance of more than 20,000 is anticipated by organisers Database Exhibitions when the Amstrad Computer Show returns to London on May 28 to 29.

This follows a turnout of

almost 18,000 visitors for the February event, which established it as the number one company-specific show worldwide.

Once again the venue is the impressive Great Hall at Alexandra Palace.

To cater for the anticipated demand, a further 1,000 square meters has been added to the floor area.

At the same time, the size of the stands has been increased by 25 per cent, with Amstrad's alone now encompassing 120 square metres. A major boon for visitors to the show this time will be a computerised product locator giving an

instant guide to pinpointing items they wish to buy.

Another innovation will be the exhibition theatre incorporated in the Amstrad stand. This will be the setting for non-stop demonstrations of the company's latest hardware and software developments.

Visitors with technical queries will be able to obtain help from the team of experts manning the advice centre.

The show will again be the launching pad for many exciting new products. However exhibitors are remaining tight lipped about the projects they currently have under development.

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Electronic mail - The cheapest and fastest form of communication possible. It costs the same to send a message to one mailbox as to 500!

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Telexessages - Type in your message before 6pm and delivery is guaranteed by first post the next day (except Sunday), anywhere in the UK and USA.

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Redpagings - If you also have a pocket redpagger you'll be alerted each time an urgent message arrives in your mailbox. So you're always in touch.

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When you join MicroLink you've got the whole business world at your fingertips - 24 hours a day. You'll have immediate access to ALL the facilities offered by Telecom Gold ... and a great deal more besides.



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 ones 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, save to disk any messages waiting for you, and disconnect in as little as two minutes.

Typical costs packages

- A) Cost: Amstrad V33 modem + RS232 interface + tape or disc systems software (£38-65)
- B) Cost: Amstrad V33, V33 automatic modem + RS232 interface + communications software (£200)
- C) Cost: Alphagate V21, V23 internal car modem + RS232 interface + Commodore rom (£130)
- D) Cost: Lotus V21, V23 automatic modem + RS232 interface + Commodore rom (£110)



More than 90 per cent of subscribers can connect to the MicroLink computer at local call rates.

YOU NEED ONLY 40000
£10 on the telephone and
send it to the address
below. You will receive
full details of services
available. Together with
an application form.
Complete this and
return it to us and
your Amstrad will be
able to use all the
services of MicroLink
and Telecom Gold.

Please send me full details about MicroLink, and information sheets about the following hardware and software options (please tick):

A B C D

Name: _____

Address: _____

Postcode: _____

Send to: George Hayes, Adlington Park,
Adlington, Westchester, MK12 5AP

CPD/CAS



Pinocchio from *Garbage*

PROPAGANDA, the TV witch — she appeared with *Red Heat* and *Erin* in the *First Monday Show* — launched *Frightmare* from *Cassette Games* (0492 526326) as it must be horribly good.

For £9.99 cassette, £14.99 disc, you get to float from screen to screen collecting dreams and fears from the darkest corners of your subconscious.

DATA EAST's fast and furious arcade classic *Kanoy* has been given the Mr. Micro treatment and released by Activision (01-421 1501).

Kanoy must run, swim

and the latest offering from GrandSlam (01-428 0886). Price £9.99 cassette, £12.99 disc.

THERE'S another batch of disks and cassettes on the way from Newson (0235 822835) over the next few months. It includes space battle fighter *Cyberoid*, a conversion of the best-selling game *Nebula*, the vertical scrolling arcade-style *Marslander*, 3D racing street-racer *Roadster 3X*, arcade adventure *Adventus* and multi-directional scrolling action in the *Netherworld*. Meanwhile, Newson's

LATEST ON THE GAMES FRONT

and by through nine levels to find the lost treasures of Babylon, taking on more than 40 types of monster. Price £9.99 cassette, £14.99 disc.

REVITALISED since the turn of the year, The Power House (01-878 3288) went to Vancouver for its latest budget releases *Dambusters* and *Desert Fox*, the products of Canadian publisher SDC. Price £1.99 each.

HDMI and sporting activities of *The Firststones* — Fred, Barney, Wilma, Pebbles et al — provide plenty of lighthearted challenges in

new budget label *Rebound* has re-released three *Genie's* adventure hits — *Tin Nuts*, *Dun Derrach* and *Marsport* — all at £1.99.

The other Newson label, *Radi-It* is offering the action quartet of *Rollie Valley*, *Desert Conqueror*, *Subterranean* and *Meroboth* for £2.99 each.

PLENTY of activity also at Gemini Graphics where new releases will include the labours of Hercules, *Alternative World Games*, *Venom Strikes Back*, and — with Magic Bytes — *Pink Panther* and *Vampire's Engine*. Prices £9.99 cassette, £14.99 disc.

THE GALLUP CHART TOP 20

PC SOFTWARE

| RANK | THIS MONTH | LAST MONTH | TITLE (Software House) | PRICE |
|------|------------|------------|--|-------|
| 1 | ▲ | ▲ | WAY OF THE EXPLODING FIST <i>Mastertronic</i> | 1.99 |
| 2 | ● | ● | PLATOON <i>Ocean</i> | 9.95 |
| 3 | ▼ | ▼ | OUTRUN <i>GGI Gold</i> | 9.99 |
| 4 | ▼ | ▼ | PRO SKI SIMULATOR <i>Code Masters</i> | 1.99 |
| 5 | ▼ | ▼ | GRAND PRIX SIMULATOR <i>Code Masters</i> | 1.99 |
| 6 | ▼ | ▼ | TRAP DOOR <i>Alternative</i> | 1.99 |
| 7 | ● | ● | SKATE ROCK <i>Mastertronic</i> | 1.99 |
| 8 | ▲ | ▲ | LA SWAT <i>Mastertronic</i> | 2.99 |
| 9 | ▼ | ▼ | 3D STARFIGHTER <i>Code Masters</i> | 1.99 |
| 10 | ● | ● | GHOSTBUSTERS <i>Mastertronic</i> | 1.99 |
| 11 | ▼ | ▼ | DIZZY <i>Code Masters</i> | 1.99 |
| 12 | ▼ | ▼ | POPEYE <i>Alternative</i> | 1.99 |
| 13 | ▼ | ▼ | BMX SIMULATOR <i>Code Masters</i> | 1.99 |
| 14 | ● | ● | JET BIKE SIMULATOR <i>Code Masters</i> | 4.99 |
| 15 | ▼ | ▼ | MAGNIFICENT SEVEN <i>Ocean</i> | 9.95 |
| 16 | ▼ | ▼ | GHOST HUNTERS <i>Code Masters</i> | 1.99 |
| 17 | ▼ | ▼ | MATCH DAY 2 <i>Ocean</i> | 8.95 |
| 18 | ● | ● | ROGUE TROOPER <i>Alternative</i> | 1.99 |
| 19 | ▲ | ▲ | TANK BUSTERS <i>Firebird</i> | 1.99 |
| 20 | ▼ | ▼ | SOCCER BOSS <i>Alternative</i> | 1.99 |

Five new titles made their entry into the chart this month with *Platoon* going straight to number one.

There is a good representation of simulators too, with four of them from *Code Masters* — *Jet Bike Simulator* making its debut at 14. Look out for the new one from the Oliver Twins entitled *Fruit Machine Simulator*.

I LISTED last month what you'd need in order to construct a second disc drive, and gave you some advice on soldering. Now I'll detail the construction of the circuit board, and connecting everything up.

The veroboard on which most of the components will be mounted has copper strips running along it on which the wires from the components are soldered.

Figure 1 shows the wiring scheme. There are three points to consider:

- The electrolytic capacitors must be connected the correct way round, as must the rectifier. Either the positive or negative end will be marked on the body of the component. Check this carefully before you solder the part in, as a mistake will damage the component when power is applied.

- The rectifier can be mounted a little above the board to allow air flow round it. The other components, however, should be mounted flush with the board.

- As you can see, the voltage regulators aren't mounted on the board, but are connected to it by wires. This is because they get quite warm, and we mount them inside the case where the metal can conduct some of the heat away.

Once you've built the board, check it carefully for any blobs of solder between tracks, also that the voltage regulators are connected up properly,

MAKING THE CONNECTIONS

Part two of JOE PRITCHARD's disc drive construction project

and that the bridge rectifier and the electrolytic capacitors are the correct way round. This is very important, so do it carefully.

Finally, push the flex that will take the power to the disc drive through its grommet and ensure you've got quite a bit of slack inside the box. Mounting the circuit board is a matter of choice. Whatever you do, it must NOT touch the metal case, as this could cause short circuits.

One way is to glue a small block of wood or plastic to the bottom of the circuit board, then stick the bottom of the block to the metal case. Follow the instructions that come with the glue for best results. However, check the

circuit board to make sure it's correct before doing so!

Most care is required when wiring the transformer. First of all solder the leads from the circuit board 110 volts input to the secondary connection on the transformer. Figure 2 shows the connections.

Now bolt the transformer tightly into place. Push one end of the mains cable through the hole into the box, and pull enough through to work with. Fit a strain relief grommet (from Rapid Electronics) and push it into the hole to secure the cable. This will prevent connections inside the box being broken if the cable is pulled hard.

Strip off the outer insulation for a

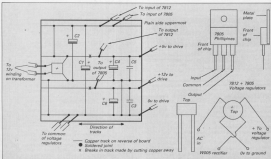


Figure 1. Wiring scheme for components

couple of inches, and then strip the three wires in the center. The green/yellow wire is the earth, and should be connected to the metal box as shown in Figure 5. This must be done securely, as it will protect you in the event of a fault.

It's a good idea to make the earth lead longer than the brown (live) and blue (neutral) connections so that if the mains input cable is pulled hard, the earth is the last connection to break.

Connect up the live and neutral wires as shown. Wrap those terminals with good quality insulating tape to remove any risk of a connection between live or neutral and the metal box under normal conditions. Now fit the mains plug and a three or five amp fuse.

Give the wiring a final check and put the lid on the box. Use the test meter's ohms range to see that there is a good connection between the earth pin on the plug and the outside of the box. A very low resistance reading - a few ohms at most - should be shown. Now use the meter to check that there's no short circuit between either the live or neutral pins on the plug and the box.

Testing

Connect the meter to the 12 volt output and the 0 volt output, then plug in the power supply. You should measure 12 volts. Turn off, and repeat for the 5 volt output. You should now read 5 volts. If you don't get these voltages, unplug immediately and check everything.

Warning: carry out any adjustments to the power supply when plugged in.

Now fit connect the disc drive. First of all, you'll need a plug to fit the drive's power socket - a four-conductor female Molex connector with 2.4mm pins. I got mine from a Tandy store, part number 274-334. This is wired as shown in Figure 6. Here we are looking down on the top of the disc drive PCB.

You will also need a data cable to

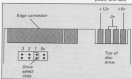


Figure 6: Disc drive power and data

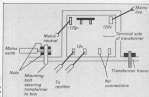


Figure 7: Transformer connection and mounting details

connect the CPC8128 to the disc drive. As mentioned in Part 1, this is available from Matrox for £8.83, or you could build your own.

You will need two 34-way IDC edge connectors and a length of ribbon cable 34 wires wide and no more than one metre long. This should be wired so that pin 1 of the Amstrad disc drive output goes to pin 34 of the disc drive, and vice versa (Figure 8). These connectors and the ribbon cable are available from any computer supplier.

Once the cable is made up, there remains only to change the drive select jumper on the drive to the 0 position. Details of how to do this are included with the disc drive.

Connect the drive, to the Amstrad, then plug in the power supply. Finally, turn on the computer. If all is well, the familiar boot-up message will appear. Now place a disc in the new drive, and type 'B'. There should be a whirring from the drive, and the Ready message should appear.

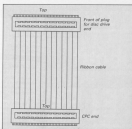
The drive is now working, and you can select between drive A, the built-in drive, and drive B. This will also work under CP/M, and on booting up, the second drive will be detected automatically.

Cleaning up

The only problem I had at first was dirt on the Amstrad's edge connector. This prevented a good connection and the CPC8128 couldn't find the new drive. However, a gentle rub on the edge connector with a hard eraser soon cleaned this up and I've had no trouble since.

The power supply will get warm, particularly in the area round the voltage regulators. This is normal, and will give no problems. If you want to, you can always drill some ventilation holes in the case - disconnecting it from the mains first, of course.

Figure 8: CPC to drive data cable connectors



ADVENTURE

I AM featuring another of Olive Cotton's excellent mini adventures this month and with it I would like to ask for your opinions. Would you rather have more maps and solutions, or do you think, as I do, that they are ideal for budding programmers?

Ralf Lawton and others have written praising them, but I haven't yet had enough feedback to come to a firm decision, and would like more of you to let me know what you think.

Graham Mitchell would like help with *Shadows of Mendon*. By either one I assume you mean the tree near the start of the game. If so, hit it with your sword until it breaks into a stump and a branch. Now you can use the branch to either level the stump to reveal an underground cave complex, or move the boulder and use that to get down the cliff.

Problems with *Seabase Delta* have prompted David Barnes to write in. To forge the signature — if you have the pen and ink — sign the form *I Non Fiat*. To get the egg from the fan, blow bubbles at it. The ingredients for the pancake are the egg, flour, and milk.

In response to many pleas for help with *Seabase Delta* and *Rigel's Revenge* I shall be printing a full sol-

ution to both games, hopefully next month.

Since the report of a bug in *Rigel's Revenge* in the March issue, I've been told by the authors that this was only present in early versions of the game and has since been fixed. Anybody with one of the bugged copies can return it to Mastertronic for replacement.

I have to wrap up to making a mistake with Julian Cator's prize-winning review of *Spirtek* in the February issue. The review read: "The plot — which is the most original I have come across..." but should have been: "The plot — which is not the most original..."

Sorry Julian, I missed the word when I was typing it up.

Graham Mitchell has some help for Alex Johnson in *Rebel Planet*. The containers are red bearings, and cannot be opened. Graham goes on to offer the following hints:

- On the way to Arcadian go to passenger cabin one, talk to the Arcadian techs, then ask him for help.
- The code for the computer building is 10101001.
- Kill the guard, get the elevator, go to the computer, remove the limcon and back, implant the battery in the elevator, drop it, then go down.

HALL OF FAME

Snowfall — Part II of a solution
by Stephen Parker

Go back to the airlock, drop the lamp, and take the stacks. Go into the monastery and find the room where the crew member is. Press the appropriate buttons to bring out her coffin. Take the coffin to the revival machine by the lift, and give her the liquid. She will tell you the colour sequence which unlocks the door to the habitadoms.

Return to the airlock and leave the stacks. Move South, West and down. If you are wearing the necktie the door will open. Go to the stores and South, East, South, and East again to the red ticket machine.

Take a red ticket, go North to the green ticket machine, and take a green

ticket. Go West to the counter, and exchange the red ticket for a red form. Go South to the other counter, and exchange the red form and green ticket for an orange form.

Return to the first counter via the ticket machines and get a yellow form for a red ticket and an orange form. Go to the second counter again and get a green form in exchange for a green ticket and yellow form.

Back to the first counter again, and exchange a red ticket and green form for a lance. Travel to the second counter and egg, West, and North to the broken janitor droid.

Attach your probe to find out which part is missing. Nearby you will find the part and must give it to the droid who will give you a bubble-helmet — the other half of your spacesuit.

Travel South, West, in, and up to

reach the cylinder, then North to retrieve the lamp and toolbox. Leave the probe. Go to the South end of the cylinder and press the button to enter the airlock. Wear the helmet, turn your lamp on, press the yellow button, and move South.

Make your way across the web of ropes to the snowfield and up to the monorial platform. The monorial has eight stations which can be identified by what can be found at the base of the pylons — the snowfield, habitadoms, snowdrifters, cliff saws, snow, robot-doms, snow, and warehouses.

To get from one station to another press the button, enter, and press the button the appropriate number of times.

Go to the habitadoms and enter via

Turn to Page 12 ▶

HALL OF FAME (Continued)

4 From Page 11

the airlock. Leave the tool box, go to the cliff cave and collect the shovel. Travel to the robotdome for the linked cylinders, the warehouse for the armour (which should be worn) and the snowdome. Weld the broken tank, and dig to find the keys.

Leave the shovel, lance, and cylinders, and go in and down. Get the extinguisher, move up, turn the keys, and leave.

Return to the habitome and find the storehouse to the south. Insert the second can into the toolbox and close it. Attach the flask to it to recharge your helmet with air.

Now go down, and to open the door enter the colour codes given to you by the crew member.

You will need the cat and the toy, but not the other objects, though using the holo-wand map provide some explanations.

For the final stage of the game you need - the cat, toy, toolbox, and extinguisher.

Go to the cliff cave then North to the base of Jacor's ladder. Open the toolbox to incorporate the weldrod. Move up and North to the base of the ramp and drop the cat (to clean the ramp). Travel up and West through

the blast doors, and at the T-junction wave the toy to disable the laser.

Enter the control room and play the flute (attached to the toy) to break the petrol bomb. Then squeeze the extinguisher to put out the fire. Move West to the control panel, and pull the red lever to start Snowfall's engines. Game completed.

Leather Goddesses of Planet Part II of a solution by Graham Wheeler

Travel E, E, SE, up, and enter the circle. You are transported to the closet. Wait. The floor gives way and you are back in the cell. S, up, up, and enter the circle. You are transported to the Martian desert.

Travel E, drop the sword, put everything in the sack, get everything but the sword, drop the matchbook, SE, SE, NW, shove the painting to the mouse. It freezes with fear. Get the mouse, S, E, N, N, stop the machine and put the jar in it.

Close and switch on the machine, then open it and get the jar out. Cover the princess with the screen. She is changed back. Get the angle, N, put the raft into the canal and board it.

Wait until you see the deck on the

south bank, grab the deck, S, E, S, buy an egg, give the coin to the proprietor, take the dust (you find a tube), drop the tube and painting, N, W, N, drop the jar, open the tube, get the circle and drop the tube and circle.

Enter the circle. You are transported to the fountain. Stand up and wait and the goddess pulls the lever. You fall to the place.

Give Tiffany the objects in the order that she asks for them, and she will build the anti-goddess machine which will fire a banana and defeat the goddesses. You are now transported home and have completed the game.

Items used to make the machine: Rubber hose, blender, cotton balls, hairlock, phone book, angle, Jean Harlow picture, and mouse.

Mocker's Guide to the Galaxy - Part I of a solution by D.P. Francis

This is not the only way of getting through the game. Many of the problems and situations (such as the whale's belly) have more than one solution. You might like to experiment with some of the problems you encounter.

Consult the Guide regularly during play - you will gain useful insights into some of the objects you encounter and over, sometimes, useful information.

You begin the game in a rather poorly condition. Turn the light on, stand up, and get the dressing gown. Put it on and take the analgolic that you find in the packet. Get the solar driver and toothbrush, and head South to the porch. Examine and take the junk mail that you find on your doormat and leave the house.

Outside, a bulldozer is preparing to demolish your home. Lie down in front of it and wait and Ford Prefect makes an appearance. Refuse the towel he offers, and ask him about your home. He will leave his chiselled air and persuade Prosser to take your place in front of the bulldozer.

Head down to the pub and take the sandwich. Ford will soon arrive and buy you a few beers. Drink only three of them and return to your home, giving the cheese sandwich to the dog you encounter along the way.

The Wagon wheel will appear to destroy the Earth, and Ford will panic and drop a device. Examine it and press the green button. You will find yourself in the dark - literally. Get used to it, as you will spend a lot of

H-E-L-P

Anita South has written asking for help with *Spellbound*. She has managed to score 75 per cent, but is now stuck. If anyone wants to be a solution I'll publish it.

A welcome partial solution to *Knight One* has arrived from Richard Higgs. He is in difficulty with the master ring, and would like to know how to read it. Does he have to do any more than examine it? How help would be appreciated.

A Williams would like some advice on *Frankenstein*. He seems to be unable to get started, and has yet to see any graphics. I haven't got a copy of this game, but seem to remember that you have to spend the night in the laboratory, then enter the coach the following morning. Can anyone confirm this, or even send a map and solution?

I have had a letter from Philip Calver asking whether it is possible to kill the black riders in *Land of the Blags Part 1*. Am I right in saying

that he must hide from them?

Graham Mitchell is stuck in the second part, and would like to know how to get to *Winecellar* without dropping the ring. Can anyone help?

Graham is also stuck in *The Colours of Magic*. Can anyone tell him the exact wording necessary to get *Goodman* to show *Winecellar* to his room?

A game I've yet to see, *The Fourth Protocol*, is causing Jean Chantabiane some problems. She is stuck on *The Bomb* - Part II. It is about the handymen: does what does the handymen's shop want does she need to trade in order to get the trading device off the old man (the trading device off the old man (the ex-SAS officer)? Can anyone shed any light?

Barbara Style is stuck further on in *Gold of Nations* than I've had time to reach. Can somebody tell her how to get the honey from the beehive, and where she can find the stallion?



time there before the game is completed.

At first you are unable to do very much, as your five senses are out of operation. If you wait and read the descriptions carefully you will see that eventually only four senses are mentioned. The missing one is new operational and should be used.

Right now, your sense of smell is working, and as you sniff your surroundings you become aware of a stealer. By examining it you realize that it is Ford Perfect. Your senses now work and you discover that you are in the hold of a Wagon ship.

Nearly are two objects that require careful study. The dispenser issues Babal fish, creatures that allow you to communicate with and understand any alien life-form.

Getting a fish constitutes one of the funniest and most cleverly constructed puzzles in any adventure. The solution is to hang the dressing given on the hook to cover the hole, use the

towel previously offered by Ford to cover the drain, take Ford's patch to block the panel and finally, put the junk mail on top of the patch to give the upper half-of-the-room cleaning robot some junk to collect. You will now be in a position to make sense of the messages that are being announced over the tannoy.

The other object in the hold requiring your attention is the atomic vector plotter. Examine it, and press the switch on the case. You will be prompted for a random word from the collected works of poetry of the ship's captain.

If you have paid attention to the announcements, you will have realized that upon your capture the captain intends to inflict some of his poetry upon you, ignore Ford's fears about this, and wait until you are captured and brought before the captain.

Since you have a vested interest in the poetry, you must make sure that

the captain thinks you are enjoying it. So enjoy the poetry, and you will be treated to a third verse containing the password you require.

On your return to the hold you must hope in the world from the poem. Since this is a critical stage, it is worth saving the game first. The case will now open allowing you just enough time to get the plotter before you and Ford are cast out into space.

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Village of Lost Souls

Robico
£9.95 (tape)

THIS is the first in a projected trilogy under the collective title of *Realms of Chaos*. *Albion* is a medieval land where magic still exists, but recently an aura of doom has hung over it.

The use of magic is controlled by the Order of St. Lucien, patron of magic, and discoverer of the 13 realms of the ancient.

Those with the magical talent are supervised by members of the order, and are regularly checked to see that their magic has not been corrupted by their contact with the arcane. A council of 12 of *Albion's* most powerful magics rules the order, each of them holding a key to one of the 12 realms of magic.

As Mathis, the inquisitor, you are commissioned to the study of the Father-Magister to start an investigation for the council. You are told that the Lord Talent of the village of Gingham is believed to be trying to open a portal into the forbidden 13th realm – the realm of chaos.

Introducing you to and the Father of Gingham to destroy the window, the Father-Magister uses his powers to transport you to the village.

You begin in a ring of stones to the west of Gingham. A survey of your surroundings reveals many locations. There is also no doubt that the villagers have all been killed. The church is soon found, along with information suggesting that the vector is dead.

The remains of his Bible suggest that



certain objects need to be restored to the altar, and that an evil entity in the crypt must be destroyed. Your first task is to find a means of resolving these problems.

Various features make life a little easier: *Robico* has a text command, long or short descriptions, an *Objs* command, a verb list when you type *Help*, and *quit* everywhere.

Another useful option is the ability to ask questions such as *info*, *what* and *where*. For instance, *Who is the Lord Talent?* – *The Lord's name is Myra Blair*.

I won't pretend I have gone as far into

this game as I would have liked as there wasn't enough time before deadline. So far I'm very impressed, particularly with the convoluted plot. However, as with the previous offering, *Black Heaven*, I feel the price is a little steep. Also, the game runs in Mode 1, and with the excellent descriptions only little input is needed before the screen is full, often resulting in the need to Load Again.

Overall, an excellent adventure and definitely one of the best around at present.

Contact: Robico, 2 Fairland Close, Lutterham, Mid Glamorgan CF7 6QA; Tel: 0447 277354

Presentation 65%

A bit basic – the main reason I think it should be cheaper.

Atmosphere 97%

I had to look over my shoulder a few times!

Frustration factor 98%

Everyone is going to need help with this one – including me!

Value for money 72%

With more up-market packaging and Mode 2 text the score would be higher.

Overall 82%

An excellent adventure which, with improved presentation, could be worth extra.

The Case of the Mixed-Up Shymer

Sharksoft
£1.99 (tape)
£4.25 (disc)

READING the plot of this game would be enough for thinking it's a kids' adventure. Yes, *Shymer* Comes, an secretary to the great Sherlock Holmes. While he is away on a case you receive a telephone call. The caller tells you that nursery school children have started noting because all the nursery rhymes on the Isle of Nursery are wrong. He gives you the location of the island and begs you for help.

Having always fancied yourself as a detective, you hire a boat and, with only your cat for company, set out to find the island. Eventually you manage to find it, but while attempting to land, your boat is dashed against the rocks and only your prowess as a swimmer enables you to reach the shore.

On taking stock of the situation, you realise that not only is the wreckage drifting away around the coast, but your cat has also vanished.

Your task is to put right the nursery rhymes, catch the cat, find your boat and repeat it so you can leave the island. An

initial exploration will reveal many locations open to you. Most require actions to be performed in them. You will also find a number of characters present, all of which can – and occasionally must – be re-encountered.

Some of the solutions to the puzzles are almost self-evident – *See See White Shymer* for instance. Others – such as *Little Miss Muffet*, *The Cow*, and *Hungry Dumpty* – appear obvious, but require more than a little brainpower to solve.

A few I found to be very difficult indeed, and I had to resort to the cheat sheet for a solution.

On the presentation side, the character set has been reduced, and for a change this is certainly done to the program's advantage.

Sandra Sharkey has written a game that doesn't take itself too seriously and is fun to play. She has taken a novel theme and injected her own brand of humour to produce what is, in my view, defined to be one of the best homebrew games this year.

I wouldn't say the game is hard – it isn't meant to be. It does, however, have a quality which is becoming rare these days – it's enjoyable.

Although *The Case of the Mixed-Up*

Shymer represents a modest beginning, I'm convinced *Sandra Sharkey* could become one of the stars in the adventure firmament. At the price it is definitely one of the most enjoyable adventures I have seen, and I look forward to seeing more of her work.

Contact: Sharksoft, 78 Merion Road, Highfield, Wigan W91 6AT.

Presentation 94%

Basic – as far as the price. The enhanced character set makes typing a pleasure and is largely responsible for the high mark.

Atmosphere 95%

Could be I'm entering my second childhood!

Frustration factor 89%

Depends how well you know your nursery rhymes!

Value for money 100%

Excellent – especially the disc version.

Overall 95%

Deserves a place on any adventurer's shelf.



PROGRAMMING CLINIC

IAN SHARPE tackles readers' programming difficulties

This is the start of an occasional series in which your programming problems will be solved by our experts. We're restricting the questions to Basic and machine code, but apart from that anything goes. If we think answering your problem will provide practical programming help to other readers without getting too bogged down in complexities, you stand a good chance of seeing it in print.

We're aiming to cater for all levels of ability. Some months we'll tackle Basic, other months we'll delve into machine code. So no matter how trivial or difficult your problem may seem, you're nothing to lose by sending it to:

Programmers' Surgery, Competing with the Amstrad CPC, Europa House, Adlington Park, Adlington, Macclesfield SK10 5NP

I have been programming in Basic for a year, and I am now starting with machine code. I would like to know if you could help me on how to move a character – using keys or joystick – around the screen in machine code – Isaac Coll, Whiteley Bay.

THERE are several ways of tackling this. When you say "character", you could mean anything from an ordinary text character to a big colourful sprite. As the aim of this feature is to present things simply, I'm going to stick with a text character, and concentrate on the process of testing the keys and updating the screen position.

Before getting down to writing the program you need to decide on the method or algorithm it is going to follow. When I started with machine code I often developed the algorithm by writing a piece of Basic to do the same or similar job. This proved the method to be correct, and I could then confidently use it as a model for the assembly language. In this case I

wrote the assembler – Listing 1 – without working it out first, and then produced a Basic equivalent – Program 1 – to show you what's going on. If you're experienced in Basic you'll realise that Program 1 is inefficient in many respects, but it does reflect accurately the structure of Listing 1.

Here's an explanation of how the assembly language program works. Whenever you write machine code you need to decide where in memory it's going to live.

This one is located at \$6000, and the `ORG $6000` directive gives the assembler this information. I put it there because it's below `HMEM` but high enough up in memory so there is room to work on the source code, which with my Maves assembler, lives at the bottom of memory.

Meaningful labels

I've assumed you're working on a Model 2 screen, and that you want the character to have some restriction on its horizontal and vertical movement. Instead of using the assumed figure

for the movement boundaries, reads, and keys to control the character, they're all given meaningful labels at the start of the program.

That way if you want to change, for example, the reads, you only have to do it once and don't need to go through looking for all the places you referred to it. An added bonus is that it makes your source code easier to understand.

The first job is to decide where on the screen the character is going to start, and I've defined this as location 10,13 in the label `STARTPOS`. This program holds the character's coordinates in two consecutive bytes because this is the format in which the

```
1 ORG Program 1
2 ORG 0
3 start@origin@cursor@down
4 start@x@start@y@start@y2
5 CALL $6000
6 start@x@start@y@start@y2
7 start@x@start@y2
8 start@x@start@y2
9 start@x@start@y2
10 start@x@start@y2
11 start@x@start@y2
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15 start@x@start@y2
16 start@x@start@y2
17 start@x@start@y2
18 start@x@start@y2
19 start@x@start@y2
20 start@x@start@y2
```

Program 1

movement routine to position the cursor requires the information.

The high byte is the X-ordinate, so this is multiplied by 256 which shifts it left by eight bits. $16 \times 256 + 13$ equates to 4128 in the low byte and 13 in the high byte.

The next point of note is that to position the cursor, print characters, and so on, we will be using calls to the Amstrad's firmware. Again these are defined as labels to make the program more readable and easier to alter. By the way I assume you've got a firmware manual because without it you aren't going to get very far.

Back to the program. In order to repeatedly test the keys, move the character, test the reads and so on, the program is basically a loop structure. The first part of the loop is the bit which updates the screen, so before the loop is entered for the first time the program needs to set things up so this initial section of code puts the character on the screen. The routine expects the old cursor position to be in the memory location labelled `oldpos`, and the new coordinates to be in the HL register pair. The two instructions preceding the top of the loop – `Joap1` – set this up.

Next the program waits for a frame-by-frame feedback before doing anything. This is partly to keep the movement flicker-

ARKANOID – REVENGE OF DOH

Imagine
£8.95 (tape)
£14.95 (disc)
Joystick or
keys

The original Arkanoid weakened havoc with production schedules here at the source of your favourite magazine. Just when we thought we'd found the limit, imagine it rock again with a special which... and I hate to say this about yet another Breakout - is brilliant.

The dimension-controlling force Doh was believed to have been killed long ago in the Arkanoid space wars, but has bounced back from the dead. Handy bit of luck that, eh imagine?

In the spacefall Zang, Doh has entered our universe helmet on something or other. After ramming through piles of ancient, data banks, the Arkanoid fighter Missile finds the answer to the threat.

An army of scurrying constructionists works day and night and soon Doh is launched. This and the fate of the entire universe is placed in your hands as you are faced with the steady task of doing in Doh.

Although similar to the original, Revenge of Doh has been enhanced to make it even more addictive. In case you were off-guard when Arkanoid first appeared, it's one of those where you beat bricks by bouncing a ball about with a bat.

Lines are through alien tape at the top of the screen. The critters are harmless but can

deflect the ball and send it flying off at odd angles. They're not balls any more, by the way, but energy balls.

When certain bricks are destroyed capsules are released which drop down to the bottom of the screen. In all there are 12 types of pot, each a different colour and with a letter painted on its side.

Called these as they fall, and you will be given special powers. Compared to Arkanoid if the capsules bring rain down, giving the game a slightly different slant.

Several of these powers are new. Capsule G gives you a lightning-drawn, gothic-like ghost which trails behind and will deflect the ball. It will break the ball into three, if you lose balls while under this power new ones are generated.

If you are really confident, it will reduce the size of your bat. The only real use of this is to obtain the 1000 points given whenever you collect a capsule. The T capsule causes a pair of fire lines to appear. Not heaven, it is surprisingly easy to let the ball slip between the two bats.

A nice new feature is a capsule that makes your bats turn red and plough through bricks without rebounding. Watch out though, they still bounce off aliens.

The traditional Arkanoid pots are still there including the laser, the inflated bat, and the escape route to the next level. An unmarked pot gives you a random power, usually a laser or red bats.

The bricks are pretty much the same, though there is now a moving type. Screen one is a touch difficult for a first screen, and the other layouts range



from hard, through tough, to impossible.

When you complete one, two exit open. Each takes you to a different destination making the game more varied than previous which have only one route through the levels.

You start with four lives, and additional ones are given at 50,000 points, which, without wishing to brag, I beat on my first go. Indeed, it's far easier to rack up huge scores than before. You can also collect the P pots for extra incarnations.

Points are awarded for each brick destroyed, with the amount obtained depending on the colour. Additional points are gained for each capsule collected, hitting aliens, and for completing a screen.

The sound and graphics are an improvement over Arkanoid, which was itself pretty good, and I think the way an impression of death has been created by giving everything shatters.

Everybody here has spent

hours Doh teaching, and we did find a couple of bugs in this pre-production copy. No doubt they will have been sorted out by the time Revenge of Doh hits the streets.

If you haven't got a Breakout, Revenge of Doh is an absolute must. If you do have one, it's questionable whether you might want another. But if you do, look no further.

John Butters

Presentation 95%

High score table and pause option. Runs not definitive, but available for left and right-handed players.

Graphics 90%

Simple, but smooth and pretty.

Sound 85%

Excellent - better than Arkanoid.

Playability 90%

Can't fault it.

Addictiveness 95%

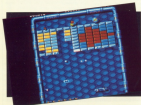
If this issue is late, you know why!

Value 95%

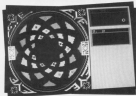
Worth the dough.

Overall 95%

A future number one!



EYE



Endurance
£9.95 (tape)
£14.95 (disc)
Joystick only

EYE was heavily promoted in the shape code Christmas, being billed as the perfect board game.

The board consists of 32 coloured quadrilaterals which the rules call squares.

There are eight colours, and four squares of each colour are in view at any one time. The other four are simulated by face-mounted spirals — so the theory goes — but in the computer version there is only a black background. There are extra options, some of which add a degree of randomness which detract from the strategic element.

When you turn a spiral the positions of the squares and the counters upon them move. As you can't see the spirals, it is not easy to work out what's happening, and some familiarity with the board is necessary before you can see what is going on.

One to four can play, and the object is to get the required number of your counters on squares of your colour.

Pieces are moved by a spirally hand, and the number of moves allowed depends on how many counters you have on any one colour.

In the two and three-player games you can capture a colour by getting four or three of your counters on it at once. This allows you to remove one of your opponents' pieces on that colour before one of your moves.

Into Eye fans may be looking forward to challenging their

friends. It can handle the other three players, and even play against itself.

I'm hardly an expert, but I suspect the computer isn't either.

Once I got the hang of things we spiralled around in a stateless for ages, and eventually I switched off.

The program seems to play for safety and makes no attempt to capture counters. Once it started a move in the winning position and moved its counters off.

If you've been you can send £2.95 to Endurance for Eye — The Official Gamebook. I like strategy games, and Eye is not at all bad, but this computer implementation doesn't do it justice.

Sam Mough

Presentation 60%

Nice box and loading screen, definable keys, screen instructions.

Graphics 40%

The black board's solid, it is just redrain.

Sound 0%

The music is credited to a G. de Witt, but apart from a few beeps there isn't any!

Playability 55%

The game suffers from inertia. The computer player seems weak.

Addictiveness 40%

For one I'll return to very often.

Value 40%

I'd be tempted to go for the board game.

Overall 45%

Definitely one to be before spending money.

FLYING SHARK

Firebird
£8.95 (tape)
£14.95 (disc)
Joystick or keys

SUITABLY aimed in leather jacket, you take forth to do combat with the might of an enemy empire. Such is the scenario for the Tatsu wing-cloaked.

Flying over a carefully scrolling background you move endlessly forwards, although you are allowed some manoeuvrability within the confines of the screen.

The animation and scrolling are smooth, but a little too slow. At first this is irritating, but you soon get used to the leisurely pace.

Taking off from an allied air base you head out over enemy territory. The first region is mostly jungle, interspersed with occasional command posts. The enemy bases are present in the shape of aircraft, tanks, and very resilient domed gun towers.

Planes attack in groups of varying size, and the aircraft require just one hit to down them. The tanks are more of a problem. Not only must they be shot twice, but they have a nasty habit of turning and firing at you fly past.

The domed towers are found in pairs, and exhibit a high degree of resistance to your gunfire. Worse still, they are usually defended by tanks.

The annihilation of a complete squadron of enemy fighters is rewarded with the appearance of bonus tokens which must be flown through. A letter B provides an extra smart

bonus, and the top symbol represents an additional life, up to a maximum of nine.

The floating letter S is my favourite as it equips Flying Shark with an extra gun, fitted ahead with three guns you are able to reveal and allowing you to blast away blindly when the action starts heating up.

Control number two is fought at sea. Fighter planes, and therefore bonus tokens, are in very short supply. The main targets are battleships and speedy little gunboats.

Once through the fleets of battleships you come back to face with an aircraft carrier. This beast is lined with domed gun towers and lashed by enemy fighters. Prepare to meet your maker.

This is an excellent game. Had the action been faster I might have awarded it an Acecade.

James Riddell

Presentation 88%
 Easy-to-understand opening screen, plus a well designed high score table.

Graphics 90%
 Small but well varied.

Sound 87%
 Excellent sound effects.

Playability 83%
 Playability was marred only by the speed of the action.

Addictiveness 92%
 Encouraged to get on with it on your trigger finger!

Value 88%
 Well worth the money.

Overall 89%
 A first-class done of an arcade classic.



ATF

**Digital
Integration**
£8.95 (tape)
£13.95 (diac)
**Joystick and
Keys**

ATF (Advanced Tactical Fighter) condenses flight simulation with strategy. As you might expect, it's your task to defeat the enemy, whose bases are scattered across the globe.

Initial screens provide a range of data necessary for the action later on. First you are given an intelligence report in the form of a global map showing enemy targets, Allied bases, and the position of your ATF.

Following that a status report provides a bar chart comparing the respective strengths of the Allies and the enemy.

Then it's a matter of arming and fueling your craft. Weapons come in three forms: Cannon (the fast frequent fire), Air-to-air missiles (which need manual guidance) and Maverick missiles (for destroying ground bases). Your fuel needs must also be considered, as there is a

weight restriction. This means that equipping with full fire power is not possible.

Once the preliminaries are taken care of, it's time to become airborne. Unlike other technically more accurate flight simulators, this one is fairly easy to use, and there are fewer keys to think about.

The main window shows your fighter with a forward view of the terrain, plus a small part of the horizon.

Top right of the screen is a radar, and bottom right is a

world map, status, and fire power. Other information such as altitude, thrust, and speed are shown in the main window.

Simply craft fly at various altitudes, so the action involves rapping them while trying to find and destroy enemy bases. Even though you are given three fighters you will frequently find yourself plunging into action.

After each sortie you must review the situation by accessing the initial screens and rearm and refuel.

Graphically the game is colourful rather than detailed. Having said that, each screen is neatly presented and provides a good deal of information in a clear and precise way.

Although it doesn't have the sophistication of strategy-forward flight simulators, ATF is a demanding strategy game which should provide lots of high-flying entertainment.

Tony Hannagan

Presentation 85%

Good range of options.

Graphics 87%

Colourful and neat.

Sound 71%

Pretty nice tune but limited sound effects.

Playability 82%

Quite easy to get into for a flight simulation.

Addictiveness 81%

You won't want to land.

Value 85%

Quite good value for money.

Overall 82%

An addictive flight simulator that's game.


PLATOON

Ocean
£8.95 (tape)
£14.95 (diac)
**Joystick or
keys**

OCEAN's latest bit is, as if you hadn't guessed, it's based on the much maligned film of the same name. The action takes place in the Vietnamese jungle where you follow the progress of a group of soldiers.

You start with five task results whose objective is to maintain the platoon's morale and, more importantly, to survive!

Luckily the soldiers are fairly resilient and few hits are required before they lie down and die. In effect this means that you have 20 lives, all of which you'll need.

The first of the six sections takes you into the heart of the jungle. Viet Cong soldiers are everywhere - up trees, in front, behind, and concealed in remarkable estimates. The 3D scrolling

screen is a little jerky, and although the animation is quite good the graphics are too blocky.

Having blown the bridge, shortly setting off a patrol which has been following you - it's on to the village. There you will find a map and a torch, both essential for the next part.

There are enemies in the village, but it is important not to kill any of the villagers, as this loses morale points.

The tunnel section features a split screen. The right window

shows a detailed map with your position, and to the left is a view of the tunnel. Here you must find a compass and two boxes of flares.

An appropriate range of obstacles are there to stop you, including guerrillas and booby-trapped boxes.

Further sections take back to some of the film's more dramatic moments. Essentially you reach a confrontation with Sergeant Barnes, who you learn to have murdered Sgt east dies.

Despite its claims to portray the tragedy of war, Platoon is Randomhouse, and the amount of bombing will hide that.

Tony Hannagan

Presentation 80%

Good play guide; definable keys; logical screen sequence.

Graphics 81%

Dirty scrolling and blocky graphics in the jungle scenes. Loved the split screen effect in the tunnel.

Sound 83%

Changes according to the level; creates atmosphere in the tunnel.

Playability 91%

Plenty of action and lots to find.

Addictiveness 85%

Should keep you going for ages.

Value 86%

Worth every penny.

Overall 88%

Not without its flaws, but very playable.



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Three of Level 9's most acclaimed adventures – Lords of Time, Red Moon and The Price of Magik – come together in one package. Each has been enhanced and enlarged with more text than ever before – 60,000 mind-expanding words creating magik and mystery round every corner. There's a powerful new parser, and most disc versions include stunning digitised pictures that help to dramatically heighten the atmosphere.

What the press have said:

LOORDS OF TIME: "Desired to become a classic" – Computing with the Amstrad.

RED MOON: Best Graphical Adventure or Best Adventure of the Year – Zap 64, Couch, Amiga, C&MG, CC, and Amstrad Computer User.

THE PRICE OF MAGIK: "Another superb adventure... their best yet" – Commodore User. Also a Crash Smash.



Lords of Time
Apple II, Amstrad, Atari, C&MG, CC, Commodore



Red Moon
Amstrad, Atari, C&MG, CC, Commodore



The Price of Magik
Amstrad, Atari, C&MG, CC, Commodore

Screen shots from
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GOTHIK



Firebird
£8.95 (tape)
£14.95 (disc)
Joystick only



The life of a Supreme Wizard is fraught with danger, as Argoth found to his cost. Disfranchised in combat by the evil Anaxion, his body was dismembered and the pieces distributed throughout the catacombs of Rats.

Argoth's only hope lies with his faithful proteges, Olga and Orel. Can they reconstitute their master's body, or will they too fall foul of Anaxion?

Gothik is superficially similar to Gauntlet, in that it uses multi-level mazes viewed from above. But there the similarity ends.

The vaguely recognisable aerial views of the Gauntlet characters have been replaced by beautifully drawn side views of six-foot-tall heroes and monsters.

Gone, too, is the frenetic gun-shooting essential for survival in Gauntlet. A smaller monster population allows you to devote more time to potion procurement and problem solving.

Progression through the seven levels is dependent on you finding lots of Argoth and then stopping into something which resembles a whirlpool - I think the preparation copy had no instructions.

The secret of success lies with the multitude of magical potions. Of the 32 available, most have immediately obvious effects: jericho destroys every maze wall in the immediate vicinity, Dark puts the lights out, and Blessed doubles your rate of travel.

Level one is inhabited by goblins and eyeballs. By way of

equalisation you are provided with lightning bolts, fireballs and arrows.

When you have located Argoth's final link a doorway to a mini-maze appears. Your objective is to negotiate the maze and touch the hideous creature standing at its exit. Unfortunately, this creature dies after you enter the maze the first begins to disappear behind you. I suggest you locate a Speed potion before attempting this feat.

Firebird can usually be cited upon to produce good quality software, and the release of Gothik sets new standards in the arcade/adventure field.

Neil Arby

Presentation 85%

Happily the instructions will be as good as the game.

Graphics 83%

Well Disney eat your heart out!

Sound 86%

Very impressive.

Playability 91%

A game requiring reflexes, plus much more.

Addictiveness 92%

You're never sure who's around the next corner.

Value 88%

Definitely - even at the exorbitant price of the disc.

Overall 82%

This one will sell and will

PREDATOR

Activision
£8.95 (tape)
£14.95 (disc)
Joystick
and/or keys

If you've seen the Schwarzenegger movie Predator, you might just fancy your chances of playing the leading role.

The object is to rescue a bunch of trapped diplomats, which sounds far easy enough but for a mysterious alien who picks off your men.

The game starts with your nose sliding over a rope from a looming helicopter. A display at the top of the screen shows the number of lives remaining, your energy level, weapons and ammunition. As you move further into the jungle, you'll come across a number of your team-mates, many of whom have been badly mutilated.

At this point you can swap weapons with the dead man. Some of the problems you'll face require more cunning than gunfire, so you need fast responses. Hand grenades can come in very useful if you are ambushed.

Every now and again there is a strange noise in the bushes, but you can see nothing. There is something out there, and it is most definitely after you. It's the alien, of course, and it can track you with its heat-seeking weapon.

When this happens the screen changes colour and you appear to glow. At the same time a small triangle appears -

the cross hairs of the predator's weapon. If you get caught within this triangle, you can be killed easily.

Time is constantly ticking away, and you must complete your mission before the clock runs out.

Many of the locations are graphically superb, but in others it isn't always easy to see what's going on.

This game allows you to make good progress on the early levels, but later on things get particularly tricky.

A couple of years ago Predator would have really tickled you out, but since then we've seen some superb combat games, and this one loses out on competition.

Nevertheless, it is a good action-packed effort, with excellent graphics and realistic sound effects.

Steve Luss

Presentation 82%

Good range of options.

Graphics 85%

Some stunning scenes, some less so.

Sound 85%

Fine effects.

Playability 82%

Responsive action.

Addictiveness 89%

Plenty to get your teeth into.

Value 84%

Above average.

Overall 85%

Additive combat action.



CHAIN REACTION



Durell
£8.95 (tape)
£14.95 (disc)
Joytack or
keys

WITH the minimum of screen setting, Durell places you in a seven-store nuclear power plant which has been overrun by psychotic robots. For some reason the Ant Nuclear Plant is behind all this.

It's hidden 'til radioactive fuel rods throughout the complex and it's your job to seek them out, dispose of them, and thus save the plant from destruction.

Each level has a network of interminably drawn rooms generated by the aforementioned paranoid parties. They'll follow you around and shoot at you, but you can fire back or use your jetpack to avoid their bullets.

All this zipping scores lots of points but sets aside at your energy. Luckily the ANP has overlooked the decontamination showers scattered around the place and taking a soak in will replenish your energy.

Rods can be picked up by moving over them, though the next time you fire you'll drop the rod, and must find the rods and return to retrieve it. Each rod must be taken to the central zone and dropped in.

There is an on-screen tally of remaining rods, and the level on which they can be found.

Map, zap, and collect appears to sum up the game play. Movement around the complex

is through doors to other rooms on the same level. Getting to other levels is accomplished via the lifts (upwards only) and holes in the floor.

Graphics are basic, and indeed the program looks as if it has been compiled from Basic. Your character can only fire along the eight compass points. Also the energy rods vary in probability and as long as your energy holds up you can sit in a corner and zap with impunity.

When several characters appear at the same time the action slows to a snail's pace.

Chain Reaction appeared ages ago on other computers, but little seems to have been done to fill in the interstices. In all, a full-price game which might make an average budget title. To ask £8 for it is cheeky to say the least. My reaction? Pull the chain...

Tony Bridge

Presentation 10%

Boring graphics, boring high score table.

Graphics 20%

Unimpaired and erratic.

Sound 10%

Fings and boops.

Playability 40%

Map 'n' zap.

Addictiveness 20%

A save game feature would be an incentive to return.

Value 20%

Save your money for some decent budget games.

Overall 15%

Zzzz...

TERRAMEX

GSE
£8.95 (tape)
£14.95 (disc)
Joytack or
keys

EXPELLED from school at an early age for turning the headmaster's cat into butter, infant prodigy Albert Eystein went on to develop a reputation as an eccentric genius.

Thirty years later Professor Eystein predicted that a giant asteroid was on a collision course with Earth. Nobody believed him, of course, by which time the mad professor had disappeared.

In the inside adventure you can play any one of five different characters, each with their own strengths and weaknesses. The graphics will depend upon the setting allocated to your chosen level, which gives the game an extra degree of variety.

Having selected your character, he is paraded into a rugged desert landscape complete with planetary and solar rain. Your task is to guide your chosen player through the wilderness to seek out poor old Albert, who has disappeared into self-imposed exile.

When you do manage to find him, you must persuade him to help, and if he agrees, it's up to you to find the equipment he needs to construct a positronic asteroid deflector.

Many of the puzzles require a great deal of lateral thinking. Your faithful adventurer will do his best to help you, turning and stating his head when you

stomp something dangerous like jumping off a cliff. If you insist, he will jump, but don't say you haven't been warned.

There are some nice humorous touches, and the game has a good responsive feel.

Occasionally, where there's a problem to be solved, the on-screen adventurer will come up with an idea all of his own, maybe even suggesting the objects needed to solve the puzzle. More often than not, though, he'll be as perplexed as you are.

Terramex is let down by a few minor niggles. The font chosen for the text makes it difficult to read the instructions, and the graphics are not up to the standard we've come to expect in recent arcade adventures.

Despite that, it's an exciting game with good sound, plenty of action, and a nice line in humour.

Steve Lucas

Presentation 70%

Instructions vague, otherwise not bad.

Graphics 72%

Big and chunky.

Sound 85%

Good tone, reasonable effects.

Playability 90%

Pretty responsive.

Addictiveness 90%

Despite its faults, I can't leave it alone.

Value 70%

Fair.

Overall 75%

An addictive game with a few minor niggles.



LEE ENFIELD – SPACE ACE

Infogrames
£9.95 (tape)
£14.95 (disc)
Joystick or
keys

LEE Enfield is the hero of a series of games from the Infogrames stable. Described as a time-traveler, Lee's Enfield's escapades are set in a variety of time zones ranging from the 18th through to the 22nd Century.

Being an amazing resemblance to another Infogrames game - *Prohibition* - *Space Ace* is a shoot 'em up on a grand scale. Perched high on a vantage point, Lee surveys the alien complex in which his life-long foe is being held captive.

Lee himself is never seen, only the sights of his laser rifle superimposed on the landscape. You control the movement of the sights around the screen, the display scrolling smoothly in the appropriate direction as you read the edge.

Alerted to your presence, alien creeps begin to appear.

They vary in appearance so much that you will fail to identify one man until it is too late.

Humoroid and reptilian beings don't pose much of a problem, but the mechanized assassins blend in perfectly with the complex's super-structure.

The object of the game is simple: You have approximately four seconds in which to destroy the alien before he escapes you. Kill one, and another appears, and another, and another. Your rifle is fitted with intelligent sights - a small

arrow appears on the cross-hairs indicating the general direction in which your target can be found. Despite this marvellous gadget, it is easier to find a needle in a haystack.

Another feature is an audible warning of your imminent termination. A tone of increasing pitch is emitted when a creep appears. If you fail to locate the alien before the highest note sounds you're an *in-space ace*.

Your only defense is a magnetic shield of limited power. Push the Escape key as the highest note is reached, and the

incoming blast is deflected.

This device is best saved for dire emergencies, as it won't last forever.

Space Ace is a great game for those occasions when you don't want to see your brain too much - just sit back and blast.

Steve Brook



Presentation 75%

Your score is never displayed unless it's good enough for the high score table.

Graphics 85%

Nice and big, but the targets tend to blend in with the background.

Sound 78%

Decent laser effects.

Playability 83%

Fast and furious.

Addictiveness 85%

Makes a good spectator sport, with anyone shouting directions.

Value 84%

No complaints.

Overall 84%

Zip and blast on a grand scale.

LEE ENFIELD – TOURNAMENT OF DEATH

Infogrames
£9.95 (tape)
£14.95 (disc)
Joystick or
keys

THIS arcade adventure set in the 19th century is the second in the Lee Enfield series. It takes place somewhere in the Court of Benny's castle in the Holy Shroud. Your sworn enemy, the Yellow Shadow, has vowed to destroy the church, which must be saved.

Lee has been recalled from the 22nd Century to undertake this mission. Having played the game for the first couple of days, I wish he hadn't bothered.

The screen is filled with a picture of Enfield in shining armour. Superimposed is a diminutive window covering approximately one quarter of the screen. The restrictions imposed by this window playing area are compounded by scraggy graphics and poor response to the controls.

To help Lee in his adventure - and they does he need it - there

are several chests scattered about the castle which contain slitting and other useful objects. It is also advisable to search every room for secret passages.

I don't know if he's in a hurry, but our time-traveller here has an irritating tendency to continue walking long after you've released the joystick. This makes getting through doors and picking up objects somewhat difficult.

His adventuring activities are further restricted by the stone

fighting he is called on to perform.

Almost every room contains one or more of the Yellow Shadow's green mannikin - monstrous tapper gnomes with glowing red eyes. When you are being accosted by one, he stands beside you and jumps up and down, flapping his cape like a demented duck.

He can be engaged in combat by holding down the fire button and wiggling the joystick. A meter to the left of the screen shows Lee's strength, and the

one on the right indicates the state of his health. Once this falls to zero, it's game over.

The second Enfield game is a game in which death is a major problem; it seems far too often, preventing you from venturing far into the castle.

Steve Brook



Presentation 56%

The instructions offer little assistance.

Graphics 59%

Most disappointing.

Sound 45%

Timeless, yet turn it off and you lose the sound effects too.

Playability 57%

Poor response to the controls.

Addictiveness 52%

Far too many enemy gnomes.

Value 45%

Don't do it!

Overall 50%

Where's the Arkonoid tape?

ENLIGHTENMENT — DRUID II

Firebird
£8.95 (tape)
£14.95 (disc)
Joyystick or
keys

Like its predecessor, *Druid*, Enlightenment casts you in the role of Hiramlock, in the original game you defeated Asamantar, the evil mage. Now he has returned from his 100 years in exile, full bent on revenge.

Along with a gang of four demon princes, Asamantar has turned the population of Belard into zombie slaves.

Only you can find an armory of spells capable of defeating the evil one. There are 32 types - detailed in a well-produced booklet - and you can carry up to eight at once.

The spells have different effects, for instance the *confuse* makes enemies run away, while others restore your health, give information, bestow invisibility, and so on.

Stepping on one of the cursed blocks to be found during the adventure results in

the associated spell's type being displayed. You can then collect it or leave it there.

Many of the simpler magics are needed throughout the adventure, while others are more specialised and increasing your knowledge of the rarer spells lets you progress to the later stages.

Gameplay is much in the *Druid* mould, with a scrolling window on the playing area and hordes of opponents.

The display is excellent, with a mini icon selector for spells, a message window, and a number of settings for the

elemental. This is a character that you can create by magic, and who will follow simple instructions like *Wait* etc. follow.

A big gripe concerns the choice of controls if you are using the keyboard. The direction keys are fine, but the electric charge - which is in constant use - is assigned to the M key. This makes the game fiddly, but I suppose most people would use a joystick anyway.

That aside, Enlightenment is well constructed, and sufficiently deep to keep you

coming back time after time.

I never played the original version of *Druid*, but I like this sequel very much indeed. It is straightforward to play, entertaining, and very addictive.

Clive Gifford



Presentation 85%

Well presented with nice clear instructions.

Graphics 81%

Good use of the screen and colourful graphics.

Sound 75%

A couple of nice effects.

Playability 88%

Would have been higher had it not been for the odd key choices.

Addictiveness 88%

Spell casting and exploration will keep you hooked for hours.

Value 88%

Very good value.

Overall 87%

An enjoyable arcade game with a bit of thought behind it.

BOBSLEIGH

Digital
Integration
£9.95 (tape)
£14.95 (disc)
Joyystick or
keys

ITS been called the ultimate winter-sports. Travelling at speeds of over 50mph just inches above the salt-hard ice, the bobsleigh has to be the most dangerous and exciting of winter sports.

At the start of the game each competitor has a limited amount of sponsorship money. This can be used to buy basic equipment such as a simple bobsleigh and a set of runners.

There are plenty of options, including three male, single men, racing over a whole season, using in the Winter Olympics, practice mode, weather conditions, country, and type of runner blade. You can also select any of six venues.

Maps of the tracks are displayed on-screen and these

should be carefully studied before starting the descent. Having made your selection you move to the start of the race. When the lights turn from red to green you must push as hard as you can by moving the joystick backwards and forwards. With any luck, the lead will gather sufficient speed for you to jump it before it crosses the start line, otherwise it will continue down the track

without you. Timing starts as soon as you pass Start, and a number of split times are given. If you've selected the practice option, you get one practice run at each event before the real thing.

The times for each run are added together and the country with the shortest accumulated time is the winner of that event.

Despite the wide range of options and the ability to save

your position on tape or disc, the game did little to introduce me to the thrills of the sport.

Control of the sleigh is difficult and the rate with which you need to move your joystick to gain speed makes it even harder.

Bobsleigh will probably appeal to enthusiasts of the sport.

Steve Jones



Presentation 85%

A wide range of options.

Graphics 65%

A bit clumsy.

Sound 70%

Reasonable sound effects.

Playability 55%

Awful to control.

Addictiveness 60%

A game you'll either love or hate.

Value 60%

Perhaps.

Overall 60%

A game for enthusiasts of the sport.

BLOOD VALLEY

Gremlin
£8.95 (tape)
£14.95 (disc)
Joystick or
keys

A RCHIBALD, a huge reptilian creature, is the star of an action game set in the distant valley of God. Once a year he organises The Hunt, a cruel ritual where a slave is given his freedom. Whether he lives long enough to enjoy it depends upon his skill in avoiding Archibald's firebreath.

Blood Valley is a game for one or two players. Depending upon your selection, the display consists of one or two playing windows. In the solo option you are the slave - barbarian, predator that - and if the two player option is selected, your opponent controls Archibald's forces.

During loading there is a pause while player two organises his troops.

As for I read my hand at the one player option. Materialising deep within a dimly lit cavern,

my barbarian began his bid for freedom. Heading east he encountered a fortified village.

According to the instructions you are able to modify your attack by moving the joystick in either six directions while pressing the fire button. Men on the Archibald version you can't!

Combat consists of facing your opponent and trading down fire while your character backs repeatedly until he or she finally falls dead.

Stepping over your attacker's station, you take about four

paces and meet the next guard. This scintillating routine sequence ends you the first showdown!

Enduring another 30 minute loading procedure, I set up the two player option. The barbarian appeared in the same underground scene, and a blue chopper with a retreating race materialised inside a building.

Controlling the lead guy should be easy. I thought to myself, after all, he merely has to run around until he locates the barbarian.

Not so, the blue guards

appeared in both windows and began hacking wildly at goblin and baby slits.

Blood Valley's packaging and instructions promise great things, but the game doesn't deliver the goods.

Steve Cook

Presentation 70%

Good background rates and instructions, but takes over 20 minutes to load!

Graphics 76%

Very colourful, but lacking in detail.

Sound 45%

Extensive background music and no sound effects.

Playability 46%

Very repetitive.

Addictiveness 42%

Tedious in the extreme.

Value 43%

Don't be fooled by the lavish packaging.

Overall 45%

Well below Gremlin's usual standard.



NIGEL MANSELL'S GRAND PRIX

Martech
£8.95 (tape)
£14.95 (disc)
Joystick or
keys

H O turn, yet another Formula One racing car simulation. That was my first thought when the package landed on my desk. Fortunately this one's considerably better than most, and is worth a close look if you fancy your chances on the racing circuit.

First you select one of the 18 Grand Prix race circuits. These are loaded from tape or disc, so be prepared to wait if you choose track 18 on a cassette-based system.

The best thing to hit you about the display is the sheer quantity of information given by your custom computer. However, it like me, you choose to ignore it and just play the game, it really doesn't seem to matter.

At the start of the season you can name the drivers and their cars, and you must compete

with at least eight of them. You can select the number of laps for each race, and once decided this is fixed for all 18 races in the season. Before each you are given a warm-up lap starting from the pits, followed by a further three practice laps.

As with most racing games, joystick control is much more responsive than the keyboard. Getting the lead from your car requires plenty of practice and very fast lap attempts tend to de-

stabilise. But with gentle use of the controls my performance is beginning to improve.

Many details help to give Nigel Mansell's Grand Prix a realistic feel. At any time during the race you can make a pit stop to change tyres and so on. Attempting to complete the race on one set of tyres can be risky and leads to reduced grip in the final laps, so it pays to make a pit stop.

The display on a green screen

is rather poor, and I had to borrow a colour monitor. Apart from this the game is difficult to fault. The action is fast and fun, and, with good control of your car.

The added dimension of being able to aspire to the World Championship helps to keep your attention. I rate this as one of the better racing simulations available for any computer.

Steve Lewis



Presentation 87%

More options than most.

Graphics 93%

Good detail.

Sound 80%

Not particularly realistic.

Playability 92%

It feels right.

Addictiveness 92%

Very!

Value 85%

Can't beat angry bank!

Overall 90%

A better-than-average simulation.

WIN FREE SOFTWARE FOR A YEAR!



It sounds incredible, but it's true! Two lucky winners will receive a copy of every program released by CRL for the Amstrad CPC range for a whole year - and that's a lot of software. Also, 10 runners up will each win a copy of CRL's latest game, *Ballbreaker II*.

Some of the programs due to be released in the near future include: *Black Shadow*, a mega shoot-'em-up; *Road Warrior*, a driving simulation; a music construction set (as yet unnamed) allowing digitised sound among many other features; the futuristic arcade adventure *I Adan*, and *Qink!* based on the cards of the same name.

As well as these CRL expects to produce more than 10 other titles, meaning the winners will each receive a prize, on average, every three weeks! If you win you can specify whether you want the programs on tape or disc, and should you upgrade from tape to disc during the next 12 months, just drop CRL a line and they'll send your prizes on disc from then on.

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THE QUESTIONS

1. What is the name of CRL's pre-gaming room?
2. What was CRL's first game to get a 15 certificate?
3. How many balls are there in a snooker set (excluding the white)?
4. Name five words starting with the word 'ball' (not including plural).
5. You have a bag containing three white and three black balls. Without looking you take out one ball at a time until the minimum number of balls you need to pick to ensure that you have two of the same colour?

ENTRY FORM

Entries may be made on this form or a photocopy. They must arrive by June 18, 1988. Only one entry per person.

| | |
|----------|----------------|
| 1. _____ | NAME _____ |
| 2. _____ | ADDRESS _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | POSTCODE _____ |

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OVER the past year I have reviewed two commo programs for the CPC. The first was Pato's Commaster, which is robust but limited. The second was Mandair's Axis, a powerful system with great potential, but let down by annoying flaws, and only runs under DPM Plus.

Now we have The Cage Room, a commo program for all models of CPC. It replaces the ram in your serial interface, and comes in versions for the common types such as Amstrad's own and the 805.

It is viewdata only, which means that its main use will be for Prestel, and you can't use it to access Micro-Link or other scrolling Ascii services. If you decide this program is to form the basis of your commo system and want scrolling Ascii, your best bet is to get hold of Marc, a public domain (free) DPM program.

Once the ram has been installed in your main box or serial interface it is accessed by typing iCAGE. You are then presented with the main menu, each option leading to a sub-menu.

If you have an external modem the ram can be configured to dial the required number from a directory on tape or disc. It will also automatically send your ID and password if you want it to. This information is optionally encrypted when it is saved, and so can only be used with a further password, making it secure if anybody gets hold of your disc or tape.

Once logged on, the ram can store (or tag) the number of the current frame by pressing Tab, Shift, and a letter key. Once that's done, pressing Tab and the letter key will return you

to that frame, even if it has a 64-bit title.

This is superior to Prestel's own system, and what's more, the tags can be edited and saved so once set up they're permanently available. This feature allows you to move around regularly used areas of Prestel (or whatever service you're using) quickly, and with the minimum of fuss.

Cage centres around the manipulation and editing of frames captured from the host service or created with the built-in editing facilities. The CPC's memory is divided into a series of frame stores, each capable of holding a page. Capturing frames into store is simply a matter of pressing Copy. On a 64k machine 23 frames are available - about the same as Commaster. On a 128k CPC this number rises to 34.

The process of saving a page is very fast - faster than you can read it - so it's possible to dash round Prestel saving frames of interest without reading them, and then logging off to view them at your leisure.

With Commaster, and to a much

lesser extent Axis, the frame capture process is slower and so not quite so well suited to this type of operation. With Axis, the lack of definable key/ frame tagging makes getting from frame to frame longer, so widening the gap.

This method can slash your online time - particularly on a 128k machine - and regular users could find the ram saving for itself, making it a viable upgrade from other packages.

The stored frames can be edited with the best CPC viewdata editor yet, and chunks easily copied between frame stores. You'd expect this aspect of Cage to be well developed, as co-author Ian Moore uses it to edit anything up to 50 letters a day on Prestel's Amstar's Cage area.

I must mention Pato's, the pixel editor. Normally designing Prestel graphics, which are built up from graphics characters, is a pain. With Cage this has been turned into a relatively simple process whereby you can edit the frame pixel by pixel.

When you've finished creating or editing frames they can be saved or transmitted to the host service. In this way you can do all the editing work off line, and then log on to send it to somebody's mailbox, or one of the many interactive areas.

I did miss an option to save frames as Ascii files, as it's often useful to be able to load them into a word processor or process them from Basic. The omission is due to lack of space - you can only store so much in a 16k ram, and the authors have packed a heck of a lot into this one.

Fortunately the facility to be able to drop in and out of Basic allows you to write up to 7k of Basic and/or machine code to add facilities that aren't built in. In this way you could write a routine to save the frame stores as Ascii, or perhaps take a word processor file and put it into the frame

Who rattled your cage?

IAN SHARPE tests an impressive new viewdata commo program

NET Contributors (a) 00024a 0a



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Amstar's Cage

- 1 More Amstar's to the Field 04/80 B
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- 3 PC4 Basic Clear Screen 04/80 B
- 4 47 Tropic's Letters 04/80 B
- 5 Basic Differences in OF 04/80 B
- 6 Indications NEW! Latest updates!

Key M for Main Menu!

000000 Key 3 for PC Support 000000
 C Spectacular 0 Neutral Microbase

00/00/00

Where it all started - the Amstar's page area

Turn to Page 20

4 From Page 20

stores for transmitting as mailboxes. If you aren't a programmer, the efforts of other Cage rom users are available as telesoftware on Prosal.

Talking of telesoftware, the standard formats are handled by Cage, and

any decompression necessary is automatic. Flexible print options give you a fast text or monochrome graphics dump, printed side by side if your printer supports reverse line feeds. Green screen users can select an alternative colour scheme for clearer viewing.

The 60 page manual is comprehen-

sive and written in an informal style. In the event it should need clarification or prove insufficient, Ian Hoare and Dave Gorski are readily accessible through Amstar's Cage.

To do this program justice would take at least three pages. As it is I've only given you an all-too-brief outline, leaving much aside. If you are thinking of getting into cages - or already are - I unreservedly recommend this program for immediate work. It's the first one I've used that's powerful, bug-free (as far as I can tell) and I've felt happy with.

Ian Hoare and Dave Gorski are justifiably proud of The Cage Rom. It is well thought out, well implemented, and since its introduction has been chosen as the basis of two cages packages.

Amstar is even stocking it alongside its own products, and I now use it in preference to anything else. What more can I say?

| MICROSET (c) | 0001110a | 8a |
|--------------|----------------------------|----------|
| 1 | Laberinth | 02:27:00 |
| 2 | Game Index | 02:27:00 |
| 3 | More Needs | 02:27:00 |
| 4 | Basic 87 programs continue | 02:27:00 |
| 5 | 87 systems talkabout | 02:27:00 |
| 6 | 82 steps of approval | 02:27:00 |
| 7 | Laberinth's ColabChat | 02:27:00 |
| 8 | File Rescue Plus | 02:27:00 |
| 9 | Materials | 02:27:00 |
| 10 | Custom 6 Laser | 02:27:00 |
| 11 | Game Prints Smaller | 02:27:00 |
| 12 | MicroLink Free Zone | 02:27:00 |
| 13 | On the Horizon... | 02:27:00 |
| 14 | Parache online | 02:27:00 |

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Hangman
Maths Hike
Nim
Old Man Out
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Towers of Hanoi



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TO ORDER, PLEASE USE THE FORM ON PAGE 53

Mega-buck\$

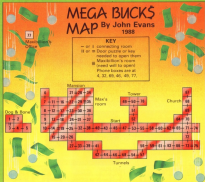
(Firebird Silver)

John Evans of Preston has come up with infinite energy and phoscard credits, which makes the game a bit easier without spoiling it. John has also provided some hints and tips.

LIST OF OBJECTS

Some can't be found until certain things have been done. Refer to the map for the room numbers.

| Room | Object |
|------|--|
| 1 | Phone directory |
| 2 | Picture bit |
| 5 | Tin of biscuits |
| 7 | Compact disc |
| 9 | Phoscard |
| 12 | Battery |
| 13 | Secret key (inside safe) |
| 18 | Energy gauge |
| 19 | Passcard |
| 18 | Spraycan |
| 45 | Levitator crystal |
| 47 | Main-eating plant |
| 43 | Cassette recorder, notes |
| 38 | Wrench |
| 30 | Telephone |
| 34 | Map and clock |
| 34 | Remote control |
| 32 | Bottle of pills |
| 37 | Hi-fi system, personal CD player |
| 30 | Shears |
| 31 | Clapper |
| 33 | Torch |
| 38 | Skeleton key |
| 63 | Mug of coffee |
| 48 | Alarm key, phone |
| 58 | Rubber boots |
| 60 | Apple |
| 60 | Mannix |
| 64 | Cookery book |
| 68 | Cheese |
| 34 | X-ray specs |
| 60 | Chemistry bit (X-ray specs needed to get it) |
| 33 | Waste clip |
| 42 | Firebrush |
| 54 | Stick of chalk |
| 59 | Dynamic browser needed to collect it |
| 41 | Robot control |
| 31 | Video tape |



HINTS

- The crystal will allow you to move up and down if it's turned on.
- Phone numbers:

Mansion 18038
Dog and Bone 28012
Church 68029
Tower 58012
Tunnels 87327
Max's office 86523

This last one can only be used when the wall is complete and you telephone from the pub.

- The picture bit and paint brush are used in the room next to the password computer (room 31).
- Eat the biscuit and drink the coffee in the master bedroom.
- Play the compact disc in the room with the hi-fi and you will get a CD player to control your ears.
- Take the pills to avoid feeling ill in the pub.
- The phoscard is to use in the phones.

- Insert the battery into the torch and switch on the torch to go into the tunnels.
- Wear the rubber boots to prevent electrocution.
- Wear the nose clip to block overpowering odours.
- Insert the password into the computer (room 31).
- To fill the plant use the shears, not the spray.
- Use the remote control to switch off the alarm system.
- Take the clapper to the church bells.
- Take the wrench to the cemetery.
- The attic key unlocks the attic in the mansion.
- Take the safe cracker to the safe to get the secret key.
- To build up energy eat the

- apple and drop the cans.
- The cheese can be nibbled four times to build up energy.
- Take the beermat to the pub so you can see upstairs.
- Wear the X-ray specs to find the chemistry bit.
- Use the robot control to move the offending robot.
- Take the video tape to Max's office and play it to win.
- Put the chemistry bit on the piping in the mansion so you can access the extra rooms.
- Use the cassette recorder to load/save games.
- See if you can beat my score of 106 per cent without cheating!

| | | | | | |
|----|-------|----|-------|----|-------|
| 18 | 18038 | 19 | 19037 | 20 | 20036 |
| 21 | 21035 | 22 | 22034 | 23 | 23033 |
| 24 | 24032 | 25 | 25031 | 26 | 26030 |
| 27 | 27029 | 28 | 28028 | 29 | 29027 |
| 30 | 30026 | 31 | 31025 | 32 | 32024 |
| 33 | 33023 | 34 | 34022 | 35 | 35021 |
| 36 | 36020 | 37 | 37019 | 38 | 38018 |
| 39 | 39017 | 40 | 40016 | 41 | 41015 |
| 42 | 42014 | 43 | 43013 | 44 | 44012 |
| 45 | 45011 | 46 | 46010 | 47 | 47009 |
| 48 | 48008 | 49 | 49007 | 50 | 50006 |
| 51 | 51005 | 52 | 52004 | 53 | 53003 |
| 54 | 54002 | 55 | 55001 | 56 | 56000 |

3D Starfighter

(Code Masters)



Jason Brooks of Long Eaton is becoming a familiar name. Here's an infantic-shields-and-status-poke, space-bingo-on-which-planets-to-fly-to, and what-is-on-them. Usual drill - reload the tape, press Play, and run the boss.

HINTS

Tour the planets in this sequence:
 Dorton Belmont Gamma Alpha Gamma Alpha Gamma
 Dorton Belmont Dorton Nexus Belmont Dorton

| Planet | Function |
|---------|---|
| Alpha | Crack assault team |
| Belmont | General purpose ship (home for young and elderly) |
| Gamma | Prison ship |
| Dorton | Command ship (you take orders from there) |
| Delta | A hospital ship (doctors can be found there) |
| Gamma | Arms ship |
| Nexus | Food production |
| Nexus | Fighter school |
| Zeta | Sport and leisure complex |

- 10 : 10 000010010
 20 : 00 Jason Brooks
 30 : 1,1,1,1, 1000100
 40 0010 10,20,21,00,01,11
 50 0010 17,00,00,01,00,01
 60 0010 10,00,00,01,00,10
 70 0010 00,00,21,00,00,10
 80 0010 00,00,01,11,10,10
 90 0010 00,00,01,10,00,00
 100 0010 00,00,01,10,00,01
 110 0010 01,00,01,10,00,01
 120 0010 01,10,10,10,00,00
 130 00000 00000 100000
 140 0000 0010,0010
 150 0000 0010,0010
 160 0000 0010,0010
 170 000 100000 10 0000
 180 0000 00000000 000
 190 0000 1,0,0,0,0,0,0,1
 200 10 000100 1000 000
 210 1010 00000
 220 0010 0010 Error 000



REMEMBER what I was saying a couple of months back about games with fancy graphics and not much gameplay? Well, I've just spent a few hours with Out Run. If ever there was a case in point, this has to be it. It looks quite good, it has US Gold's name behind it, it's been hood something rotten, but dear me, what a turkey! I couldn't stay awake long enough to review it.

Maybe I'm missing something, but I think it's disgraceful that a big name software company is pushing this sort of rubbish. I have a feeling that the software houses can't keep up with the demand for games, and rather than producing fewer and taking the trouble to give value for money, they churn out as many as the market can take, no matter what the quality.

It's a pity that some of the better games don't make it into the charts. Having had a go at US Gold, I suppose it's only fair to cite Solomon's Key as an example of a game that deserved to make a splash but didn't.

Run over. This month I'm printing the top 10 games from the last year or so. It's taken me ages to count your votes - literally thousands of them - and here are the results.

| | | | |
|----|----------------------|--------------|-----|
| 1 | Grand Prix Simulator | Code Masters | 80% |
| 2 | Arkanoid | Imagine | 80% |
| 3 | Samurai | U.S. Gold | 55% |
| 4 | Dory | Code Masters | 40% |
| 5 | Paperboy | Elite | 30% |
| 6 | Exciton | Hewson | 30% |
| 7 | Starblazer | Imagine | 20% |
| 8 | Starfighter | Rainbird | 18% |
| 9 | Necessary | Newgen | 15% |
| 10 | Head Over Heels | Ocean | 14% |

The percentages refer to the proportion of people who named that game in their top three. No great surprises there. I've played them all and I would have been happy to pay for any one of them.

And the £25 worth of software? First name out of the ed is hat (I know I'd find one big enough) was Tim Jackson of Dundee. You should have it by the time you read this. Tim, right, I've got a bumper bag of pokes this month, so run down...

Timothy

I-Ball II

(Firebird)

Here you get infinite lives, the ability to continue when time runs out, and hidden passages appear after two seconds instead of 30 and 50. Rebecca Claxton of Sandiware is responsible for this one.

- 10 : 10 0000 11 00
 11 : Rebecca Claxton
 12 : 100 Computing with
 13 : the mouse
 14 0010 00,00,00,11,00,00
 15 0010 00,00,00,11,00,00
 16 0010 10,00,01,10,00,00
 17 0010 17,00,00,00,00,10
 18 0010 00,00
 19 0010 10,00,00,00,00,00
 20 0010 00,00,00,00,00,10
 21 0010 10,10,00,00,00,10
 22 0010 00,00,01,00,00,00
 23 0010 00,10,10,00,00,10
 24 0010 00,10,10

- 25 01000 01000 000
 26 REMOVED
 27 01000 01000 00
 28 0100 1000000 0000
 29 0001 100000
 30 000 1,1,1,1,1
 31 000 1,1,0,0,1,0
 32 000 0,0,0,0,1,0
 33 000 0,0,0,1,1,0
 34 000 0,0,0,0,1,1,0
 35 000 0,0,0,0,0,1
 36 000 1,0,0,0,0,0,1
 37 000 1,0,0,0,0,0
 38 000 1,0,0,0,0,0,1
 39 000 1,0,0,0,0,0,1
 40 000 1,0,0,0,0,0,1
 41 000 1,0,0,0,0,0,1
 42 000 1,0,0,0,0,0,1
 43 000 1,0,0,0,0,0,1
 44 000 1,0,0,0,0,0,1
 45 00000 0000 000
 46 000000 1,0,0,0,0
 47 000000 1,0,0,0,0
 48 000 1000000 10 0000
 49 0000 00000 10 000
 50 000 1,0,0,0,0,0,0,1
 51 101 00000 1000 000
 52 001 10,10,10,0,0,1,1,0
 53 001 00,10,10,10

- 54 000 1,0,1,1,0,1,0,1
 55 000 1,0,1,0,0,0,0,0,1,0,1
 56 000 1,0,1,0,0,0,0,0,1,0,1
 57 000 1,1,0,0,1,0,1
 58 000 1,1,0,0,1,0,1
 59 000 1,1,0,0,1,0,1
 60 000000 0000 000
 61 000000 1,0,0,0,0
 62 000 1000000 10 0000
 63 0000 00000 10 000
 64 000 1,0,0,0,0,0,0,1
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 67 000 1,0,0,0,0,0,0,1
 68 000 1,0,0,0,0,0,0,1
 69 000 1,0,0,0,0,0,0,1
 70 000 1,0,0,0,0,0,0,1
 71 000 1,0,0,0,0,0,0,1
 72 000 1,0,0,0,0,0,0,1

10 LINERS

WIN up to £10!

Send YOUR WINNER to:
Competing with the Amstrad CPC, Europe Music,
Attingham Park, Attingham, Macclesfield SK10 6BP

THE accent lies on music this month with two excellent renditions, one an edit, and the other bang up to date. There's also an arcade game similar to Scramble.

Caverns

By W. Booth

CAVERNS is an interestingly hard game in which you try to navigate your craft through caverns without bumping into the walls. You control the craft using the cursor keys, but it goes in the opposite direction to the arrows on the keys. The object is to travel as far as you can.



£10
WORTH

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Get it right!

| | | |
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| 10 = 200% | 20 = 100% | 30 = 500% |
| 40 = 120% | 50 = 110% | 100 = 100% |
| 20 = 200% | 30 = 500% | |
| 40 = 400% | 50 = 100% | |

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Beat

By Graham Reed

THE more modern of this month's musical programs, Beat, packs a lot of sound into a small amount of code. The compositions going on behind the main theme are very realistic.

£5
WORTH

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Get it right!

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| 10 = 400% | 20 = 200% |
| 30 = 100% | 40 = 500% |
| 50 = 100% | |

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Telstar

By Joosten Kortwerk

THE short program draws a star and plays that old favourite Telstar. The developers have been carefully worked out to create a sound like the original, making it well worth a few minutes at the keyboard.

£5
WORTH

IN MORE (1-14-111) 44444444 44111111
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WIN A ROMBO PACKED WITH ROMS

British software is alive and well on the CPC, and to prove it Computing with the Amstrad CPC is giving away more than £500 worth of the most sought after hardware and software. Answer five simple questions correctly and you've a chance of winning a Rombo rombo packed with the acclaimed Amstrad roms. Amstrad has been working on Maxam 1.5 for a year, and it's been well worth the wait. You get a top-class machine code development system with all the features of its predecessor, and a lot more - a must for machine code programmers everywhere. Completing the programming picture is the Utopia toolkit which won't save reviews from all quarters, and the powerful BCPL compiler. To complement Amstrad's latest masterpiece there's Protect, the word processor by which others are judged, and to round things off there's the spelling checker Prospell and the mail merger Promerge.

Each rom is worth between £30 and £75, while the Rombo itself retails at £25. A prize catch for any CPC user, we're sure you'll agree. To have a chance of getting your hands on the goodies just answer the questions, and return the entry form to us no later than June 30.



Over
£500
worth of prizes

THESE ARE YOUR QUESTIONS

- Which book does the name Amstrad come from?
- How many pins are there on the CPC's expansion port?
- What does EPROM stand for?
- How many pins are there on a 16k rom?
- How many bytes are there in a 16k rom?

ENTRY FORM

Entries may be made on this form or a photocopy, and must arrive by June 10, 1985. Only one entry per person.

1. _____ Name: _____

2. _____ Address: _____

3. _____

4. _____

5. _____ Postcode: _____

Send your entries for Rom Competition, Computing with the Amstrad CPC, Europa House, Addington Park, Addington, Madderfield, SE26 6PP.

Two top compilations you can't afford to miss!

FOUR SMASH HITS FROM HEWSON

Here's your chance to bag four block-busters at a bargain price. This worldwide-winning collection represents some of the best arcade action of all time - and to mention the best value for money! Read what Computing with the Amstrad CPC's reviewers said:

- **Beaten:** "The best arcade I've ever awarded" - *Jan Reed*, September 1987
- **Dynasty:** "Crappy as it may... Hottest!" - *Foxy Haragan*, December 1987
- **Star Wars:** "For playability alone, this game is definitely worth adding to your collection." - *Foxy Haragan*, July 1987
- **Ultimate Play:** "The original fast-scrolling shoot 'em up. Not sponsored clones on every form of computer you could imagine!" - *Jan Reed*, February 1988

SAVE
UP TO
£6!

Straight Six

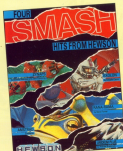
SAVE
UP TO
£6!



Loriciels has brought together six best sellers from France at a price you could pay for just one of them.

- **Beaten:** All the thrills of world class football, and it's always a match to remember in this superb simulation.
- **JD Figher:** Fast-moving 3D arcade action. Can you destroy the barbaric ships, dodge the missiles, and blast the enemy base?
- **MAIT:** Drive a magnetic tape round a magnificent crystal palace of the future in this beautifully designed arcade adventure.
- **Joe 2000:** Rescue the planet's inhabitants by battling your way past Joe's evil hordes and invading his fortress.
- **Elite:** Explore eerie alienworld Paris as atmospheric graphics set the scene for this engrossing arcade adventure.
- **Planet:** On the battlefield of the future only a super laser and lightning reflexes stand between you and annihilation.

Look to see that the price of a budget title - you can't miss. *L'Esprit World Computing with the Amstrad CPC April 1988*



| Available for | Product | Format | RRP | Special reader offer | RDU (SAVE) | Offer including subscription | RDU (SAVE) |
|---------------|-----------------------------|--------|--------|----------------------|------------|------------------------------|------------|
| Amstrad CPC | Four Smash Hits from Hewson | Tape | £8.95 | £8.95 | £3 | £16.95 | £5 |
| Amstrad CPC | Four Smash Hits from Hewson | Disk | £14.95 | £11.95 | £3 | £20.95 | £6 |
| Amstrad CPC | Straight Six | Tape | £9.95 | N/A | N/A | £20.95 | £4 |
| Amstrad CPC | Straight Six | Disk | £14.95 | N/A | N/A | £20.95 | £6 |

TO ORDER, PLEASE USE THE FORM ON PAGE 53

INSTEAD of a single main utility we've decided this month to give you three shorties, none of which are big enough to merit a full feature in their own right, but nonetheless are very useful.

As any disc drive owner knows, before a new disc can be used it must be formatted. This is a process during which the Amstrad lays down tracks which the disc can store information. Normally this involves digging out a CPM disc, booting up, and using a utility. This isn't very convenient and might be the only time you use CPM. **Fastformat** does away with all that: it's a disc formatter and writer which runs from Amstrad. Apart from not having to use CPM,

it also has the advantage that with it you can add a format option to your own programs.

I wanted to keep things short and simple, so I opted to stick with data format as used on the CPC6128. For CPC484/664 owners this means it isn't for discs you want to use with CPM2.2. If you do use CPM2.2, there's nothing gained by having a formatter to work from Amstrad, and you should continue with CPM's formatter. On the other hand if you only ever use Amstrad, you get a bit more space — 1768 — on each disc.

Type in Program 1, which generates some machine code used as format-*io*. Whenever you want to format a disc you need to load and initialise the machine code with a routine such as Program 2.

Once you've done that, to format a disc type:

```
FORMAT,0
```

where 0 is 0 for drive A, or 1 for drive B. The formatter doesn't verify the disc as it goes along, which is why it's so quick. Most of the time this will not present any problems, but if you want to verify the disc, type:

```
VERIFY,0
```

Again, it will be 0 or 1. This only checks data format discs; any other format will show up as a bad disc. If a disc doesn't verify properly after trying to reformat, you should swap it.

Over the last three years we've published a number of screen dumps, but this is still the most common request from news readers. Even those who have the earlier dumps will find



IAN SHARPE presents three useful utilities

Multidump has something new to offer. It produces monochrome dumps in three sizes.

The smallest is half the width of ordinary listing paper, and works well in Mode 1 and Mode 3, but isn't so good for Mode 2. The intermediate dump is the full width of the paper and works in any mode.

The largest dump also works in any mode, and is approximately A3 size for making posters and notices. These are printed in halves, and you'll find some marks at the corners to show you where to make the join and trim to size.

When you run Program 0 you'll find you have two RSXs:

```
MULTIDUMP,0,0  
MCON,0
```

MULTIDUMP is the screen dump, and it needs two parameters. The first is the size, 1 being the smallest and 3 the largest. The second is the ink number you want to be the background, in other words the one that's left as white. In most cases this will be 0, so to get the largest dump you'd type:

```
MULTIDUMP,3,0
```

The other RSX command, **MCON**,

configures the dump to work with the two main types of printer. As written, **Multidump** drives the later Epson compatibles such as the Amstrad OMP's, the Panasonic KRP1080, and so on. If you have a printer such as my Shiva which uses GSC R, to give 640 dot bit image mode, typing **MCON:FIG** will alter the dump to work with it. Typing **MCON:FIG** again swaps back.

Multidump is some of the first machine code I wrote, so it's not the world's best bit of programming, but it works well and has proved very useful.

Last year we published my limited base of data reader, a program to convert an area of memory into a Basic loader such as Programs 1 and 3. The compacted format didn't go down too well in some quarters, so we reverted to the usual method. **Hex loader generator**, Program 0, is the version I wrote to produce the type of listing you see in the magazine, and judging from the submissions we receive, plenty of people need it.

Just run the program, and it will ask you for the details it requires such as the start and end address of the area to be converted. The loader will then be written to tape or disc.

Turn to Page 40 for



4 From Page 28

Program 1: Generates format files on disk

```

10 REM Program 1
20 REM Generates Partition machine code
30 REM By Ian C. Sharpe
40 REM Int Computing with the Amstrad
50 REM ----- CPC -----
60 REM:
70 REM:
80 REM:
90 REM:
100 REM:
110 REM:
120 REM:
130 IF (MEMO=>MEMO) THEN GOTO 200
140 REM:
150 REM:
160 PRINT:PRINT IN (1000),100:PRINT
170 REM:
180 REM:
190 REM:
200 REM:
210 REM:
220 REM:
230 REM:
240 REM:
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990 REM:

```

Program 2: The data maker

```

10 REM Program 2
20 REM Data/Format generator
30 REM By Ian C. Sharpe
40 REM Int Computing with the Amstrad
50 REM ----- CPC -----
60 REM:
70 REM:
80 REM:
90 REM:
100 REM:
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120 REM:
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170 REM:
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```

Program 3: An example routine to initialize the machine code

```

10 REM Program 3
20 REM Int Computing with the Amstrad
30 REM ----- CPC -----
40 REM:
50 REM:
60 REM:
70 REM:
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```

Program 4: Multitask system change

```

10 REM Program 4: Multitask
20 REM By Ian C. Sharpe
30 REM Int Computing with the Amstrad
40 REM ----- CPC -----
50 REM:
60 REM:
70 REM:
80 REM:
90 REM:
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110 REM:
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160 REM:
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```



| Low Level | Low Level | Low Level |
|------------|------------|------------|
| 10 = 4884 | 110 = 4718 | 120 = 4703 |
| 130 = 4811 | 140 = 4738 | 150 = 4643 |
| 160 = 4644 | 170 = 4748 | 180 = 4890 |
| 190 = 4888 | 200 = 4863 | 210 = 4933 |
| 220 = 4811 | 230 = 4988 | 240 = 4888 |
| 250 = 4810 | 260 = 4878 | 270 = 4888 |
| 280 = 4811 | 290 = 4878 | 300 = 4888 |
| 310 = 4811 | 320 = 4798 | 330 = 4888 |
| 340 = 4811 | 350 = 4798 | 360 = 4888 |
| 370 = 4811 | 380 = 4798 | 390 = 4888 |
| 400 = 4811 | 410 = 4798 | 420 = 4888 |
| 430 = 4811 | 440 = 4798 | 450 = 4888 |
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| 940 = 4811 | 950 = 4798 | 960 = 4888 |
| 970 = 4811 | 980 = 4798 | 990 = 4888 |

All your favourites are here!

WE'VE brought together the best programs from recent issues of Computing with the Amstrad CPC to produce three compilations at a very special price.

Whatever your interests you'll be delighted with their variety, and by studying the programs you will learn so much more about your CPC.

Ten of the Best

Volume 3

- Wheel Spin** - Spin the city streets, avoiding other cars, to collect the 25 flags.
- Diamond Mine** - Dodge the rocks, collect the gems, gain the gems. It all sounds so easy - but it isn't!
- Commander Red** - Place gnomes in the gardens of the houses of Parliament.
- Heroes** - All the braves of the crystal globe - and you can't stop play in this one!
- Islands** - Cruise along through the complex maze and drop them into boxes.
- Fishing** - Cast your line and keep a keen eye on the float to catch the fish.
- Eggsalis** - Roll the seven columns of the egg mine by dragging through soil.
- Comballs** - Blast away at the mutant bugs which multiply across the screen.
- Diamond Digger** - Navigate the mine through the mines, avoiding falling rocks.
- Wings Requiem** - Roll the Doodlebug to safety while eating up the fruit.

Ten of the Best

Volume 4

- Mines Game** - Play the popular domino game for one to four players.
- Eye** - Bring the ancient African board game to life on your computer screen.
- Agnes** - An interesting variation on John Conway's famous game of life.
- Fun Factors** - Learn about factors with this stimulating game for young children.
- Deluxe** - Compete against the CPU in the classic test of strategy and skill.
- Fairy Machine** - See the fairy leaders in a spin on this unusual board.
- Paloma** - The royal hand of this popular card game, without the rest of your cards.
- Quarters** - Position multi-colored tiles on a grid in this classic test of strategy.
- Revelle** - Place your items, ladies and gentlemen, with this exciting simulation.
- Yakbad** - Ready to go? Your lucky rider's feet, stick on the dice and go there now!

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Mind-bender

Try this tricky little puzzle
devised by PAUL ROBSON

SCRAMBLE is an intriguing puzzle which will keep you baffled for days. The idea is simple. On the screen is a 5x5 grid, and each row is filled with one of five coloured shapes.

At the start of play one shape is removed, leaving a gap. Next, the grid is scrambled by moving rows left or right and columns up or down. Your task is to sort out the resulting jumble and put everything as it was before.

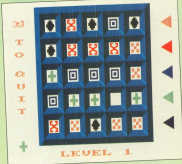
Rules govern the way you can move rows and columns, and it is these that make Scramble a challenge for the keenest minds.

Level one is the easiest. You can scroll the rows and columns round the edge as much as you want, but the central three in each direction can only be moved if they contain the gap.

On level two things become tougher, as the movement of the middle three is restricted to a range of two squares.

You can use the joystick, or cursor keys with the spacebar. To shift a row or column move the marker to it, and push fire or spacebar while pressing the joystick or keys in the appropriate direction.

Good luck, it might seem impossible but it CAN be done.



```

10 REM          SCRAMBL
20 REM          By Paul Robson
30 REM (L) Computing with the Sinclair
40 REM ***** (C) *****
50 SCREEN 0:CLS:PRINT "SCRAMBL"
60 SCREEN 0:PRINT "SCRAMBL"
70 GOTO 1100
80 GOTO 1100
90 GOTO 1100
100 GOTO 1100
110 GOTO 1100
120 GOTO 1100
130 GOTO 1100
140 GOTO 1100
150 GOTO 1100
160 GOTO 1100
170 GOTO 1100
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1920 GOTO 1100
1930 GOTO 1100
1940 GOTO 1100
1950 GOTO 1100
1960 GOTO 1100
1970 GOTO 1100
1980 GOTO 1100
1990 GOTO 1100
2000 GOTO 1100

```

Turn to Page 59 ▶

HOUSE CALL

THE POWER OF ZEN

CRL was set up six years ago by its present managing director Clement Chambers when he was still only 18. Being an enthusiast, he saw the growth potential of the still-young home computer industry.

To get things going he advertised for freelance programmers in a computing magazine. The response was excellent and led to CRL marketing its first programs for the ZX81 and Spectrum.

A string of successes followed, including Rescue, Derby Day, Handicap Golf, and Test Match, which was CRL's biggest selling title until 1986, when The Rocky Horror Show and then Tau Cell took over that position.

At first Clement was both managing director and sole employee, but as business increased during the first quarter of 1983 it became necessary to take on two employees. They were a secretary/receptionist to handle the large numbers of calls, and Tim Vernon who started as a general assistant and ended up international sales director before he left in 1986.

Expansion continued, and by the end of 1983 CRL had a team of in-house programmers. In July 1984 the

company had been so successful it went public and moved to larger premises of 2000 sq ft. During that year the main releases included Slider Pilot, Gang Gieg, Omega Run, Grand National and many more.

To handle its ever-growing need to produce more games with greater quality CRL hired a graphics designer, and on Tim Vernon's departure recruited Greg Duffield to succeed him.

In 1986 two new labels were created. The first was Nu Wave which was set up with a catalogue of innovative and experimental software aimed at computer owners who, tired of the usual arcade and adventure

games, were looking for something different. The second was Alpha-Omega, later re-branded as The Power House, which is beginning to make inroads into the budget market. At the same time as Nu Wave was breaking into the market, CRL moved again to even larger premises (5750 sq ft) which it named the Zen Room. That year Mike Hodges joined the team as the new creative director.

Among CRL's major productions were Blade Runner, Space Doubt, Pirgim, SAS Raid, and the Image System. One game released in 1986 - Descula - claimed a first by having a 15-certificate slapped on it, much to CRL's delight. Even more copies were sold than expected, as people bought it to see what was so gory.

Since then, probably because blood and guts proved so successful, it seemed that feat with Jack the Ripper which got an 18 certificate.

Now, CRL has outlived virtually all its original competitors. How has it survived? Having spent a day with the company, I would say one of the answers is the dedication of everyone involved.

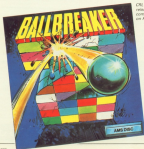
The atmosphere is very friendly, - they're always bouncing ideas off each other in a sort of creative ordered chaos.

The programmers each have a stereo by their microp, and there's a store of mattresses in the back room on which to crash out after a hard night's programming. They get used quite often, as the programmers almost live and breathe the software they're creating.

Mike Hodges introduced me to some of the team, all of whom enthusiastically demonstrated the

ROBIN NIXON finds out about Zen and the art of programming at whizzkid software house CRL

CRL's latest release *Join the competition* on Page 207



projects they're working on.

Some of the software they're writing for the ST and Amiga is brilliant, with the best sampled sound I've heard so far.

And they've not forgotten the good old CPC with *Ballbreaker II* in the pipeline.

As many of you will remember, *Ballbreaker* is a 3D breakout, both fast and very addictive. It has entertaining features such as frogs that hop up and down and, if you're not careful, poison on your list.

There's also a conversion from the Commodore of *Allen* where you play an alien who has been captured by farmers and try to escape through a vast maze while they're asleep. You then have to get into an underground complex and find an escape route.

Another game to be released soon is *Dink*. Yes, for those aficionados of the comic, this is *Dink!* the computer game. CRL has worked closely with the writers, and the game is based around four characters from the comic.

The idea is that you are the editor and have to play four arcade games as well as possible to attain a high score, which in turn rewards you with higher circulation and more pages. The extra pages have to be filled by adding panels which have been written by the *Dink!* team and make up full stories on completion.

Another reason for CRL's success lies in Clement Chambers himself. He has a vision of the future where software houses, the record industry, and film and TV companies will combine

to produce "total experience" games.

He says that as soon as the home micro's power is big enough CRL will be there at the forefront. Imagine a game with the graphics of *Star Wars* or *2801* having a one-hour stereo sound track, and using modern film and record production techniques. According to Clement it isn't too far away.

An insight into Clement's world can be gained through some of the things he says. While we were down at the pub for lunchtime refreshments (having been driven there in the company Toyota Crowe - number plate CRL 1) he remarked on how he felt he was becoming a dinosaur, and had visited the Natural History Museum to see some dinosaurs (presumably so

that he could make sure he wasn't resembling one too closely).

To keep in touch with the younger generation - he's only 24! - his boys records by the Beatle Boys and other new groups. Not that he particularly likes them, but that's what a lot of kids are buying at the moment.

But it isn't only Clement who runs the show. He, Mike Hodges and the rest of the team all pool their ideas to come up with software they believe in. Then they work hard to achieve a finished product as near to the original specification as possible.

CRL has really gone places and has its mind set firmly on the future. Look out for many more top quality releases to emerge from the programming den at the Zen Floor.



From left to right, Jeff Lee, Jay Clement, Mike Hodges, Jon Lee, Andy Sinclair

Creative director Mike Hodges



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Fings ain't what they used to be?

I LOOK forward to receiving your magazine each month but I think it is not as good as it used to be. My copies of the 1989-90 issues are frequently dragged from their shelves and are looking rather dog-eared now.

My sympathies are with those readers who search in vain for helpful books on Basic. I have bought several and they are all only good in parts. What is needed is a complete encyclopedia of Basic in which working examples are given with explanations of their use and are free from jargon.

Now here are a few queries I hope you can help me with. I have a CPC464 with disc drive and DMP2000 printer. Having put together two short programs I realised that I could use them better if they were merged into one. I found this could not be done from disc, and I had to do the merging from tape. Why did I have to do this?

I have written a sorting routine using RMD which works OK. Is there a way to prevent it from printing the same number more than once?

My Mini Office II also is over a year old by now, and

has rendered great service in regular daily use. Is there any reason why it is not available on rom? Should there ever be a Mini Office III, would you please consider this? — C.A. Watts, London.

■ The content of the magazine is aimed at what we see as the wishes of the majority. If you aren't getting what you want, tell us what you would like to see, be it the overall content or specific suggestions.

There is a bug in the original version of Amos which causes problems with merging Basic files if they are saved as Basic. If you save them as Basic (with a J option) the problem does not occur.

There is no easy way of preventing RMD from repeating itself. The only solution is to stop the numbers in an array as they are generated, and check new RMD values with all the previous ones, discarding them if they are the same.

Mini Office II is far too

large to fit on a single 16k rom. A rom-based program typically costs £30, so you would be paying £90 to £96 for a multiple-rom set, and this would detract from Mini Office II as a cheap and cheerful package.

Modem connections

SOME time ago we bought two Protek acoustic modems with Celer RS232 interfaces to allow us to network our two CPC464s over the internal telephone system. The equipment worked fine until I upgraded to add a PC232.

The RS232 interface of the PC is not compatible with the requirements of the Protek unit. I have tried writing to Protek but they appear to have gone out of business.

The only firm I have managed to get from Celer is that Protek made two self-canceling drawing mistakes

in their data sheets. But which two wires are displaced?

I write to you almost as a last resort. Has anyone resolved this problem? — Geoff Lewis, Canterbury.

■ Not having the modem or interface in question we haven't come up against this. Make sure the modem is connected properly. Pin 1 of the modem connects to pin 7 of the interface. Pins 2 and 3 on the modem connect to 2 and 3 on the interface. Pins 4 and 5 on the modem are unused, and pins 4, 5, and 0 on the RS232 are connected together.

The ultimate answer may be to use different modems such as Plan's latest Linnet, which will operate at 1200/1200 baud.

Excessive profits?

SEVERAL software companies complain about piracy saying that the pirates take their profits and that they have to charge high prices to cover the loss. However, I am rather surprised by the following:

A new game was released this month in which I was interested. On contacting the software company concerned I was told that the disc version is £14.99. I then contacted a mail order company who didn't have the game in stock, but could get hold of it and sell it for £11.94 — that's £3.05 cheaper for the same product.

Now the suppliers and the retailers must be making a profit on the goods as they wouldn't last very long in business, so how can the software company justify a price 27 per cent more for a direct sale to the customer? I assume that I'm not

Coin-op conversions are a washout

HOW many more do we have to put up with coin-op conversions? There is no way you can convert games like Duxon well to a home computer.

Duxon Roper was not a disappointing conversion, but you can't enjoy the real excitement of being on a bike as you can in the arcade.

The software companies must spend millions on advertising the games but when seen they're quite disappointing. How much longer do we have to put up with all this converting, and why don't we have new titles for games? — James Gibbons (aged 11), Hereford.

■ Your letter arrived just after Tiffany had written much the same thing — inspired by the same game — in her Jerrisa column. You're both right on target. Is there anybody out there who bought Duxon and thinks that they got value for money, or that it deserved number one in the Gallup chart?

As far as the software houses are concerned, conversions have a lot going for them. If the game has been a hit in the arcade, there is already a demand for the converted version, and it's much more likely to sell than something nobody's ever heard of.

Also, a lot of the work in

writing a game is finding a good idea and developing it into a playable design. With a conversion this has already been done and the programming team just have to copy it.

This has the advantages of making the game quicker to write so the programmers can get on to the next project, and the software house doesn't have to worry about finding really creative people, who are rare and more expensive than competent but unexceptional programmers.

As long as large numbers of game players fall for the hype and send the likes of Duxon to number one, there's little hope of change.

buying pirated copies from the firms advertising in your magazine, so the product must have been bought for less than £71.84.

I am not saying that I agree with piracy, but it is not the case that the software companies are partly to blame by trying to make what seem excessive profits? — **Mick Black, Bristol.**

■ The mail order suppliers buy software in bulk and can therefore command a discount.

In order to deal on an individual basis with customers the software house has to employ more staff, so the overhead per unit sold is increased compared to selling several hundred games to one retailer.

Patterns for fill routine

SHOULD other readers be afraid for patterns to use with Ian Sharpe's excellent 68 routine from the January issue, they have more than 200 characters to use at the back of the user guide. The fill blocks can be used in any colour. — **Bill Hamley, Seattle.**

■ An excellent idea. The patterns can be copied with the pattern designer or typed in manually.

Banking on rambuffer

I RECENTLY bought your Utilities Diskette and I am interested in the Rambuffer printer buffer program. This does not work with Casework 8128 because they both fight for the extra 64k of ram.

I tried to load the buffer into my 356k expansion card, only to be informed by the program that I must use one Amstrad 4.7 only, in other words the extra ram in the CPC8128.

Can you provide a simple patch to remove this restriction? I would also be obliged if you can suggest a further

Speedy screen saver coming up...

I AM writing a program and need to store the screen in a different part of the computer's memory. The program is around 70k long, and I have written a routine in Basic which copies the screen down to location 84000. The trouble is that it takes 40 to 50 seconds.

I really need to do it in around a second. Please can you tell me how to do this, and how do I save and load the screen from whenever it is stored?

Also, please tell me how to save the program (in values of a Mode 0 screen). — **The Olive, Nottingham.**

■ This listing should be added to the start of your program. When you want to copy the screen down to 84000, put a CALL 8190 command at that point. To copy the screen back up again CALL 818c, it takes less than a second. Don't

```
10 SCREEN 0:PRINT:GOTO 10
2000 TO 8111:PRINT:GOTO 2000
30 1,1,0,0,1
40 800 CALL 8190 TO 0
50 800 CALL 818c TO 0
60 10 0
70 818c 811,8,144,800
80 818c 1,8,144,800
90 107
10 817c 811,8,144,800
11 817c 1,8,144,800
127
```

forget that the screen must not scroll between copying it to a safe place and moving it back again.

If the screen is at 84000, to save it put the following in the program:

```
CALL "screen",8-800,84000
```

The 84000 is the start of the screen memory, 84000 is its size. The 1 in the filename is for tape alert and stops the display being

corrupted by the Press play+ message. To reload the screen:

```
CALL "screen",8000
```

The safest way to save the ink values is to put them into the last 70 bytes of screen memory (which is unused and not used just before saving the screen. Assuming you have the ink values in an array called ink\$, the program would look like this:

```
FOR I=0 TO 15
  PEEK 8111+I:INK$(I)=PEEK
```

When you reload the screen, the first job is to peek the values out again:

```
FOR I=0 TO 15
  PEEK 8111+I:INK$(I)=PEEK I:INK$(I)
NEXT
```

improvements: allowing more than one 128 block to be used as a buffer, or use Graphics for much of my printing and this would be much faster than it would seem even 128 in no time. — **B. Wollin, London.**

■ Unfortunately we no longer have the source code for this utility so there is no easy way of providing the patch. If anyone with more time on their hands wants to write one, and can help it out enough for the read page, by all means send it in.

Mapping the Amstrad

RECENTLY I sold my Atari 8000L to buy the Amstrad CPC8128 and drove up in the world. I had a book for the Atari called Mapping the Atari which gave me the details of what each memory location was used

for. Please could you tell me if there is a similar book to this for my CPC as I am having problems in finding one? — **Philip Dawson, Wigan.**

■ The best place to start is with CPC8848848128 Firmware, published by Amsoft, code SOFT 968. This is the official Amstrad documentation for the inbuilt operating system routines, and should be available through your dealer or one of the mail order advertisers.

Quite a few people have written asking about the differences between SOFT 968 and the original firmware manual — SOFT 157. The later manual covers all models and documents the disc drive firmware calls as well as the cassette routines. It also has other useful information not covered in SOFT 157.

Anybody buying a firmware manual should go for SOFT 968, no matter which machine they have.

Suffering housework

IN reply to a letter in the February issue from S.J. Tovey, we are also new to computing, and when it comes to programming are total dillies. However we have found very Basic Basic by D. Fitzmaurice and P. Scheffels to be excellent as a gentle introduction to programming. It is published by Century Publishing and Melbourne House.

One another point: there seems to be a general number of discontent from ladies using computers, mostly concerned with the scarcity of good games. I've found plenty, some of which are very addictive — so much so the housework is suffering.

True, some may be slightly sexist, but why pay any regard when a game is basically good? Sorry about

the scribbles, I'm writing this between Solomon's Key and collecting the slide from actual. — **R. Bittles, Ipswich.**

◆ Solomon's Key is one of Tiffany's favourite games too, but what would readers recommend other than the ones mentioned in her 1987 top 10?

Double the drive

THANK you for publishing the disc drive project. I intend to build it and thus save myself the cost of every copy of Computing with the Amstrad I've bought — and I've been a reader since issue one.

Having seen that the second drive can be built for less than £80, and that I'm paying retail price for the parts, I've been wondering how Amstrad can justify £100 for the genuine article?

After all, the only difference is the rear plastic casing, and Amstrad is buying at manufacturers' prices and in bulk. It must be making them for £30-£40 each at most, so how come the end-user price is nearly three times that? — **David Hainsey, Birkhead.**

◆ Don't forget that Amstrad

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has a lot of overheads such as labour, packaging, distribution, advertising, investment in future products, and the 1000 other things necessary to keep a big company in the market to which it has been accustomed. There are also the profits of middlemen such as distributors and retailers. Having said that, £100 is still a difficult figure to explain.

Video titling

IN the February postbag there was a question on video titling. This could be done using slots E, 4 and 5. Join pins 4 and 5 together, and pin 6 to earth.

This will give SW reproduction which is far better

than Amstrad's modulator, especially in Mode 2 — **Martin Burke, Coventry.**



Sound with GAC?

I AM new to computing and at the moment it's fairly cluttered. I own a CPC464 and I am writing a program for my grandson using the Graphic Adventure Creator. While the system is, in my opinion, excellent, I feel it would be greatly enhanced if it were possible to include some sound.

Could you suggest a method or a package to enable me to include sound? — **C. Mortimer, Bradford.**

◆ There is no easy way of getting sound with GAC in itself; it might be possible for an experienced programmer familiar with machine code to add sound, but this would be a difficult task and for practical reasons the answer to the average user is no.

Postal study

I'M pretty new to computing but I find it quite fascinating. I'd like to learn more about the subject and am thinking of taking a correspondence course such as the one advertised by Microwise of Colchester.

Can anyone make a recommendation based on personal experience? — **Steven K. Harris, Northampton.**

◆ We can't speak for Microwise, but the National Extension College in Cambridge is reputable and runs a range of courses, including computing, which lead to recognized educational qualifications.

Whoops!

A CRASHW crash into Disc Library in the April issue. After the program had been tested we added some IBM statements with our appropriate message and to make the program clearer.

Disc Library is such a tight fit in memory that the IBMs pad it out a bit too much. When you try to add a directory to the catalogue, if the disc holds more than around 20 files you get a string space full error.

The remedy is quite simple. Delete lines 10-60 inclusive. Now go through the program looking for lines that are just IBM statements. Leave the line number and IBM intact, but delete the message that follows it. This will create enough room for the program to run properly.

In February's *Whisper* listing there was also a small problem. It only shows up if you make a typing mistake in the data at the end of the program, but if you do it can cause all sorts of weird and wonderful effects. Line 2010 should read:

```
2010 IF @=000;IF@=0
    GOTO 200;IF@=1;IF@=
    GOTO 200;IF@=1;IF@=
```

Stop Press and Tasword

£10 Prize letter

YOUR review of the AMR Stop Press DTP program in the February issue mentions a niggles concerning loading text from the Tasword/Amstrad word processor, namely Tasword inserts a hard return at the end of each line, and Stop Press acts on these, messing up the justification.

I've created this one. If Tasword is set to its maximum margin settings of 7 and 126, the problem does not occur, it's worth experimenting a spare copy of Tasword to these margins rather than changing them

every time you use it. I keep mine on the spare side of my Extra! Extra! floppy disc.

A sheet of test typed on the slide settings can be printed by using the condensed print option. Test already typed on different settings can, of course, be reprinted by using Tasword's hard justify — Control L.

Lastly, does everyone who bought the original PageMaker know that Advanced Memory Systems offer a free upgrade to Stop Press if you send them your original disc? They'll also send you a copy of Extra! Extra! at the bargain price of £10, which is well worth having. — **Alan Webster, Glasgow.**

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Mice one, Siren

ALLAN MITCHELL
assesses a new
page design
program and
mouse

HAVING reviewed AMX's impressive Stop Press (in our February issue) I was eager to test a new competitor in the DTP stakes, namely Mice Design from Siren Software. Along with the review copy I was supplied with Master Mouse, Siren's AMX-compatible entry into alternative input.

Siren offers Mice Design as a "fast and versatile drafting package designed to produce graphic artists and technical drawing on a dot matrix printer". This seems to be a fairly accurate description, and the program falls about half way between a simple drawing package and a full-blown desktop publisher.

The product is disc based, and comes with a brief but adequate 15 page A6 manual. It requires 128k of memory, so you will need a CPC6128, a CPC644 with a minimum of 84k additional ram, or a CPC644 with disc drive and ram pack. Needless to say, you also need a dot matrix printer. Control is either by keyboard or AMX/Master mouse.

There are five sections - described in the manual as pages - which cover layout, design, printing, filing and icon editing. In each section the screen is divided into four windows, which always perform roughly the same function. Figure 1, created using Mice Design, shows the design section.

At the top left a window displays the drawing, where all design work is done. To its right another window shows the menu from which all operations in the current mode are

selected. Some of the menu options require selections from further pull-down menus.

The bottom left window shows icon sets which may be pasted on to the page. This window is present when the drawing section is first entered, but can be toggled off to give a larger drawing area. The bottom right window displays options available from the function keys (F1-F8). These vary from section to section, and may also vary within a section depending on which menu item is selected.

Mice Design is best used via a mouse, but the function keys have been very cleverly implemented to enable one-handed operation. All major facilities can be accessed and used by pressing the function and

arrow keys. This is very useful if you don't have a mouse, and cuts down on eye strain from constantly having to look down at the keyboard.

Layout

After the program has loaded you enter at the layout section. Here you first decide which of the three page formats you require: A4 upright, A4 landscape, or strip format. The layout section may also be used, as its name suggests, for adjusting the layout of drawings before committing them to paper. It is sometimes possible to load pages created under one format to a page of another format, but this may cause distortion.

The menu options allow you to move around, copy and erase user-definable blocks of page - handy for making last minute adjustments before printing.

The second section - design - is where drawing operations are carried out. Facilities available include lines, rectangles, circles, text and zoom. Block commands similar to those in the layout section allow you to reposition areas of the drawing.

- By staving a block and selecting the glue option you can flip, rotate or invert the block and repaste it on to the page. There is, however, a limit to the size of the area which may be stored.

The standard of graphics facilities is generally very good, and you always have the option to undo the last operation. Design also gives you access to the icon sets. These are user-definable shapes which may be moved around the drawing area and pasted into place. The current set of icons is displayed in the bottom left-hand window.

Twenty or so sets of ready-to-use icons are provided on the disc, so you can get a good idea of what is possible before starting to produce your own.

Quite a few of the icons are in the form of different fonts. In a special icon mode you can use the keyboard as a typewriter which prints with the currently selected icon set. Of course the output only makes sense if you have a set with alphanumeric characters in the correct order.

As each key is struck the preceding icon is faded on the page and the next one appears at the cursor position. Figure 2 shows a few of the fonts provided as standard.

In addition to the icon sets the write option provides four different sizes of text which may be typed directly from

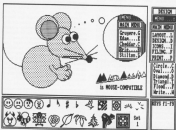


Figure 1: The Mice Design screen.



Figure 8:
A selection of
the available fonts

4 From Page 88

the keyboard. Text may be entered in any one of four different directions, and each character may be positioned with pixel accuracy before being fixed.

Icon editing

In the next section icon edit, you can modify any of the existing icon sets or create new ones. Icons are available in two sizes - 16x16 and 24x24 pixels. The main work area takes the form of a large grid within which the editing takes place. Alongside the grid is an actual-size representation of the icon which is being edited. This is updated as you work, so you can see how any changes will look.

Next comes the filing section. Fairly comprehensive file handling and maintenance facilities are provided, including: catalogues, delete and rename. Sires says the drawing is compressed so it is saved. This makes loading and saving impressively quick, and keeps the disc space used by each drawing to a minimum.

Special loading and saving options allow for the handling of the icon sets. Three sets of icons may reside in memory at the same time, each one containing 32 icons. The sets may be saved individually, or as a block of three.

The latter option is used for saving the different fonts which require all 66 icons to give upper and lower case letters and numbers. Micro Design

V1.0 has a bug in this section which causes a crash if loading or saving is attempted on a CPC464 or CPC664. This bug has been rectified in V1.1, and Sires assures me that all V1.0s which have caused problems have been exchanged for the later version.

Printing

In the last section, printing, you see your work come to life. The printed output is to an IBM or Epson-compatible dot matrix machine capable of quadruple density graphics. V1.1 provides a printer set-up utility for configuring the software to either standard.

Three sizes of A4-based printout are available - full size (A4), half(A5), and quarter(A6). An additional strip format provides a higher resolution print, but will not print at quarter size. All full size, strip format covers about a quarter of an A4 sheet.

The print options also include a choice of single or four-page printing, a shade option for a darker image, multiple copies, and single sheet or continuous stationery. The Escape key will abort any of the printing operations. Printed output is high quality, and a sideways A4 format gives Micro Design that extra bit of flexibility.

You will not be surprised to hear that printing a full A4 sheet in single pin mode takes almost an hour. I didn't time a printout using both single pin and dark options together. Also provided on the disc is a utility

for converting Mode 1 or Mode 2 screens into a file which can be used by Micro Design. This is handy for loading artwork from other sources.

Micro Design is a very compact piece of programming running in 128K of ram. A problem with some of the more sophisticated design packages is that when you run them on a single drive system a lot of disc swapping is involved. With Micro Design very little system disc access is required, which means that you don't need to have the system disc in the drive except when you wish to load new icon sets.

Master Mouse is in fact an early AMS robot which is being re-marketed by Sires. The review model was quite acceptable although I did find some of the instructions a little confusing at first. AMS has changed the button assignments on its later mice, presumably because it thinks the new way is better. I think I agree.

Conclusion

Micro Design falls short of being a full-blown desktop publishing package. It is a mid-priced mid-range program which will give the hobbyist the ability to produce presentable pages of mixed text and graphics at a very reasonable price.

If you buy Micro Design and then decide you want to buy a mouse you can order a Master Mouse from Sires Software, Frank, at £49.99. I think it is overpriced. You can buy Micro Design with a mouse and Sires's Cherry Point for £94.99 but I still think that this is a little over the top, especially when you consider that you can buy Strip Press and the latest version of the AMK Mouse for around £75 more.

Having said that, I would not like to diminish the software's value in any way. Micro Design provides a wide range of facilities and is eminently usable with or without a mouse.

If you need to produce mixed text and graphic pages but don't think that you can justify a large outlay for a desktop publishing package or a mouse, Micro Design is for you. At around £25 it will give you the feel of desktop publishing without costing an arm and a leg.

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Son of Maxam

IAN SHARPE investigates the latest version of Arnor's popular assembler

BACK in the CPC's early days, Arnor produced Maxam, a machine-code development system that became the standard by which others are judged. It comprised a text editor, assembler, disassembler, monitor, and utilities. Since then other packages have appeared, many with features that Maxam lacks.

Last year Arnor released Maxam II, a CP/M Plus version which included just about everything missing from the original version. Unfortunately it isn't very very convenient for non-CP/M programs.

Now Arnor has done what everyone hoped they'd do - produced an upgraded Maxam for use under Amstrad. As the title Maxam II is already spoken for, they've called it Maxam 1.5, and it is soon only.

The new form is a commercial version of something Arnor has been using in-house for the last couple of years, and the preproduction review copy was in the final stages of testing, though I couldn't find any bugs.

So what's changed? The original Maxam had an excellent built-in text editor which was the prototype for Protext, Arnor's acclaimed word processor. The only way Arnor could enhance Maxam was by removing the text editor to create room in the rom. Now, in order to write your assembly language source code you need Protext on rom, disc, or tape.

As a long-time Maxam I user the first thing I noticed was that instead of pressing Escape and selecting A from a menu, to assemble a file, you type asm from Protext's command mode. In fact, of the two menus in Maxam I only the first remains, the second having been replaced by additional RSX commands.

In Maxam I you could see the listing on-screen, optionally dumping it to the printer. With Maxam 1.5 you can also send the listing to a file, but owing to restrictions in Amstrad you can't write your machine code to tape/disk at the same time - it's one or the other.

One advantage of sending the listing to a file is that there is a new test command which doesn't produce code, it just lists errors. If you have Promerge Plus you can use the two-

file editing facility to flip between source code and a file of errors.

You can still assemble source code held in REM statements, which is handy when you're developing short routines in conjunction with Basic. The ability to have source code and a Basic program in memory at the same time has always been a plus point.

There are many additional features which make life easier. For instance, when including character strings in your machine code a new STR directive will put them in for you and set the top bit of the last character.

This is the format in which RSX names are stored, and is the easiest way of testing that the end of a string

is informative as Figure 1 shows.

The hex/hex dump to the right of the register values is the contents of the memory around the address pointed to by each register. Below it is a disassembly of the code around the instruction being executed. Although it doesn't show on the dump, if any of the flags are set they are marked on the top row.

In addition to *and* you can now have eight breakpoints which do not affect the length of the code. You can also set one temporary breakpoint which, if it is inserted in a loop, will only execute first time round. As well as the choice of three types of breakpoint there are a number of associated commands to give total control of the new breakpoint functions.

Maxam 1.5's debugging facilities will fall short of a single-stepper where you can execute your code at instruction at a time seeing how it affects flags, registers and memory locations.

I took a peek into the rom with the intention of seeing how much room it

Figure 1: Extended breakpoint facilities

has been reached when printing it, unless you are using graphics characters. You just access each character in turn, and test to see if the top bit is set before resetting it, printing it, and exiting from the string printing routine if the end has been reached.

When things don't go to plan (they rarely do) it's time to go debugging. This was perhaps the weakest aspect of Maxam I. All you had were breakpoints where you could pause the program and see the state of the registers. These had the drawback of being an extra instruction in your code, so each breakpoint lengthened it by one byte.

The breakpoint feature has been extended and is now a lot more useful. The old *and* instruction is still there, and it still inserts an extra byte. However the display it produces when the program pauses is a lot more

left before taking Arnor to task for not including the feature. There isn't much free space, but I found Arnor had anticipated me by leaving a message to the effect that it is considering this as a future enhancement if Maxam 1.5 is well received.

Maxam II has the ability to set conditional breakpoints where the program only pauses if a certain condition has been met, and Arnor might like to think about that too. Having said that, Maxam 1.5 is still a big improvement over its predecessor.

Another welcome feature is a set of PEEKs to initialise the registers before calling a machine code routine. These can be used from Basic or Protext, and you can then use *and* to jump to the code with the registers loaded with

Turn to Page 58 ▶

■ From Page 87

the required values.

The memory editor is still there, it has always been a good one, but you OFTEN get a specific option. By the way, there are two short cuts here. One is to do IAA, followed by IJ, & B056 where n is the number

specified in the firmware manual to switch the relevant 16K block into the address space at \$4000. The other is to CALL B056n followed by n parameters. Their value doesn't matter, but the number of parameters is passed to B056 in the A register which then becomes the parameter used for the block switch.

Extended disassembly

A frequent complaint about Maxem 1 was that the disassembler wouldn't output to a file. You wouldn't want to do this so you could alter a program for which you didn't have the source code. This could be got round with a short utility, but in Maxem 1.5 it is built in.

If you select this option the hex and Ascii fields are removed, leaving you with a file that can be reassembled without further processing. The one quibble I have here is that with some other packages labels are inserted where the program refers to an address within itself. Maxem 1.5 doesn't do this, but it isn't a major criticism and you could write a major

to do it. As well as disassembly, a hex/Ascii dump of memory can be sent to screen, printer, or file.

The pre-production review copy came with a photocopy of the documentation which supplements the Maxem 1 manual rather than replacing it. Production versions will be supplied with the original manual and the supplement.

To sum up then, if you can afford Maxem 1.5 and Protent - and I don't pretend they're cheap - they make a superb combination unmatched for sheer convenience and ease of use, and they're still a few features that I would like to see, such as single stepping and the addition of labels to disassembly, but for my money the Protent/Maxem 1.5 combination ranks as the best for non-CPM work.

Product: Maxem 1.5 (new only)
 Price: £29.95 or £19.95 as upgrade from Maxem 1
 Supplier: Amtec Ltd., Protocol House, Waterman Rd., Peterborough PE2 0NU
 Tel: 0753 228977

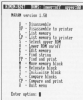


Figure 8: The Maxem 1.5 menu

Castle Computers



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 Burslem,
 Stoke-on-Trent,
 ST6 3GB
 Tel: 0782 575043

| ANTHOL COLLECTIONS | ANTHOL COLLECTIONS | ANTHOL COLLECTIONS | ANTHOL COLLECTIONS | ANTHOL COLLECTIONS | ANTHOL COLLECTIONS |
|--------------------|--------------------|----------------------|--------------------|--------------------|--------------------|
| Thomas of the Wood | 1.00 | Virgin Attack | 1.00 | Education | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 16th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 17th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 18th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 19th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 20th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 21st | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 22nd | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 23rd | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 24th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 25th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 26th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 27th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 28th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 29th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 30th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 31st | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 32nd | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 33rd | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 34th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 35th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 36th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 37th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 38th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 39th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 40th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 41st | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 42nd | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 43rd | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 44th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 45th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 46th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 47th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 48th | 1.00 | Book of the Dead | 1.00 |
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| Thomas of the Wood | 1.00 | Warfare of the 50th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 51st | 1.00 | Paradise | 1.00 |
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| Thomas of the Wood | 1.00 | Warfare of the 60th | 1.00 | Book of the Dead | 1.00 |
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| Thomas of the Wood | 1.00 | Warfare of the 68th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 69th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 70th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 71st | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 72nd | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 73rd | 1.00 | Paradise | 1.00 |
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| Thomas of the Wood | 1.00 | Warfare of the 75th | 1.00 | Paradise | 1.00 |
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| Thomas of the Wood | 1.00 | Warfare of the 81st | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 82nd | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 83rd | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 84th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 85th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 86th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 87th | 1.00 | Paradise | 1.00 |
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| Thomas of the Wood | 1.00 | Warfare of the 89th | 1.00 | Paradise | 1.00 |
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| Thomas of the Wood | 1.00 | Warfare of the 92nd | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 93rd | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 94th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 95th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 96th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 97th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 98th | 1.00 | Book of the Dead | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 99th | 1.00 | Paradise | 1.00 |
| Thomas of the Wood | 1.00 | Warfare of the 100th | 1.00 | Book of the Dead | 1.00 |

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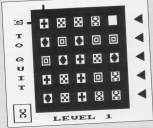
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```

2048 GOTO 10
2049 FOR Y= 0 TO 5:FOR X=0 TO 5
2050 FOR Z= 0 TO 5:FOR W= 0 TO 5
2060 PRINT;
2070 GOTO 1100
2080 GOTO 1100
2090 GOTO 1100
2100 GOTO 1100
2110 GOTO 1100
2120 GOTO 1100
2130 GOTO 1100
2140 GOTO 1100
2150 GOTO 1100
2160 GOTO 1100
2170 GOTO 1100
2180 GOTO 1100
2190 GOTO 1100
2200 GOTO 1100
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2240 GOTO 1100
2250 GOTO 1100
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2270 GOTO 1100
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3990 GOTO 1100
4000 GOTO 1100

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1980 GOTO 1100
1990 GOTO 1100
2000 GOTO 1100

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2010 IF X=0 THEN GOTO 2020
2020 IF X=5 THEN GOTO 2030
2030 IF Y=0 THEN GOTO 2040
2040 IF Y=5 THEN GOTO 2050
2050 IF Z=0 THEN GOTO 2060
2060 IF Z=5 THEN GOTO 2070
2070 IF W=0 THEN GOTO 2080
2080 IF W=5 THEN GOTO 2090
2090 GOTO 2100
2100 GOTO 2110
2110 GOTO 2120
2120 GOTO 2130
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2260 GOTO 2270
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2950 GOTO 2960
2960 GOTO 2970
2970 GOTO 2980
2980 GOTO 2990
2990 GOTO 3000

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| LINE | CODE | LINE | CODE | LINE | CODE | LINE | CODE | LINE | CODE | LINE | CODE | LINE | CODE |
|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| 70 | 00144 | 50 | 01110 | 60 | 00040 | 70 | 01000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 80 | 01110 | 50 | 00100 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 90 | 00100 | 50 | 00100 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 100 | 01110 | 50 | 00000 | 60 | 00000 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 110 | 01110 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 120 | 01000 | 50 | 00010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 130 | 00010 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 140 | 00010 | 50 | 00000 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 150 | 00010 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 160 | 00010 | 50 | 00000 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 170 | 00010 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 180 | 00010 | 50 | 00000 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 190 | 00010 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 200 | 00010 | 50 | 00000 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 210 | 00010 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 220 | 00010 | 50 | 00000 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 230 | 00010 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 240 | 00010 | 50 | 00000 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 250 | 00010 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 260 | 00010 | 50 | 00000 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 270 | 00010 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 280 | 00010 | 50 | 00000 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 290 | 00010 | 50 | 01010 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
| 300 | 00010 | 50 | 00000 | 60 | 00010 | 70 | 00000 | 120 | 00010 | 170 | 00010 | 220 | 00010 |
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