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ISSUE 47 £3.95 AUGUST 1994

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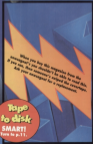
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### MEAN MACHINE

EXCLUSIVE COMPILATION OF SOME OF THE BEST DEMOS AROUND

## BRAIN STRAIN

Stretch your mind and exercise your intellect - we reveal the best C64 puzzle games ever... page 26.



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**Tape to disk SMART!**  
See p. 11.

**Mega-preview section**  
10 new games coming your way!

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When it comes to puzzle games, the Commodore has more choices than the desktop variety. But if you need to stretch your mind and challenge your intellect, do you know which brain teasers offer the greatest stimulation? That's a question we put to a panel of great reviewers...



## 33 LOADS-A-PREVIEWS

Here we get news and screenshots of 10 brand new titles that should be feeding your eye soon. Eight of them are from Germany, and two from the UK and most of you are... *workaholic addicts.*



New games from the UK and Germany.



## SPECIAL FEATURES

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By Jon Hills. An inside look at the creation of this game. The personal notes from a pioneering lead.

### 26 THE BEST C64 PUZZLE GAMES EVER

By Thomas Wink. A meticulously researched work of genius by a writer whose great style makes a lot of easy information seem easy.

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## SERIOUS STUFF

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By Jason Fuchs. When it comes to the serious side of the C64, this is without doubt the definitive work.

### 29 MEAN MACHINE CODE

By Jason Fuchs. This can be said of thousands of the early Magazine files in the astonishing but informative study.

## REGULARS

### 5 SHIPPETS

By Dave Gidley. From behind-the-scenes.

### 6 LETTERS

By Bob. Though the style tends towards the pompous, the sheer intelligence of the piece keeps you hooked.

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By a Bob. Featuring the kind of headline which makes you suspect this is either working under a pseudonym.

### 11 POWER PACK

By Dennis Henningsley. One can only suspect that the contents of his desk were greatly exaggerated.

### 14 PD FORMAT

By Andy Roberts. A surprising new work for the Commodore, but far more thorough than that up to the task of reviewing PD-type disc compilations.

### 25 BACK ISSUES

By SJP Taylor. The history of C7 announced!

## 17 GAMEBUSTERS

Five pages packed to bursting point with games tips, hints and settings, including:

- **SLEEPWALKER** - everything you need to know to make your way through level one.
- **SOB** - your gaming system got overloaded.
- **LEIBENHAIN FROBENHAIN** - the secrets of why my reviewer made it to our archive knowledge of Settings.



## 23 TECHIE TIPS

The world before techie questions and answers began with a difference. Well, not questions and answers are different to our needs. What would do you want? Better?



## 32 THE ULTIMATE UPGRADES?

Right, so adding - there's hardware available in the UK that could really make your C64 a serious contender for those to-be machines. We let you do the sums - you decide whether you want to be a part of a computing revolution.



## 11 ON THE POWERPACK...

### THE LEGEND OF SINBAD

Ah, the legend of the ancient Tar East. It was a time a time when men sailed the blue seas and adventures were to be measured. And you can experience these times in the totally authentic, interactive Fun Reaction style presentation.

### REACTION

Finally games are the theme of the month, as we need to give every a month game really. 0001-0007

### MEAN MACHINE CODE

An excellent sample of some of the most impressive demos available for the C64.















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CF/94/104



All the meat and none of the flabby bits, in a lean, mean guide to the coverage...

# POWER PACK



...and how some board is still to be quibbled by keeping the amount down. Speed up the Counts by shortening them.

Despite its past 3 plays, it's a bit of a cramped board this month, so no meaning about any other coverage (the article is otherwise more the "History" format). The first time I saw it they had "you know, the..." routine was all included early, the straight into those instructions.

## LEVEL ONE

The game is out one that needs when together from a set of a pipe which an won't better going into there. The pipe Sinbad who has been kidnapped and thrown in the dungeon of Sultan Sinbad's fortress. To escape the dungeon you must collect the keys to open the doors you see on the map.

See power! (app). To reach a key you must collect eight pieces of treasure - the pieces will float at the point. You can only carry one key at a time and you can only shoot when you're moving horizontally. Avoid everything that moves or flashes. Pick up the key for a surprise (pause for breath).

## THE LEGEND OF SINBAD



From New Horizons

points take one bit to fill while the leader takes two (except this is a full exchange to see, how you keep up with that?)

## LEVEL THREE

Next stage - crossing the desert. Project your strategy carefully by setting the desert. Also your ability by moving the black eighth. Good



opposed and sometimes himself into a danger which must be about 13 times. From And that's it, Good job - I'm off for a rest.



## THE MEAN MACHINE

What's better than that kind of effects? You first notice of them, exclusively controlled by the character known as Commander Normal, should you give a pretty good idea. From security devices, through government-related projects in allowing

advanced equipment, these are the kind of device you can show to any foreign embassy and say, "This - and what did you pay for your machine?" They prove that the CIA is a different kind of man, it could well be a go introduction by American friends.

"Well, it's not way to find the real control."



## LEVEL TWO

Having escaped the dungeon, you now have to battle your way out of the fortress. The fourth episode from beyond the doors, the leader has a large game for while the others are in red. The reason why you can't, which, while the others need to get your team. Being your player left or right while meeting by pressing the Control



## NO LOAD ZONE

If you're taking a hard time loading the tape's Power Pack then point the full tape to a fully charged, and it'll be up and good to go. QNT Tape Preparation Service, Mail Studio Video Ltd., Hancock House 14, Dulwich, London SE18

## REACTION

Despite its Past 3 Let's get the instructions out of the way. This might not be the best written by James Hall and Ben Connolly that is normally like a "to make" version.

The first few levels are deceptively simple, taking you into a series of false security, but it rapidly becomes more and more difficult. All you have to do is change all the figures on the grid to red. There's a warning which you can move over the grid. When you press the, the square beneath the cursor and the others surrounding it will all turn orange - red (except this, mine become red).

And that's it. A device I would use almost daily if I could, give it a try... but don't send the example for the free replacement therapy.



It's not a tape, but a tape preparation service.

## TAPE TO DISK

This month's Power Pack is also available on disk. To get the disk version simply cut out the information the tape may need, write your name and full address on a piece of 5000, pop it in an envelope with a cheque or postal order, made out to Alpha Audio Video, for £1.50 (including duplication, mailing and post) from: Claret Tape To Disk, Alpha Audio Video Ltd, Postcode RH16 1JN, Tonbridge, Kent TN11 3SQ.

## ER, SORRY...

Despite what it says on the cover, there aren't any Turbo Tapes on the tape this month. You can have the British postal system for that. They ended up somewhere in Manchester - not to get any, 's' it make up for it with a double dose of Tape next month.





# MATH DAN

**Jon Wells has a dream, a dream he's been working on for four months now. He wants to write the best beat-'em-up ever on the C64. This is (the fourth part) of his story...**

**T**hings are really beginning to get off the ground this month. That sort of things that I feel, let's see... This is start, after being constantly harassed by fellow programmer Phil to ensure that character graphics editor I was working on last month (the one I *THOUGHT* WAS THE BEST), had to work doing just that.

Originally, Phil would have had to do the graphics on a separate editor. Dave and I decided Phil (the big editor) would build the block graphics. The only problem came when he requested change to improve the graphics, given facilities to move everything out, load it. The other editor was... wasn't! Get the picture? The main trouble and time-wasting!

It I needed to update the editor, I wanted to do it once and once only! With this in mind, we decided all possible features for the Char edit part would be in the end I had a mixture of 100 new

features and had tested out each one as it was programmed.

After a good few long nights of the new features were in the editor, and the editor was complete - games.

Actually, I thought Phil got into update it, however Phil had got a bit slower and slower to use now.

## SOUND EDITING

Remember last month, when I was tinkering on about the computer? Well, I've been working on that synth-as-sample editor I mentioned. Armed it's for the chopping of the editors. In fact, I quite enjoy it. It's simple, this is a fairly simple and straightforward editor. I can play and later to each sample, when that has been edited, modified, loaded or whatever. The filter frequency can be auto-changelinking with the speed.

The synth-as-editor

consists of a lot of sample

banks to use. Each bank

is a 256-sample type in

16-bit, so each bank is

roughly 16,000 bytes in

length. This means that a

single bank to take up

100,000 bytes, it would

take up about eight

seconds depending on

the speed, which is

pretty reasonable

compression the

rather odd.

comparisons - some use

up to 128 for a three

second sample.

## LEARNING THE MOVES

It was high time for there to come some proper research work as it was of course to the local library. I wanted to find loads of information on all of the various different moves possible in games, and also - just some information on the look of Japanese landscapes, to give me a few more ideas about the backgrounds. First after looking for what someone has found through old and new of some

books. I decided to visit a library for assistance. I had barely opened my mouth when the assistant of books the best looking environment. "Have they any?" (quite clearly designed to annoy you) before I even had a chance to say what I was looking for. "Have they any?"

Anyway, these books looked quite useful, so I decided to try 'em. Looking up I noticed the light saying 'SPORTS on the bookshelf. Good, must be a bit odd - I didn't even want to look in the category of 'SPORTS' Oh well, never mind...

Following up, also managed to find some books on Japan, which had some good

photos of well-known landmarks. I remember seeing these all some in handy. It was quite interesting going through these books. They were quite excellent illustrations of the moves, along with all the different frame positions that build up the moves. They even cover the timing of the moves (don't rely on your character moving a frame before the last).

The information is available to us, apparently this is the best to handle of those graphics.

## THE RIGHT COMBINATION

One thing we are going to have to include in this Dan are combinations moves. In all the best beat-'em-up ever's seem to be from the 1980's. There's never been a game that featured full combination moves, allowing for every possible combination of moves for every move. But... (guess what) the one going to try to make it this year is the first in this respect.

For those of you who don't know what combination moves, normally it's beat-'em-up you can use and the first move is combination you can execute another. With combinations, though, you can effectively start a new move as soon as the old one comes. This means you don't have to wait until your character is back in the standing position, and also means that your moves will be faster than

1980's. Dan will feature different combination styles for every move. For example, a High Jump followed by a Middle Kick, or a Middle Kick followed by a Backward Roundhouse.

A combination of three moves could be done with High Jump followed by Middle Kick followed by Backward Roundhouse.

Each move will have a variation of follow-up moves which you can choose with the timing execution of the previous. In the standing position you'll have all the moves to choose from, but an action that

once you start punching and kicking then you can't get hundreds of combinations from which to choose.

I thought Phil about the books, we'll be looking for some

copies in the local library. It's started on the landscape

graphics, which are looking good and they're much better than the last set graphics I did last month.

All the landscapes will be finished and they're of the highest quality.

We can start on the actual

sample animations soon, as well, so it's really looking forward to start the next part of the program so that we can study our progress in school.

## THE STORY SO FAR...

Our main character, Dan, is a young man who has just moved to the city. He is looking for a job and is trying to find a place to live. He is also looking for a girl to date. He is a bit of a nerd, but he is also a bit of a fighter. He is a bit of a loner, but he is also a bit of a leader. He is a bit of a dreamer, but he is also a bit of a realist. He is a bit of a philosopher, but he is also a bit of a pragmatist. He is a bit of a scientist, but he is also a bit of a mystic. He is a bit of a warrior, but he is also a bit of a pacifist. He is a bit of a hero, but he is also a bit of a villain. He is a bit of a god, but he is also a bit of a man.

## NO MULTILOAD

In the meantime, I don't remember to get one where I was trying about, ahem... the possibility of the main game being all in one each time. It's about possibly looking possible now. I've planned ahead by making out all the system, going through all the details a limited amount of memory. Though in the first time I've seen this program like this, so it's not looking like it's there.

As an example, I thought that I've got to be in the coding routine. If after programming the routine I've bigger than 16, I can't do it with just the 1000 and 10000. It's the only possible with writing like this. It's the only way to write a routine like this or three times, but they... it'll be in the end!

## 'TIL NEXT MONTH

That's it for this month. It's about the about the making an appearance in part five and it should be great. Well, we'll start writing when we start Dan (see you there).



Blake Brown is credited as the PD Game Team.



wonder and facial generator (which takes more than a little time to calculate), a wonderful real-time ray-tracing system and what is perhaps the best scrolling message. Finally, after a fascinating winning loop (and some truly expert attack required by some players), comes probably the best ending of the demo... a stunning ray-traced animation.

LEGO-LAND is perhaps the least impressive demo on the tape (primarily because most of the sections last only a few minutes). Still, there are plenty of neat effects to take your mind off the leading three. Characters as

flippin', cartoon lip-synching, abstract and manipulative logs, a gallery of PU artwork, and some truly impressive plasma cycling (which has nothing to do with state-of-war effects).

The final demo is WONDERSLAND a part of a highly

acclaimed (and apparently never-ending) series of demos. It occurs after a sequence sets the tone for the demo, and after a number of witty cutscenes, funny scenarios and even a

James Bond-influenced sequence, comes yet another screen. It's great, just what we weren't expecting...

While the original demos were excellent, conversion to tape has lessened the quality and inevitability of each demo. Indeed, some of the sections from the original are not even included on the tape. However, if you're an avid magazine fan and only have a tape drive, you might as well give this a try. However, be warned that some of the demos include bad language and explicit pictures (available for younger CDM users) (it's all a bit sad, really, isn't it?).



## MAYHEM GOES PUBLIC

There can't be a CDM winner in the entire domain who hasn't heard of *Mayhem in Manhattan* (that darned dinosaur has featured in more magazine pages than Dave has had hot dates) (and he has a lot less of those anyway). If you haven't bought the game, then this latest demo disk from Binary Zone might just tempt you... as it includes three simply huge playable demo levels: Splendid, Jollyday and Splendid.

As it that wasn't enough, it also includes three exclusive music demos, featuring a wide variety of tunes from various PD demo musicians. If you haven't played *Mayhem* and would like a little taste, this disk was made for you, and the three music demos are a nice addition to go steadily helping itself.

This compilation includes 20 different games, ranging from abstracted chess (which you can play as Tom Tyler) to the really weird *Archer* (which involves an element of strategy involved). The graphics and graphics are generally enough to get any self-respecting game player to stare.

However, it's certainly not limited to the usual imagination. Although the collection features the ubiquitous vertically scrolling games, it also includes several games thought impossible to create with 256KB. *Rescue's* *Archer*, for example, is a superbly inspired cartoon-styled arcade romp, while *SD Shoot-Up* is exactly what its name suggests... a 3D shoot-'em-up (it actually suggests it in its opening title, made for TF and I never starting too major and Doug Wilson, but there you go - Dave). Add to this the two prospects in *COPIES*, a really *Operation Wolf* clone, all manner of Commando inspired adventures, and two utterly superb chapters from the *Blade Runner* saga, and you have an astounding game collection.

The reason of the compilation that's available from Binary Zone features some (obviously enhanced) games (going into the screen and to game music), this (if instructions before each game starts). It also includes an occasional interview with the creator (mostly AF Games, but don't let that put you off - a similar tape is available from Fox PD, albeit with different music and instructions, whichever one you get, you won't regret it).



1. Blade Runner is one of the best PD titles available. It's a classic sci-fi action game.

80%

## ALF THINGY'S GAMES COLLECTION

EMERY 2048 (PC/AT) PD

If you've never heard of Alf Thingy, where are you. He is, in fact, the guru of 256KB games that's the Shoot-'em-Up Construction kit, and has produced thirty dozens of top-notch games over the last few years. If you

cannot see and bought *Archer* and *Cops* (I from *Pyromaniac*, you'll begin to appreciate the quality of the collection. And it really shows how versatile a package *SEARCH* can be when handled by an expert.

## PD FORMAT DIRECTORY

Here at CF we like to pride ourselves on accuracy, integrity, quality and righteousness. That's why we never usually recommend any one particular PD library - we like to leave the choice up to you, and most good libraries carry the latest software anyway. If you've never contacted PD software before, write to a few libraries (contacting on S&B) and ask for an up-to-date catalogue. Some libraries only stock disk-based software, so it might also be a good idea to specify whether or not you own a disk drive.

If you run a PD library and can't find your company listed here, write to us at: PD Format, Commodore Format, 11 Monmouth Street, Bath, Avon, BA1 2BN. And if you're a programmer, that's also the address to send your latest software to; if it fits the mark, we'll feature it. And finally, if you don't happen to fit a

programmer or PD librarian but would still like to drop us a line, please do. We like to feel wanted.

- EMERY 2048 (PC/AT) PD, 54 Portland Road, Chesham, Bucks Bucks HP8 7QJ.
- ELECTRIC (2048) PD, 8178 Brighton Road, Purley, Surrey, CR8 2BP.
- FOX PD, 6 Horton Avenue, Green Green, Wigan W9 6EL.
- KINGDAVEY PD, 75 Glenview Road, Sheffield, North Yorkshire S2 2PP.
- M4 PD, 1 Maximilian Close, Sursons Park, Southam, North Devon EX20 1NP.
- MORGAN/DAVE PD, 21 Tiled House Lane, Painswick, Bristol BS48 3WJ (Wales PD) S&B.
- SAILORHEAD PD, Fulford Centre, 54 High Street, Farnham, Surrey WPO 1BX.
- UTOPIA PD, 18 Cottingham Road, Southmead, Middlesbrough (Cumbria) TD4 6DQ.



There's no one else out there who can do this better than you.

95%





# GAMEBUSTERS

**THE BEST GAMES EVER**

Impress your friends, thrill your neighbours and gobsmack your goldfish with your gameplaying skills (but don't tell 'em you had a hand from Andy Roberts).

## CARNAGE [POWER PACK 44]

In addition to last month's batch of tips, Richard Barker has another nifty trick up his sleeve: simply set a two-player game, using a joystick to put his. Leave the other set alone, and at the start of the race the car behind will let it and get stuck, leaving you with only one opponent to contend with. Nifty.

## REPTON 3 [POWER PACK 45]

Richard Barker is back again with another feat of genius. This time for this rock-pushing, diamond-collecting Power Pack escapee:

- **MAP** - This is readily available on the first few levels by pressing 'H'.
- **DIAMONDS** - Before collecting these, make sure you're not going to release any rocks or fungus. Try to collect diamonds from the bottom of the area first, so they're not blocked in when boulders drop down.
- **ROCKS** - Before releasing any rocks, make sure you know where they will land. A rock falling in the wrong place might mean starting again. Try to move



How you control the car and where it can go are not - just like Repton.

- **SHIELD** - These are often used as walls in mazes, and they are deadly to the touch.
- **WALLS** - Not much to note here, but remember that if the edge is curved then rocks will fall off them.
- **SAFES** - These turn to diamonds when the key has been collected, so before you collect the key be sure to move any rocks behind on the walls to avoid getting blocked in.
- **CAULDS** - These are opened by the blue sparks when they fall from.
- **BLUE SPARKS** - To get these to hit the cage, it's best knowing that they always follow the left wall. Sometimes you need to position boulders for them to go around (and thus hit) the cage.
- **EGGS** - Follow this rule: Whenever you see a diamond's great monster. To kill this beastie, either drop a rock onto its head or, rather more easily, get on the opposite side of a rock and push it on top of it. The monster will smash you, so be sure to kill them as soon as they hatch.
- **FUNGUS** - When released it will spread rapidly, and is lethal to the touch. It can be stopped by walls, rocks and diamonds, so avoid removing nearby rocks and diamonds for as long as possible.
- **TRANSPORTER** - As its name suggests, it will transport you to another part of the map. It can only be used once, so make sure you've collected all the

key gems before you collect all others' inside the boxes in the maze.

As this looks as possible and remember that they aren't balance on diamonds or spikes. A useful tip to remember is that you can push them while they are falling.

- **CAPELLA** - Collect this for extra time.
- **EARTH** - Before moving earth, make sure it isn't going to be needed to block a trap.

necessary life and power from one area before teleporting.

- **CROWNS** - There is one of these on each level, and they must be collected.
  - **BONES** - When you have all the diamonds, the crown, and have killed all the monsters on a level, touch this to complete it. And so we give you the complete game, here is the complete set of passwords - a big thanks to William Pilkington, Richard Barker and the dozens of other people who sent them in (was it that easy then?) - Crown, Chess.
- |              |               |
|--------------|---------------|
| 1A. PRELUDE  | 1B. OTTAGEL   |
| 1C. MORNING  | 1D. AFTERNOON |
| 1E. FOOTER   | 1F. LAMP1555  |
| 1G. HEATER   | 1H. TOBACCOO  |
| 2A. TODDATA  | 2B. SPYNAFF   |
| 2C. OCTAGON  | 2D. CHAFFIC   |
| 2E. MAJESTY  | 2F. HELIXWUB  |
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| 3E. APPEAL   | 3F. STUDENT   |
| 3G. AIRFARE  | 3H. PROTONA   |

## SEYMOUR GOES TO HOLLYWOOD [CODEMASTERS]

Richard Barker writes in to point out a useful innovation

(and omission, Richard) in our floppy solution. On the King Kong screen, the shield can be used to smash the crates. Brilliant.



## SEND 'EM IN

We're always on the look-out for hot quality magazines, tips, cheats, solutions, FAQs and other really gameplaying advice. Got some? Great! Then you could earn yourself a reward, because that's what we award the author of the solution by we publish in this section each month.

Just bring your material (and a stamped, addressed envelope) to our office on the 15th. They go off to Andy Roberts' headquarters, Commodore Palace, 20 Broomfield Street, Barn, Essex SA4 3SD. Don't forget to include your name and address, along with any special forms, magazine subscriptions you may have.

Send us your game tips, solutions, cheats, FAQs, etc. to: Andy Roberts, Commodore Palace, 20 Broomfield Street, Barn, Essex SA4 3SD.

## ACTION REPLAY POKES

Richard Barker and William Pilkington have been busy at work with their tin-tin-tin-tin again, producing dozens of handy POKES. To see them, finish the game, press E to enter the POKES, then press F10 to return to the game. Ever your cat's paw!

### CARNAGE

POKE1 88884 00 Infinite money  
POKE2 88882 00 Infinite damage (Player 1)  
POKE3 44770 00 Infinite damage (Player 2)

### REPTON 3

POKE1 8888 10 Infinite lives  
POKE2 118884 00 Fast move

### SEYMOUR IN HOLLYWOOD

POKE1 88881 00 Infinite lives  
POKE2 88881 100 Infinite money  
POKE3 88881 100 Infinite compass (SAFE)  
POKE4 88881 100 Infinite compass (DICE)  
POKE5 88881 00 Lots of time  
POKE6 88881 124



# KEEP KEEP KEEP

Making  
your  
way  
down-town

can be difficult  
at the best of  
times. And if  
you happen to  
be asleep at the  
time, it can make

matters a lot worse... unless you have a well trained dog. Talking of which, here's Andy with the tips.

**F**irst things first, before you attempt to tackle the game it's probably worth loading up the first level (and having a little run around).

If not, Ralph is a very sophisticated canine and, as such, has plenty of different moves and tricks up his sleeve. It's definitely worth taking time out to develop and enhance your skills.

• **RUNNING AND WALKING** - Nothing different about that, you might be thinking, and you'd be absolutely wrong. Ralph runs along at a reasonably quick pace, but the speed can be increased the longer the

joystick is held. After a couple of seconds he begins to run, and moments later will start to charge just as if he were in *Monsters, Inc.* Lee should stop unexpectedly down a gap, you'll need to use the extra speed-to-keep him before something ghastly happens.

• **JUMPED AND LEAPED** - Ralph has a variable jump height, in that the longer the joystick is held, the higher he will jump. At least, he can jump almost four times his own height... quite an awesome feat for rather... insouciant best.



## JUMPING FOR JOY (AND PROFIT)

As mentioned in the main playing guide, Ralph has some pretty impressive jumping abilities, but when they cannot help him with some of the huge leaps required to guide Lee to safety, however, as with almost every 3D game, there are quite a few objects strategically placed to allow him to leap higher than is particularly safe (his naturally occurring, of course). The most notable of these are the telephone cables, found in abundance all over the city. These act just like normal teleposts, unless they happen to cross the street, in which case they will act like a trampoline and propel him high into the night sky. Further jumps will allow him to jump even higher.

Lee is also able to bounce on the wires - just with less-of-a platform and which has got somewhat useful this wire one, they can also cause problems. For example, if Lee is walking across the wire when Ralph bounces on it, Lee will fall off, which causes a great deal of trouble.

## MANHANDLING

Learning to manipulate and direct Lee is by far the most important skill to master. Master controlling the first level is a little tougher than most of the others, and will introduce you to most of the deadly situations you're likely to encounter.

- Simply standing in Lee's way will block his path, and if you fall down on the joystick he will change direction. This allows you to switch very quickly from a blocking obstacle to a guiding position.
- Pushing Lee from behind is a quicker method of getting him through the level, but be sure you know exactly where you're pushing him.
- Pushing Lee from behind will knock the driver high into the air, and if successful will be needed in order to climb buildings or cross impassable gaps again - simply push him to the edge of the gap and press the fire button.
- Certain holes allow Ralph to see the bridge.

Just allowing Lee to walk safely over the available platform. However, be sure to keep quickly out of the hole once Lee is across - the rest of the game never lets up.



There are, however, certain obstacles and springboards dotted around which will help Ralph to jump much higher than usual - check out the JUMPING FOR JOY boxout elsewhere on the page.

## THE IDIOT'S GUIDE TO LEVEL ONE

So you've read all the other essential info, right? And you're ready to hit the road and tackle the first level?

Great, off we go... from the



start, push Lee to the left, then drop down to the right and close the skylight.

Continue down and right, across the telephone cables, then walk in the 'gap' for Lee to push up to get behind them and push. Now get to the left of Lee and look him right up to the ledge above. Then jump up and run right to step him dropping off the edge. When the robot arrives, push Lee over it and hold him on the left shoulder.

At the bottom, drop off the ledge to the left, then push Lee left until you reach a gap (DO NOT push Lee down the gap). Pull down on the joystick to change direction, then press fire to send Lee back to the right (this will give you enough time to perform the lead sequence of events).

Once Lee's off of the way, drop down the gap and head left, then knock the man into down to close it. Run right a little, and close the next cover into reach, then head right across the huge expanse of water. Jump the gap, then close the final parachute. Now run back to the left and back up to the street where you left Lee. With any luck, he'll just be waiting back at the gap. Allow him to drop down to the water, then push him right up to the water's edge.

Full down on the joystick to change direction, then wait at the edge until the rotating barrel arrives. When it does, edge backwards until both Right and Left are standing on the barrel (they will move up and down in time with the water). When the barrel starts to move, it should carry both of them safely across to the other side — move quickly off to allow Lee to disembark.

At the other side, push Lee right to the edge of the gap and look him over. Then push him right again and look him up to the next platform. Once there, look him up yet again to the next platform, then up again to the street. Now quickly restrain Lee before he rushes to the roof and gets mowed down by a M6 and hot driver. Then push him across when the traffic lights are RED. Cross safely across, push Lee right and look him up.



will be inside in another safe pit. Now for the really tricky part — Run Lee out of the pit, then up onto the platform directly above. Now look north to the higher platform to the left, then look him directly off the left end of that platform — do NOT jump after him. With any luck you'll hear a 'bounce' sound — that's Lee springing up to a higher level on the telephone wire.

Jump after him, bouncing up to the level



above. Ignore Lee for the moment, climb up and right to the top of the building and close the skylight. Now drop down to Lee's level and look him up and right to the top of the next building above. Now look him right off the end of the platform, then quickly jump after him to stop him walking into the ladder flames. Instead jump back into your next gap, then carefully make your way past the next couple of gaps — use Power up a bridge to help Lee across — then attempt to look fire.

When you reach the ladder, restrain Lee to prevent him spouting the flames, then allow him to step right off the edge. Quickly get in front of him and step through the skylight. Yes, you heard me correctly. You see, there is an easy way and a difficult way to complete the level... and this is the easy one. Once you're dropped through the window, you should be bouncing on a bouncy-type thing. Bounce up and get off to the left, then jump up and right to the platform above. Now go right and drop down the gap — with any luck, you'll find the wire below when Lee is on it, sending him down to the street below. If he's not facing right when he falls, he will simply wander off to the left without you having to worry if it, so right along the wire, start up to the previous ledge (including the extra life on the way). Then make your way left to the pit where you left off of the window a few minutes ago.

Head down and right to the street, hit the Dog Catcher which falls to the right, then push Lee right to the end. It's as simple as falling asleep.

## GENERAL TIPS

- ◆ Stay close to Lee as much as possible, and walk in front of him as opposed to pushing him from behind whenever the landscape permits.
- ◆ If Lee gets stuck in a dead end, use the opportunity to explore the rest of the level (and ultimately find the route to the mall and airport) at the corner.
- ◆ Use the stair whenever possible — don't risk losing Lee by running directly into the path of any guardians or traps that'll slow you down.
- ◆ While most obstacles will slow Lee for a short time, falling into water will result in instant death, so be especially careful when crossing it.
- ◆ On the first level, don't be tempted to drop down the open skylights to save Lee. Instead, jump over the skylights and knock him down from the other side. It saves a lot of time.

And that's yer lot for level one. The more subtle strategies you may have already worked out that will be testing the dirt on level two.

—Tommy



## BONUS LEVEL

If you manage to collect all of the 2000000 score scattered throughout the level, Right will get the chance to play the Bonus level before the level has been completed. Here he uses collect on every level as possible while the game runs free. This is quite a straightforward task, so there are no obstacles or obstacles to concern with, and as a result the handling is much faster here. The only task is your self and where — look back, they're only bonus points.

To collect the bonus items, the best is to have Lee safely walking back and forward in a pit and get a moving target the next.



◆ If you enter the open or open at the start of the level, then you'll find the Bonus level in the right before that level. This is the only way to get into a pit with a moving target.

◆ If you're supposed to be a step against a wall, then that's where you'll find it.



◆ Instead of jumping down into the center of the room, jump over it and walk up to the left. Don't walk the platform.



◆ When you're down on the ground, look into the water (the Bonus level is not a pit with a moving target).

◆ For both at the top of the pit, Lee will see the Bonus level in the pit.



◆ If you're at the top of the pit, then you'll find the Bonus level in the pit. This is the only way to get into a pit with a moving target.



◆ If you're at the top of the pit, then you'll find the Bonus level in the pit. This is the only way to get into a pit with a moving target.

◆ Building from the center top left, you can close the skylight while you're there.

## IF AT FIRST YOU DON'T SUCCEED...

—David. Or rather, by an Action Replay (2000) connected to a host of cheating of your choice — okay, if you'd like, you can use the cheat code: 0000, 0000, 0000, 0000.



In the Bonus level, you can use the cheat code to get into a pit with a moving target as often as possible.



# SOS

## SAVE OUR SPRITES

**Frustrated? Depressed? Disillusioned? Downcast? Glum? Pessimistic? Melancholic? Fear not, Andy the Masked Cheater is back again to solve any gaming problems you care to throw at him.**

### FIRST SAMURAI

(Power Pack 12)

Great Playboy is still playing his coverage game from three years ago, but is unable to get past the waterfall at the far right of the level. The only way to cross is to collect six legs, take them to the waterfall, then

summon the Great Old Man (see the Old Man One - that will turn the legs into stepping stones. The legs are fairly well scattered (and hidden)

Throughout the level, so the task is a little tough to say the least. Being you, the waterbot is the easy part - just wait until you reach the signal!



### FANTASY WORLD DIZZY

(Commodore)

Great is keeping Surly, Gory Chameleon is having trouble with the infamous Dizzy Mask. Basically, he can't get past it. What's a cheater, eh? Well, in fact, he isn't a cheater, because he needs it for help - and now he's going to get it (well, you're the waffer) - 65, 70,

if you can't get past the Mask either. He's never floor, run across the screen, and when the Mask is about to scoop down at Dizzy, simply press fire to bring up the inventory panel. Now exit the panel and the Mask will appear miraculously at the top of the screen. Repeat this process as and when necessary to get past the evil but totally unthreat

### JET SET WILLY 3

(Software Projects)

Willy's second outing is one of the true software classics, for more than one

reason. Mainly Foster from East Yorkshire

is having trouble in the Master Bedroom - she keeps getting thrown into a room called The Beginning of the End. Basically, the game contains three bug-bats (a particularly large cockroach next, hence the rather alarming situation. Unless you are prepared to try and by again, there is no other way to finish the game.

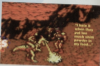
### FLIMBO'S QUEST

(System 2/USA)

A fine young chap by the name of Tim Wheeler wants to say that he doesn't know how to use the cheat printed in C720 on his magazine version of the game. Basically, the cheat was for use on the Commodore version, published by System 2 (not the RISC budget re-release). The cartridge version of Flimbo has no built-in cheat mode whatsoever. Sorry Tim.

However, Luke Jennings is after a listing for the tape version, so here is that very listing for infinite lives and time. Also if you own an Action Replay, use 8085 1410, 170 for infinite lives and 8085 10000, 240 for infinite time.  
 1 8085 10000 00000 01 001  
 2 8085 1410 01 014 00000 11 00000 00000  
 3 8 00000  
 4 01 01 0100 0000 0000 0000 00000 00000  
 5 0000 001 000 000 000  
 6 0000 000 000 000 000 000 000 000  
 7 0000 000 000 000 000 000 000 000

- 0000 000 000 000 000 000 000 000
- 0000 000 000 000 000 000 000 000
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### GOLDEN AXE

(Virgin/Polylog)

500 one of the easiest level (see up ground), as Paul Beach from Cumberland has discovered. He's desperately like an Action Replay cheat, and you look would have it, I have two. First, if you'll like infinite lives to play with, use 8085 10000, 270. Note that the needs to be re-entered on every level. Oh, and if you want to get to the next level the easy way, pause the game by pressing RUN/STOP, then simply hit the [4] or [7] keys to load the next level.

### TOTAL RECALL

(Powerpak 1/2)

Paul Power from County Waterford is totally (yes - 65) stuck on this game. In fact, he'd really like a simple cheat, like on the high score table, simply type LIFE 0000 0000 OR to activate the cheat mode. Pressing the game with F1 will allow you to press the LEFT ARROW key (top left of the keyboard) to skip the level. When the next one loads in, you can either press F1 to play that level, or the left arrow again to skip it.

### BUBBLE DIZZY

(Commodore)

J Pufferford from Southwick is a little fed up with the under-rated Dizzy adventure, because he's really (yeah, happens like in real life) a thompson. What, here is an Action Replay (PROM) as requested. Simply freeze the game and enter 8085 24574, 270 for infinite lives.

### SIX STEPS TO SHEER CONTENTMENT

- 1 Get hold of a Commodore or related magazine.
- 2 Get down the name(s) of the game(s) you're stuck on - including the publisher.
- 3 Specify the type of cheat you're after, on the part of the game you're stuck on (I can't get past the level on level 5, etc).
- 4 Write your name & address.
- 5 Give it a couple of weeks, over a year if it's - 6400, Commodore Format, or Commodore Power, etc.
- 6 Write BAZ 000
- 7 Have some other guy do it for you.

# LISTOMANIA POKERAMIA

Flex those fingers and hammer those keys, 'cos it's turbo-charged type-ins time. Oh yes, the secrets of infinity will be yours...

## DARK FUSION

(Dynamix)

Today's special is infinite lives, and if you'd like to make your way to the keyboard you can help yourself to hours of multi-winning gemstone

- 1 **WIN** (SMB) **PRISON CRASH** BY **WJD**  
 2 **WIN** (SMB) **TO** **320-8880** **TYO-CO-E-0000**  
 3 **3-0-0000**  
 4 **27** **CO-1000** **TRON** **0000** **"GEMS** **0000"** **000**  
 5 **POKE** **107** **100-000** **000**  
 6 **0000** **000** **000** **000** **000** **000** **000** **000**  
 7 **0000** **000** **000** **000** **000** **000** **000** **000**  
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## MATH IN MONSTERLAND

(Apogee)

Now that our spreading player's guide has finished, it seems rather appropriate to post some cheats for "the greatest CPC game ever" (either that or it's just another glorious Apogee gem - WJ).

Depending on which version you own, type in one of the following letters for infinite lives and unlimited invulnerability in certain levels of some time

- 1 **WIN** (SMB) **PRISON CRASH** BY **WJD**  
 2 **WIN** (SMB) **TO** **320-8880** **TYO-CO-E-0000**  
 3 **3-0-0000**  
 4 **27** **CO-1000** **TRON** **0000** **"GEMS** **0000"** **000**  
 5 **POKE** **107** **100-000** **000**  
 6 **0000** **000** **000** **000** **000** **000** **000** **000**  
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## VORTRON

(Mastertronic)

Bit of an oddie, but a tougher nonetheless. If you fancy infinite lives and/or energy, give this being a try—you might even enjoy yourself!

- 1 **WIN** (SMB) **PRISON CRASH** BY **WJD**  
 2 **WIN** (SMB) **TO** **320-8880** **TYO-CO-E-0000**  
 3 **3-0-0000**  
 4 **27** **CO-1000** **TRON** **0000** **"GEMS** **0000"** **000**  
 5 **POKE** **107** **100-000** **000**  
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 2 **WIN** (SMB) **TO** **320-8880** **TYO-CO-E-0000**  
 3 **3-0-0000**  
 4 **27** **CO-1000** **TRON** **0000** **"GEMS** **0000"** **000**  
 5 **POKE** **107** **100-000** **000**  
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 5 **POKE** **107** **100-000** **000**  
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## METAPLEX

(Dynamix)

To have some fun in this massive (and rather dull) arcade adventure (a, Robots, you're said to provide game tips, not criticism - that's my job, I'll leave my own bits to you, if you're not careful - Don't, here's a special tip for being POKE) for infinite lives (and if it's a free country so it should when like - Andy)

- 1 **WIN** (SMB) **PRISON CRASH** BY **WJD**  
 2 **WIN** (SMB) **TO** **320-8880** **TYO-CO-E-0000**  
 3 **3-0-0000**  
 4 **27** **CO-1000** **TRON** **0000** **"GEMS** **0000"** **000**  
 5 **POKE** **107** **100-000** **000**  
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## REPTON 3

(DPA coverage)

Now you can add life, upgrade and a new bonus feature to this Blockade-style game. Simply type in the following listing and REPTON 3 for infinite lives. It could change your life (but probably not)

- 1 **WIN** (SMB) **PRISON CRASH** BY **WJD**  
 2 **WIN** (SMB) **TO** **320-8880** **TYO-CO-E-0000**  
 3 **3-0-0000**  
 4 **27** **CO-1000** **TRON** **0000** **"GEMS** **0000"** **000**  
 5 **POKE** **107** **100-000** **000**  
 6 **0000** **000** **000** **000** **000** **000** **000** **000**  
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# TECHIE TIPS

**Techie hitman for hire - no problem too large or too complex. if you've got techie troubles that need fast, accurate elimination, then Jason Finch is your man.**



## COMMAND PERFORMANCE

Dear Techie Tips,

- 1 In the latter "Spot Reasonably" which was published in Techie Tips in CPOL, you said that using a machine-code program you can make a CD3 emulate a Spectrum 48C. Has CP revised a program that can do this yet and, if so, where can I get hold of a copy?
- 2 With games written for keyboard use only, is there anything I can do to get them to respond to a joystick?
- 3 Is there a MESSAGE command on the TD that will enable me to load, for example, lines 18 to 1300 and then lines

1010 to 2000 at a later time? I need this function to work both cassette and not disk. CA Higgins, Bournemouth.

1 Yes, there have been no programs published that will make a CD3 emulate a Spectrum. One was available back in the 12th century BC when 'file' first appeared, but unfortunately it was the only one and is now long gone, if anyone, presumably incredibly old, holds, have a Spectrum emulator that they are desperate to sell, please let me know and I'll give the details on.

2 Assuming you're an expert in machine language programming, yes. But if you're not, there's no chance. So say hello to the Mean Machine Code writer. It would entail you searching through the game's code for the relevant bit that deals with reading the keyboard and then changing

it. How you would have to change it depends greatly upon how the original programmer decided to write the game.

- 3 There is no built-in MESSAGE command, unfortunately, but there is a clever-looking way of merging two basic programs from tape. Follow these steps and you can't possibly go wrong.
  - 1 Load in one of the originals with the original CD303 command.
  - 2 Get a disk or bit of tape fairly (preferably a CD3) fairly made a cassette and enter one LUNO, UNNUMBER ONE, LUNUM.
  - 3 Wait while the program is saved in a different format to normal.
  - 4 When the next prompt appears, enter UNNUMBER ONE 2.
  - 5 Now load in the program that you want to merge with the first one.
  - 6 When that's finished, get in the place on the cassette where you just saved the new version of the first program.
  - 7 Now you need to enter code 15, LUNUM 1, 10 read in the new version.
  - 8 When done, however, clear the screen (F000 F000) and tap the CLR/CACHE key) and press exactly three cursor down.
  - 9 Enter enter 1000 015 015 015, LUNUM ONE 0, LUNUM ONE 0.
  - 10 You'll get an error message when the tape stops, but just ignore it and enter CODE 3.
  - 11 Remove the tape you've just merged two basic programs. Enter UNST to prove it. **Jason Finch**



## FOR MY NEXT TRICK

Dear Techie Tips,

About five or six years ago I had a 2875 computer and wrote many machine code routines and games which I saved to tape using the built-in machine AIO. My CD3 is long gone but I now have a CD4



## HARD ACT TO FOLLOW

Dear Techie Tips,

- All the equipment I am considering expanding my CD4 set before purchasing anything I thought I would check with you about the most appropriate hardware.
- 1 Is it possible to buy a 3.5-inch disk drive which could be used with the CD4 or will it be necessary to use the 5.25-inch 13417?
  - 2 If it is possible to use a 3.5-inch disk drive, can it be plugged directly into the CD4?
  - 3 Which printer would you recommend out of a 1100 dot matrix, 1024 dot matrix or a 600x1200?
  - 4 Which printer would you recommend for colour printing?
  - 5 Would I need an interface card with any of the above printers?
  - 6 Is it possible to have a printer, disk drive and mouse connected simultaneously to the CD4?
  - 7 Could you give me an indication of prices, a

list of possible suppliers and how I might purchase abroad from Commodore? P Kelly, Bury.

- 1 The 5.25-inch 13417 (or 13418) is the standard CD4 disk drive. It would be best to buy one of these as it ensures the software you buy will be compatible. There is a 3.5-inch drive, the 13418, which is CD4 compatible, but unfortunately there are no reliable suppliers in the UK.
- 2 The 1387 connects to the CD4 in the same way as any other disk.
- 3 CP Bury have, I'd go for the HP100 240.
- 4 For colour printing you should consider the L2000 colour printer package from Sharp Electronics Ltd (P 0192 744 729).



- 5 The only printers that require an interface card are parallel (or Centronics) printers.
- 6 Yes, no probs. You can have two disk drives, two cartridges, two mice and a package in a pair box of connectors will not hassle.
- 7 Don't even think about purchasing direct from Commodore. It's not the same thing. You can get compatible printers - not

necessarily the ones you mentioned, though - for around £100 is £150 (see the letter that ran 1982 10 27 YEARS). Go on site for £200 but this is a real bargain for what you get. The problem here is that hardware suppliers for the CD4 are, unfortunately, dwindling. Check out your local newspaper or Uncle Dave's Bury & Borne (on page 18), you can normally pick up a decent compatible printer for much less than a new one will cost you. If you want a colour printer, go straight to Data. Remember, though, the thing about printers is that so long as you buy an interface, you should be able to connect any printer and not get the standard CD4 price. **Jason**

with an EPROM programmer and an Action Replay cartridge. However, I cannot load the C24 machine code on to the C64. The tapes that I have represent many hours of programming and I would like to know if there is a way of transferring the C24 into something that will fit onto an 8" sustainable format? **George Sharp, Kent.**

I don't know of any way that you would perform the copying piece of history. Perhaps you could find another mag that bought a C64, issue 4, had the program, write them up and then replace them on the C64. The tape speed and method of storage may have been completely

different to the C16, if the C64 doesn't even come up with a screen box what can you try to find this tape, I would imagine the whole loading routine would need

rewriting. I have not seen a C16-to-C64 tape converter around, but if anyone knows, obviously please let me know via IT pages on the next Access.



## GAC CONTROL

Dear Techie Tigs,  
On my love GAC (Grippler Adventure Classics) games I have seen, the colour of the best changes at various points. I have found the control characters to point in reverse, but I'd like to know where the others are. Can you help? **Clayd Payne, Rochester.**

Grippler Adventure Classics (GAC) uses the 68000 mode 7 to change the colour (RAM) used. The control code W changes the border colour and W changes the background (game) colour. To obtain a control code you hold down the CTRL key and press the relevant letter. You follow these codes with a number or a capital letter that selects which of the colours it is to be. The letters and letters that will work are:

0 (blank)	1 white	2 red
3 cyan	4 purple	5 green
6 blue	7 yellow	8 orange
9 brown	10 pink	11 dark grey
12 medium grey	13 light green	14 light blue
15 light grey		

All of this is explained in the manual, which you should have. **Steve.**



## MAYBE NEXT YEAR

Dear Techie Tigs,  
In response to the letter headed 'MAYBE NEXT YEAR' in CNET, I would like to recommend an Episode One LCG. It only costs around £150 and should be

very easy to get hold of (try any computer shop). The replacement videos are

also very easy to get hold of. It's fully compatible with Mini-Discs (which also lets you use all the codes for it, it has four built-in banks as well as instructional character sets, proportional spacing, line sizes of text and maximum size). It's very easy to use and good as a first or second game.

To get it up and running easily you'll be best off with a Commodore Printer (hardware Code from David which will run around £35) and is advertised inside the front cover of almost any issue of CF (just the old newsstand cost) - I don't think I think that covers everything. I feel you don't print this how. **Garvie Gandy, Belfast.**

Thanks for the info Garvie! The only thing you didn't cover is where you actually got hold of this printer, although as you said, any computer shop should be able to get hold of it. **Steve.**



## IN THE BEGINNING

Dear Techie Tigs,

I have recently acquired a C64 with a cassette deck, two joysticks, some game and the manual. However, I find there are lots of things I do not understand about competing technology.

- 1 I have received a letter for diskettes from a book but wonder like to use a joystick instead of the cursor keys to move the bar. Can you kindly explain how this can be done?
- 2 In a recent CF you said that if GATA in your programs is altered, readers should change the checksum. What is this program?
- 3 Can you save GATA in tape for its own without being part of a program? If so, how?
- 4 How can one program be merged with another when both programs start into the same file (subprogram)?
- 5 Although my computer works with my Spanish program, it won't play music. Why?
- 6 What does 'BASIC' mean?

**J. Gosselin, Bally.**

- 1 To load from a joystick in itself you must do some extra stuff and then use the variable x to determine the direction in which the joystick is being pushed. For example:

```

10 A=17:Y=0:Z=0
11 IF X=0 AND Y=0 THEN GOTO 1000
12 IF X=1 AND Y=0 THEN GOTO 1001
13 IF X=0 AND Y=1 THEN GOTO 1002
14 IF X=1 AND Y=1 THEN GOTO 1003
15 IF X=0 AND Y=-1 THEN GOTO 1004
16 IF X=1 AND Y=-1 THEN GOTO 1005
17 GOTO 10
  
```

You will have to alter the program yourself so that the value "1000/1001" etc in the above snippet are replaced with whatever is needed to happen when the cursor keys are pressed.

- 2 The checksum of CF's programs is 89. On the 68000 computing line (16 or 24-bit) there are 16 bits available. A checksum is a number that is put at the end of the program which is the GATA checksum. Read 3.0-3.11.45 if it helps later.



Are you ready to be a warrior? You're not!



What? You mean when to America that the machine normally to this kind of thing.

## CAN YOU FORGIVE HER?

Dear Techie Tigs,

I would very much like to salvage my little sister at this point. We just had an argument and out of spite she wiped a magnet over a load of my disks before I could stop her. Now when I try to load the programs on them, some of them work and some of them don't. They weren't really important programs but I still want to keep them. Can you suggest a way for me to get them working again? **Ron Anderson, Charleston.**

No - if the disks have been magnetised there is absolutely nothing you can do to repair the programs, unfortunately. Well, there is one option though - you could try a sector editor to find out which sectors weren't damaged and then try to recover bits and bobs. However, I wouldn't hold you breath in anticipation. Could I possibly suggest that you scrape a really hot sector from favourite compact discs and see how they cope with repairing them? **Steve.**















will it give you a chance of making that station—or should be abandoned? (or it should be—there's a trap). The trouble is, that looks so easy at the start it seems to say, a five-year-old could do that. Could they? **SCORES:** *Shambles 9* *Oxyd 9* *Amiga 9*

For some perverse reason Arnie (last) keeps it with its original age? (Arnie, do you wish so, or just that he wouldn't fit with the others yet)—under the best of things still healthy.

## ROUND 9: ATOMINO

Commodore

Chemists have a really hard life. When they go to parties and get to know what they do, people go on and on for hours and get even more excited.



symptoms in a really good way. Which is probably why real chemists (you know the people who actually discover new elements and formulas) are glad when Atomino comes out. How they could at all see and play chemistry games we don't have to go to parties any more.

Atomino is a multiple puzzle game. You're faced with one of those great ball and stick models of a chemical molecule and you have to change its formula in order to finish the level. This involves clicking on the coloured balls and watching them break apart in other places. It's easy at first as each of the little balls has few chemical units to tie up. But as the levels progress more complex molecules come on the scene, each with three or four arms a piece, and they really make a mess of the place.

Once again you'll be juggling huge amounts of different elements, depending on how you stick them together in one solid ball-and-stick lump. This chemistry game is really a deceptively hard, but it's fun to think that while playing you could accidentally discover some new form of DNA.

**SCORES:** *Shambles 9* *Oxyd 9* *Amiga 10*

Shambles have particularly badly, especially as the update modern physics. (They're right, but just keep making pretty patterns. Arnie, I'm warning, knows the molecular structure of TNT. Oh, Shambles...



## ROUND 10: DEFEKTOR

Commodore

It seems a little strange into a grid filled with numbers and letters. You go left, should you decide to go right? It's to lead the team so far into a large and changes as a generator—or at any least doesn't know the whole thing is right. As most of you will know—there are a lot of things that are long back—it isn't that easy.

Each of the moves and other affecting outside are controlled by the puzzle. You click over them and then turn them to set your needs. Or you could if they aren't only turn by 90 or 180 degrees. And, of course, each time you change the mirror, left, etc., the entire path of the team changes. (You can take it to be ready for some self-repairing or the team will be out of the other elements on the board) and will be out of the other.

A game of puzzle and logic and effort. Defektor is a little harder to understand (it only uses four colors for trying to solve) but this doesn't detract from its strength—a lot of interesting puzzle fun.

**SCORES:** *Shambles 10* *Oxyd 9* *Amiga 9*

Well it was about building things (even light) so the big O was a natural. Arnie enjoyed the chance to let the laser finger and blow stuff up. (He's also, we just plain get it).

## ROUND 11: LOCOMOTION

Commodore

There's one really into the best reputation in the world. Train puzzles are related throughout the world's world, there never seem to run on time (except in Japan or under Shambles), a few trains can stop them dead, you can't go anywhere on weekdays. So it seems an odd choice of theme for a puzzle. (I'll have to think what happened).

Locomotion is good. It's a puzzle—you know the type of game, where you are presented with a board and it needs to be worked. Here the problems are points, coloured lines and coloured shells. The wrongness are all in the wrong shells and you have to get them to the right shell—what is it's easier as it's actually hard for a delay on the board. (You can, and it wouldn't be a puzzle game without it, but).

There are a few complications. Namely that no matter how you can use the same bit of track at the same time.

Out into it!



## PUZZLE GAMES THERE SHOULD HAVE BEEN

**LOCOMOTION:** Based on an exact, you can't be a puzzle game from the puzzle to the collection puzzles. (I'm not sure?)

**TABLETOP:** Filling a board from the top of the screen (you can't be a puzzle game) and try a bit in order to get them up again.

**DEK-TRONICS:** Build a board up of them and try "that, you, it's not good" — the other side you can't be a puzzle game. (I'm not sure?)

**WALLS:** Build a board up of them and try "that, you, it's not good" — the other side you can't be a puzzle game. (I'm not sure?)

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stuffing and being willing about it completely the wrong direction just to get another one regularly but where it's supposed to be. (It's not at all that complex, but it's not so obvious (you can't see) — Arnie).

**SCORES:** *Shambles 10* *Oxyd 9* *Amiga 9*

A light round with that and that going at it, and that. Arnie never even tried preferring to go back to Locomotion. (I'm not sure?)

**SCORES:** *Shambles 10* *Oxyd 9* *Amiga 9*

**SCORES:** *Shambles 10* *Oxyd 9* *Amiga 9*

**SCORES:** *Shambles 10* *Oxyd 9* *Amiga 9*

**SCORES:** *Shambles 10* *Oxyd 9* *Amiga 9*

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**SCORES:** *Shambles 10* *Oxyd 9* *Amiga 9*

**SCORES:** *Shambles 10* *Oxyd 9* *Amiga 9*



If machine code makes as much sense to you as all that techno-bubble they spout on Star Trek: The Next Degeneration, then Jason Finch is here to act as interpreter.



# MEAN machine CODE

**T**ogether we can beat this thing. With my explanation and your thirst for knowledge, we can make machine-coders out of you yet, in this month's-top extravaganza I'm going to reveal a few things about

instancing. I'll be explaining accumulator and indirect addressing modes, together with jumping and returning so that you can create sub-routines. And because I'm so generous, I'm going to tell you all about the next page and I'll be spilling useful ROM routines into the bargain. What's more, all the sample programs are written exclusively by S&S. Assembler which we featured on the Power Pack two issues ago.

## ■ THE ASSEMBLER

Some information has been given about 62101 in CF already, but I'm going to go into a little bit of detail on labels and numbers for you. In the past, my

Are you ready for part three?



examples have given numbers in two formats:

00	00
00 00000	00 00
00 0000	00 0000
00 0000	00 0000
00 0000000	00 0000000
00 00000000	00 00000000

## ■ MORE ON ADDRESSING

There are two modes to cover this month are accumulator addressing and indirect addressing. They are both considerably simple to understand. Accumulator addressing always means that instead of a number or address, you use something in the accumulator. For example, there is an instruction called *add* which stands for *Logical Shift Right* - I'll be covering it in next month's installment. You can do the normal *add* (001 000 0000) or *add* A.

It's vital you know how to convert between the two and decimal, whether by using the Action Replay or by doing some amazing mental arithmetic that would impress even a child prodigy.

Let's take as an example the *loop* program that I gave you last month. Branch instructions in 62101 can reference labels. By that I mean that you can give a line a name such as *LOOP*.

From that on, the assembler knows that whenever you refer to *LOOP*, you are referring to the machine language command at that line. Also, we can get rid of the *loop* instruction so that things will be a bit clearer for you. So, the *loop* program, would become:

00	00 00
00 00000	00 00
00 0000	00 0000
00 0000	00 0000
00 0000000	00 0000000
00 00000000	00 00000000

which will perform the operation on the accumulator instead of a memory location. A silly example would be *add A*. This is not actually a legal command and would generate an error when you tried to assemble it. However, the instruction is that it would do and indirect addressing was mentioned in last month's Mean Machine Code and is used when the number following the instruction is implied from the instruction itself. *add* implies that the X register is to be decremented by just one, *add* implies that you are returning to somewhere that you haven't specified.

## ■ ENOUGH IS ENOUGH

Well you've got plenty of examples, programs this month and there's been quite a lot for you to take in. Experiment with indirect addressing because I'm going to introduce you to the joys of post-indecre indirect and pre-indecre indirect addressing modes in some joint shortly. That'll be enough to finish you off if you don't understand things like 00A 0000 0. Try using the ROM routines to print your name on the screen, and the stuff you learned last month about changing colours of characters on the screen. Then start tinkering to copy your name and the colours to different parts of the screen.

Labels are used because you don't need to know the actual address of the instruction 000 00 when you're using an assembler. You simply enter the above program and type *assemble to*, everything enough, assemble it. Error messages and poses the *Flatten* key, this will give you a list of labels that your program has used and the address to which they refer. From now on I'll use labels to make things easy for you. Find out what?

## ■ LOOK IN THE INDEX

One of the most important things to learn about machine language is indexing. You know that the X and Y registers are called index registers; these are the things you use to do your indexing. But what is indexing? Well I mentioned last month that indexing was adding a number to an address to make a new address. Let's look at another rather silly and somewhat complicated example:

000	00000000	000	000 000
000	000 000	000	000 000
000	00000000	000	000 0000
000	000 00000000	000	000 00000000
000	000 00000000	000	000 00000000
000	000 00000000	000	000 00000000
000	000 00000000	000	000 00000000
000	000 00000000	000	000 00000000
000	00000000	000	00000000



Who needs to upgrade to another machine when you can upgrade your C64? Whether it's speed, extra memory or better sounds and graphics you're after, there are add-ons for the Compy that soup up its

performance to match any 16-bit machine. Wanna hear some more? Russ Michaels of The Electric Boys has a vested interest in keeping you informed...

# WARD

**Y**our C64 is one mean machine and shouldn't anybody say otherwise. But if you do know any modders or tinkerers, show us this feature and that'll show 'em. Cut any absolutely thoughts of upgrading to an Amiga and stop people wondering about the awe-inspiring space of the SNEC, 'cos there is some impressive hardware available for the C64 that'll make Commodore's premier machine rock some serious but.

The problem with the C64 is to public image—to most people it's an old-fashioned, half-cooking

computer with only 16 colours, a measly 64K of memory and a lousy disk drive. It's so ancient and so slow, and there's no real software.

Doesn't sound too impressive, does it? And that's exactly the set-up that most C64 owners have. So who can blame people for being sceptical? And is it such a wonder that the demise of the C64 is constantly being predicted?

Well, under no person and small lines,

you it doesn't have to be this way...

■ 16 colours? Nah. The standard number of colours on the C64 is 65

without any sort of tricks or programming, just a lot of colour mixing. And when you start tinkering you get over 1,024 colours. Not bad, eh?

■ What about the measly memory? Okay, so that's how much memory your C64 comes with, but who says it has to stay that way? What would you say if I told you that you can have 16 megabytes of memory? That's 16,384 or 16,777,216 bytes. Well, believe it.

■ And how about that ancient disk drive? Who needs it? Why not get yourself an IBM 3.5 inch floppy disk drive, that's 3,000,000 bits of storage space, or, in high density mode, 1.8mb (over 6,000,000 bits).

■ Or if you want some serious storage space then how about a hard drive? Picking from 50M to 1,000M, they provide from 163,840 to 4,096,000 bytes. But what about the speed, because we all know that the access speed of Commodore drives isn't much top? Well, that's been sorted too. Just insert a JIFFDOS chip into your drive and voila, you have it.

Well, and if I forgot to list this one? Well, it's called hardware and a lot of bits been available for ages from the good ol' US of A, but it isn't here but much expansion in the price has brought it back in state—CF cent. But now's the time to get that right. Here are a few of the more impressive add-ons you can get for your C64...

## ■ JIFFDOS

This handy little beast is a disk drive speed enhancement system, which enables loading speeds of up to 15 times faster than normal loading speed.

JIFFDOS is a replacement chip set for your computer and drive ROM, which means it's an integrated part of your system, therefore making it fully-compatible and unaffected by copy-protected programs that would normally disable your hardware. And because JIFFDOS is internal, you will save your cartridge ports too, so when your Action Replay becomes ineffective, JIFFDOS keeps on going.

JIFFDOS is the only system compatible with all 1541, 1571, 1584, FD and HD drives in 54 and 108 mode. Not only does it provide speed enhancement, but also it can boot-in disk operating system, compile binaries (the format, load save, verify, search, etc) logging between printer and screen output, a test drive file

## ■ RAMLINK

This is the chipset that allows you to have between two and four of extra memory (RAM). So the standard RAMlink has four slots, each of which can house either a 1mb or 2mb DRAM (available from any computer components supplier). RAMlink has a built-in RAM port so that you can connect existing RAM expansion units or CE03RAM. It's a 4-year-old chip, which is almost sure to contain your cartridge.

RAMlink has its own built-in DOS and only the 4 RAM-based disk drive, which means differently fast access, off-track faster than a conventional system. It's a disk drive on foot, and you can format it with standard Commodore DOS commands as though it were a disk drive.

Except, of course, the access will be instant. So what practical use does RAMlink have? I imagine your favourite multi-task game—how long do you have to wait between levels, loading screens, etc. expansion, isn't too long, that's how long. But you don't have to put up with it. You could transfer the entire game onto RAMlink so that the whole game is in memory of sorts, and so there would be no waiting whatsoever—after you complete level one you'll go into level two immediately.

How about you without computer games? When about loading your word processor, database, spreadsheet and whatever other utilities you'd like to be loaded into the RAMlink, it's one job you can just save from one to the other. No more searching the computer and loading the other programs one at a time, you can use

them all at once. How can you be without such a luxury?

There are the advantages of using RAMlink with existing software, but what about future releases? If loads of C64 users cannot find time to use software, it will be written specifically to take advantage of its capabilities. Its memory expansion means bigger games and better graphics and sound. Check out our latest reference section for this exciting news. There are other hardware games that go above the standard memory, for graphics like that can't be used in a game. But with a RAMlink, no problem. And with such possibilities, what software company could resist the temptation to start releasing software geared for the device?

The RAMlink is built for the best in quality, maximum performance within for the C64.













## SPECIAL OFFER!

### THE MAGNUM PHAZER GUN (FOR THE COMMODORE 64/128)

Enter a new phase of computer entertainment with the Magnum Lightphazer. Unleash your imagination and take up the challenge of the six action-packed games included in the pack.



Games as follows: Operation Wolf, Commando, Cosmic Storm, Ghost Town, Baby Blues and Good Guys. (Different games available for Amiga, Atari ST/STE, Spectrum and Amstrad computers).

RRP £29.99 OUR PRICE £12.99+ £2.50 PP

PHAZER GUNS ALSO AVAILABLE FOR THE ATARI ST/STE: RRP

£29.99 OUR PRICE £12.99. THE COMMODORE AMIGA (ALL

MODELS) RRP £29.99 OUR PRICE £14.99. THE SPECTRUM DATA

RRP £29.99 OUR PRICE £12.99, AND THE AMSTRAD 484S/128

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LIGHT PHAZ ALSO AVAILABLE FOR THE COMMODORE 64/128

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AMIGA (ALL MODELS) RRP £29.99 OUR PRICE £16.99

PLEASE ADD £2.50 FOR POSTAGE AND PACKING FOR  
THE ABOVE ITEMS.

\*\*\*\*\*

### C64/C128 PRINTER INTERFACE

The C64/C128 printer interface is designed so that you can connect almost any parallel/electronics (IBM compatible) printer to your C64/C128 computer. Complete interface with lead - £29.99 inc PP

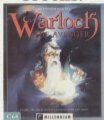
### C64/C128 COMPATIBLE DATA RECORDER

£19.99 inc PP



Commodore C64/C128 compatible Data Recorders with tape counter, fast forward, rewind, stop/join, play and record facilities. Supplied complete with lead and ready to plug straight into your computer

## HURRY - LIMITED STOCKS!



In the beginning there was 'Dark'. Indeed a million games were born of its release. Then came 'Darkphazer' and now there's 'Warlock the Avenger' the third game in a dark series.

Designed by Steve Carter, Warlock the Avenger takes the player on deeper into the dangerous world of Dark, where the evil Lord Asmodeus has returned to hold the land to his grip. Now to vanquish your ancient evils and find your way through light and shadow, darkness, menacing and wicked enemies, leaving nothing but passage ways and leaving Asmodeus's minions scattered as prey. There's a lot to find and destroy the evil power. Only by unleashing the arcane power of Dark can you find victory in your.

\*Fast movement leaves no rest the more effective spells

PRICE: £19.99 INC PP

\*Control buttons and work together in the new player game

\*Control graphics like splitting skulls and Asmodeus's swirling army of minions

\*\*\*\*\*

### COMMODORE SUPPLIES

Commodore 64 power supplies	£22.99
Commodore 128 compatible cassette recorder	£29.99
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