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COMMODORE

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ISSUE 53 • £3.95 • FEBRUARY 1993

Geopaint
and
JiffyDOS
revealed!

Three
pages of
top game
TIPS!

SSHH! LISTEN

Discover how to create explosive
sound effects, adapt samples and more
with our guide to the art of noise!

Top Ten PD Demos!

Seven of the special
effects and ingenuity of
these excellent demos!



Blitz 2000 reviewed!

The classic shooter has been
dusted down and revamped -
but can it still cut it?



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03

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contents of your mailbox is for sale. It could also
be your own. When someone's looking for something
do your advertising for a reasonable price!

Tape
to disk
SMART!
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After last month's introduction to GPOW, we look at the art module of the integrated system...



5 ON THE POWERPACK...

Mind Maze

This is a puzzle to make your gray matter, your brain explode and your shikiri-wrapped TV screen spontaneously combust! With 37 levels of frantic action, this one'll keep you going for months.

Darkest Road

The first year of this two-part text adventure sees you stumbling through marches.

wiggling your toes in magic shoes and smugging a mermaid.

You also have to save the land from the evil ravages of the Black Wanderer with the magical power of the Black Ring...

Bee 52 demo

As the name suggests, this is a rather bizarre shoot-'em-up. You play a bundle bee who's trying to collect enough pollen to fill his honey pot while avoiding a variety of hostile insect life.

Artris demo

Ray helps to Poland's answer to Yaris. Artris is fast, smooth and has the added bonus of rewarding your successes with a pizza.



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Discover the secret of sound on your C64 with our guide to everything from sampling to S&S.

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A bring-and-buy sale full of like-minded souls.



THE MIGHTY BRAIN

After retrieving *The Mighty Brain* from the bottom of an algae-encrusted fish tank (he works part-time as an aquarium hygienist), we sent him to work through this month's post.

Biology lessons?

Dear TMB,
Why don't you put some educational stuff on the PowerPack? It would make a change from the comic games, and instead of taking cash I'd be able to money train.
Mike Perry, Westwood, Ohio

Interesting idea, but how many do you make brain-rot? Well, educational software is certainly worth thinking about. Oh, and by the way - is that name of yours a pseudonym or what? TMB

CF magazine?

Dear TMB,
Seeing as you seem to be in the process of moving Commodore and Turbo Tips on to the PowerPack, why don't you convert the whole magazine to tape or disk (like the old CF magazine used to do)?
Jim Bray, Bristol

While it's doubtful that the whole magazine will become a disk or tape drive, there's been talking I'd expect of getting more "editorial" pages on to the



Westwood head at the Commodore Annual office, I mean. It's worth remembering exactly what a brain-rot is. Thinking is, like, hard? I had more experience in the old brain-rot department yet!

PowerPack, indeed. Your letter used to run a feature on its coverage - we could possibly do the same sort of thing, but don't expect any changes for a few months yet.

Is there no end to human ingenuity? Well, yes, there is actually, but seeing as I'm in a good mood I'd pretend to be impressed. TMB

BITS 'N' PIECES

Dear TMB,
If you've reviewed magazines, how much do I get, I see Commodore reviews floppy magazines for the BEBES and gave a 54% L. Come blood, brother!

Magazines was intended way before Commodore Format was founded, so we have never officially reviewed it. However, if we had, I would have got about 50%. TMB

Dear TMB,
Put a free gift on the cover sometimes. Something like a CD-ROM.
David Connolly, Woodstock
PS Bring the dog to work!

No, TMB

Dear TMB,
Stop the dog was great. Neil Grayson, Scarborough

Different stripes for different folks, eh? TMB

Dear TMB,
Do you ever make up the letters? David Baker, Westwood-on-Wharfe

Never. But I have been known to make up the occasional answer. TMB

Always post the bulky letter graphics with any enclosed disks game, mail work fine.

THE 64 SOAPBOX MAKE YOURSELF HEARD

If you've got something to say, then TMB + your page is the place to get your opinions heard. Write to: *The Mighty Brain*, Commodore Format, Future Publishing, 10 Commodore Street, Bath, Avon BA1 1RN. All letters sent to Commodore Format will also be assumed to be for publishing. We also are prepared to edit your letters for reasons of length, grammar and punctuation.

Parallel lines

Dear TMB,
First of all thanks for covering the opening of my new PC library. Parallel/ops is issue 30 of Commodore Format. The PC/CD info article that was sent to you (under the name of SAZ) was not intended by me, because I have now decided to create the catalogue of this month's CD, as of January, you may receive a free copy of the catalogue by sending a blank disk and a disk worth \$10 to us here at PC/CD.

Anyone who wishes the micro-entry level also should receive a free copy of the CD Catalogue. Finally, I've also decided to continue sending my reports to inform you of the library will around Britain. Please send me your information or to your readers? Philip Payne, Phoenix Logic PC, 40 Windsor Ave, 60 Ardara, Ireland BT20 8AL.

Certainly. After all, these misunderstandings are only to be expected among humans. TMB

Simply the best!

Dear TMB,
In CF46, you printed the feature "How to Build Your Own CD-ROM" that you were given. I have about 100 CD-ROMs on tapes and disks under Action Replay. So when I receive my PC computer I spent over £100 and have more on the way. So I was excited with the CD that you give. It's the best!
Mr M Wood, Scarborough, North

I couldn't agree more. Well, I could, but that would take too much mental energy. TMB

Ad it up!

Dear Commodore, I may be dead, but I can help - and, by your definition of gender, anyway - TMB. The back cover of CF should be reserved for PowerPack only (see CF46) and not wasted with adverts for comic magazines. It's only a editorial way of saying, "Why stop the old and let a couple of more positive approaches would be to consider the people who are now supporting the CF scene in the UK and consider them in advertising in CF regularly. These include Phoenix, Apex, Playtron, MSF and



the *Electric Blue*. The future of the 80 bit is in their hands, and it's these people that the 80 owners want to read about.

Art Hester, Manchester

As the tip of the cone gets prepared to pay more for their use, *Waters* quite happily to give IBM-related resources free coverage, which also means they can concentrate their resources on their software rather than advertising. **TMB**

Tip of the iceberg

Dear **TMB**,

It's seems to have got the complete map and pricing guides in Commodore's 7 found there more useful than just tips.

Mark Hammond, Dartmouth

Of course you found them more useful than 'just tips'. A complete solution is, by its very nature, found to be more useful than a couple of tips. But fear not, Andy Hester will get to supplying the full complete solution or two. **TMB**

Dumb!

Dear **TMB**,

It seems it's a bit of a pity if people's e-mails read: "Has Commodore been sold? Have alphabets got wings?"

Theoretically, it is possible

Dear **TMB**,

We all know how fast the C64 is, but did you know that in the 25th Century, long after the death of Beige, Nintendo and even the mighty IBM, the 80 technology is still at work? In 2000, the technology of the Commodore's limited capabilities to create the virtual known as *Ultimate Commodore Data*.

Unfortunately, it seems highly susceptible to alien forces and computer viruses. We're wondering whether this is a fault with the hardware, or whether the software hasn't bugged. Can you help?
Lee Barber, 24th Century Sea Paradise

Have you checked the manual transmitter for the posts on the rear panel pattern may be out of alignment. **TMB**

And here is the rather handsome *Ultimate Commodore Data*, Miss. See also the C64 computer shops.

My dictionary gave me the definition of wings as: "the organs of flight of insects or some animals."

As far as I'm concerned, an eagle and an owl are wings of flight and that means alphabets do have wings. **TMB**

Wow, Dumb! Not with my eyes. Reading the name and organs of flight and that means alphabets do have wings. **TMB**

has been sold?



Ariel Mabey, Bridgend

Quid? Qu? Nigel, never get a job as a printer's designer. But hey, this is the real world and Quid? is just one of those cute little silly names. **TMB**

WIZARD GAMES

* C. 64 CASSETTES *

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POWER PACK

Karen Level guides you through the packed byways of covertape levelness to a land of gameplaying joy...

Mind Maze

Written in 1983, Mind Maze is one of those puzzle games that looks obviously easy but manages to confound you later on than you think! It's that level. To start off, stick your joystick in either port one or two, load the game, then get ready to hit the fire button.

The idea of Mind Maze is to solve all the blocks from the screen within a pre-determined, and very short, time scale. To reach your objective, you need to move the floating cursor over the block you want to remove and press fire. Now, this will make the chosen block and those immediately left, right, above and below it disappear.

Unfortunately, if the block you choose has an empty space next to it, pressing the fire will make a new block appear in that space. But it's a case planning ahead, which isn't easy when you're up against the clock. Then, just as you're getting into the swing of things, the controls change so that either the top or bottom or spaces immediately adjacent to your chosen block changing, the steps to the top left, top right, bottom left and bottom right are affected.



Good one, this one's as easy as it looks - the finished 204 in the corner is evidence of that!

Darkest Road (Part 1)

The Darkest Road, which originally started to surf on the old Spectrum, is a huge test adventure in which you must defeat the evil Black Wanderer with the magic of the Silver Song. But, before you can do that, you must travel through levels but not too long a moment and generally avoid any of the unpleasant traps that await you.

The game is well presented and follows all the usual adventure rules. There are four different fonts to choose from, and you can select these using the F1 button. There are several different tones, which you can toggle between with F3 and F5, and if you're playing in the dead of night, you can turn the music off with F7.

The game is in two parts, and we'll be pulling the first part of this book late in CDROM Power Pack.



The first part of The Darkest Road offers you plenty of puzzles and mismanagement.

NO LOAD ZONE

If you're having trouble loading this month's Power Pack then please call our helpline in a jiffy and help us to help you! Call, and it up and ready to go! 4750 Tape Requirements made by 4750 Tape Requirements Inc. USA Audio Video Ltd.



Bee 52

In five minutes 52 years old in that state it is to collect as much pollen from the flowers as possible and then return to your hive without bumping into any of the insects or creatures that are out to make your life as difficult as is conceivably possible.

The idea here is to collect enough pollen to fill your honey pot, but be careful, you can only carry three flowers' worth of pollen at a time, and if you get hit, you lose the lot!

Directions Arrow (good fire)
Fire pollen pot Fire button
Sleep Space bar
Bee B
Flyover F1/F2/F3
Quit (when passed) Q



You don't have to be a genius to guess where the pollen is.



TAPE TO DISK

This month's Power Pack is also available on disk. To get the disk version simply cut out the label on the right, insert it into your name and full address on a separate sheet of paper, slip the label in an envelope, affix a stamp in your order, made out to Atlas Audio Video Ltd, PO Box 40, Colchester, Essex, CO1 1JL, UK. Only Tape To Disk, Atlas Audio Video Ltd, Harlow, Essex, Essex, UK. Tel: 0206 311400.

Artris demo

This Tape demo leads from the early provinces of Palatral. In one, the idea is to write and fit the falling blocks together to form complete lines at the base of the pit, unlike the traditional game, however, Artris offers you an incentive in the form of a picture. As every time you complete the task, just whether you have to complete a single line or a complete designated number, you receive a line of the picture.

The game is controlled with a joystick in port

two. Press fire on the title screen to start the game. Once the game is a full size or respond to the command to be performed. Following the disk left and right moves the block accordingly, holding down screen uses the falling block, while fire crosses the block.





STEP THE SLUG

(Power pack 11)

Thanks to Warren Pilkington, you now have all of the passwords for this entertaining little-foot-wrangler.

Alternatively, enter

POSH MOTOR as a password to activate the cheat mode. Near TV can be

used to skip levels.

LEVEL 2 - WINDMILLBOY
LEVEL 3 - BOOGLINGBOOGL
LEVEL 4 - HAPPYFLYDUM
LEVEL 5 - GORGONSLUG
LEVEL 6 - MURDER PRINCE
LEVEL 7 - LEMONCORNERS
LEVEL 8 - NEONER LIONS
LEVEL 9 - ZEPHYRUS V
LEVEL 10 - NIGHTHOLE

And just in case you don't know where the secret houses levels are, Richard Barker is on hand to reveal their locations...



Now you can cheat your way through this, the biggest slug wrap-up of all time!

Stepping the slugs behind these ponds will show you slugs, but it won't step 'em!

proceeding. Surprisingly, the honey isn't that difficult to collect - unless you get chased by a slug. That is, if you don't have any honey handy, you'll inevitably keep a cool head to survive.

Stage 7

Another new bug appears here, namely, the dragonfly. It passes or flutters whatsoever, unless it gets hit by a stray bullet, whereas it will give chase (on most the same way as the wasps). If you're unlucky enough to hit a dragonfly or get chased by a wasp, you can say goodbye to both Bumble Bees. The bumble bee is the biggest problem, and it's just to avoid rather than run through the level.

Stage 8

You won't be surprised to learn that feet-overting gets in your way. The dragonflies are more aggressive than before, they move much faster, and they now fly faster too. Collecting the honey isn't too difficult, but it does take a long time as the flowers are a bit misaligned. Watch out for the swarms of bees in those ever-to-appear ponds.

886 • DROP NEEDLE

Meeting the guardian

SO SOUTH • WEST • SOUTH • WEST •

SOUTH (the Guardian won't let you in

unless you've killed the monster) • GET

BLADE • BEAMING BLADE • HOLD BLADE •

NORTH • EAST (if you've killed the Mermaid

the Guardian gets you, and if you've tried to

fight or hit anyone else, you won't be

allowed into his cave) • SOUTH • EAST

• SOUTH • SOUTH • SOUTH • EAST

• EAST • EAST (make sure you've got the

map and have read it) • WEAR MASK •

SOUTH (you still do it if you've got wearing

the mask) • NORTH • NORTH • MOVE

ROCK • GET WEST (if you got north how here

you will die of sadness) • SOUTH • EAST •

SOUTH • SOUTH • WEST • BEAMING MASK •

DROP MASK • DROP MASK • DROP MASK (you

need two maps, remember?)

Window on the world

SO WEST • WEST • NORTH • NORTH •

NORTH • NORTH • GET GUN • GET NEEDLE •

Captain Fizz

(Physique)

This is a nice old, boring, repetitive, monotonous, sluggish, tedious and downright enjoyable Gauntlet clone (Glenn don't mind your words, Andy, let us know what you really think - Karen! lol). If you really want to see the statue-and-sequel, by the way, to find the infinite energy if you dare. Action/Action games can use POSE 8888, ITS and POKE 4004, ITB for the same effect.

0 FROM CAPTAIN FIZZ CHEAT BY WAZ

1 FOR KUSTO TO CHEAT READ YICUZY POKE

3,7,9,8,0,1

2 IF CUSTO'S TROOP PRINT "DATA ERROR" END

3 POKE 157,158,159,160

10 CMT# 000,000,000,000,000,000,000,000,000,000,000
11 CMT# 000,000,000,000,000,000,000,000,000,000,000
12 CMT# 000,000,000,000,000,000,000,000,000,000,000
13 CMT# 000,000,000,000,000,000,000,000,000,000,000
14 CMT# 000,000,000,000,000,000,000,000,000,000,000
15 CMT# 000,000,000,000,000,000,000,000,000,000,000
16 CMT# 000,000,000,000,000,000,000,000,000,000,000
17 CMT# 000,000,000,000,000,000,000,000,000,000,000
18 CMT# 000,000,000,000,000,000,000,000,000,000,000
19 CMT# 000,000,000,000,000,000,000,000,000,000,000
20 CMT# 000,000,000,000,000,000,000,000,000,000,000

Rampart

(Guns)

Rampart is a rather playable conversion of the extremely playable arcade machine (which has consumed quite a bit of my money during frequent trips to Southend seafront). You're in the lobby and PLUG it, you can then press RUN/STOP followed by FIRE during the 'start' and 'end' sections for extra time as and when required.

0 FROM RAMPART CHEAT BY WAZ

1 FOR KUSTO TO CHEAT READ YICUZY POKE

3,7,9,8,0,1

2 IF CUSTO'S TROOP PRINT "DATA ERROR" END

3 POKE 157,158,159,160

10 CMT# 000,000,000,000,000,000,000,000,000,000,000

11 CMT# 000,000,000,000,000,000,000,000,000,000,000

12 CMT# 000,000,000,000,000,000,000,000,000,000,000

13 CMT# 000,000,000,000,000,000,000,000,000,000,000

14 CMT# 000,000,000,000,000,000,000,000,000,000,000

15 CMT# 000,000,000,000,000,000,000,000,000,000,000

16 CMT# 000,000,000,000,000,000,000,000,000,000,000

17 CMT# 000,000,000,000,000,000,000,000,000,000,000

18 CMT# 000,000,000,000,000,000,000,000,000,000,000

19 CMT# 000,000,000,000,000,000,000,000,000,000,000

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22 CMT# 000,000,000,000,000,000,000,000,000,000,000

23 CMT# 000,000,000,000,000,000,000,000,000,000,000

24 CMT# 000,000,000,000,000,000,000,000,000,000,000

25 CMT# 000,000,000,000,000,000,000,000,000,000,000

26 CMT# 000,000,000,000,000,000,000,000,000,000,000

27 CMT# 000,000,000,000,000,000,000,000,000,000,000

28 CMT# 000,000,000,000,000,000,000,000,000,000,000

29 CMT# 000,000,000,000,000,000,000,000,000,000,000

30 CMT# 000,000,000,000,000,000,000,000,000,000,000

31 CMT# 000,000,000,000,000,000,000,000,000,000,000

32 CMT# 000,000,000,000,000,000,000,000,000,000,000

33 CMT# 000,000,000,000,000,000,000,000,000,000,000

34 CMT# 000,000,000,000,000,000,000,000,000,000,000



1 FOR 5-028 TO 5-READ 1 0 0 0 0 0 0
 2 V A N E T
 3 IF C=0280 THEN PRINT "DATA 1 (0280) END"
 4 DATA 101, 108, 015, 000
 5 DATA 000, 000, 000, 100, 000, 141, 040, 000
 6 DATA 100, 001, 141, 000, 000, 010, 114, 000
 7 DATA 000, 000, 000, 000, 000, 000, 000, 000
 8 DATA 000, 000, 000, 141, 140, 100, 000, 010
 9 DATA 141, 000, 000, 100, 010, 141, 004, 000
 0 DATA 100, 000, 141, 000, 000, 000

DEADLINE

(Players: 1-4)

This latest game from Deadline may have a slightly familiar concept (compared to, say, *Dropzone*), but it demands more than a bit of simple thinking. Here are a few tips if you're stuck on the demo level.

- Your craft will automatically dip to the bottom of the screen if left unattended, so keep adjusting the joystick upwards to stay in the same spot.
- Unless the world is destroyed or a nuclear holocaust or you have to go downtown for tea, keep your finger firmly on the fire button at all times.
- As soon as you've collected a scientist, move



— or, make it that on it itself, a grey sphere, a blue globe, a green diamond and some Out-of-Phase wire twiddled.



When all else fails, get your feet in the floor and hit fire! It's out of there. What else, you say?

The most likely culprit in the current scenario has to be... well... *Deadline*. You should just thinking about it!

quickly (along the top of the screen) to the telephone — it's green with a large arrow on the side.

- The level map wraps around, so it doesn't matter which direction you fly in. Sooner or later you'll reach the right point.
- Having said that, I should point out that there are several aliens moving in the same direction, you should beware them. Why? Basically, you'll shoot at the same speed as them and thus collect the amount of new aliens that can fly on to the screen (and pass it on) to you this.

Make a friend (not to help you out — you can keep an eye on the alien while he/she looks out for the scientist; it's virtually impossible doing it by yourself — over).

Caution, the camera are picking up a big black shadow off the port scanner...

SHARK

(Players: 1-8)

And no, before you start to make star-circles about sharks (that play the role), this particular game is a Cybernetic squid shoot-'em-up. It's also a might tricky, so this listing for infinite lives, money, bonuses, bonuses, bonuses, and credits should come in pretty useful.

ORIGIN: SHARK: CHEAT BY WAZ
 1 FOR 5-028 TO 5-77-READ 1 0 0 0 0 0 0
 2 V A N E T
 3 IF C=0280 THEN PRINT "DATA
 SUPPORT END"
 4 FOR 5-0 TO 5-READ 00 PRINT "000000"
 5 000000 000
 6 IF 000000 THEN FOR 5-004+070 TO
 000+070 PRINT 0 0 0 0 0 0 0 0
 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 8 DATA 100, 000, 000, 000, 000, 000, 000, 141
 9 DATA 141, 000, 000, 000, 000, 000, 141, 141
 10 DATA 000, 001, 000, 000, 141, 000, 000, 000
 11 DATA 000, 000, 000, 100, 100, 100, 141, 000, 000
 12 DATA 141, 004, 000, 141, 000, 000, 141, 141
 13 DATA 000, 141, 141, 000, 141, 104, 000, 000
 14 DATA 000, 000, 000, 000, 000, 000, 000, 000
 15 DATA 000, 000, 000, 000, 000, 000, 000, 000
 16 DATA 000, 000, 000, 000, 000, 000, 000, 000
 17 DATA 000, 000, 000, 000, 000, 000, 000, 000



SMASH TV

(Players: 1-8)

It may be a little like the old one, but plenty of people are still willing to bet tips and credits, such as Luke Simpson from Aberdeen. We don't have room to print a listing, so satisfy yourself with these tips.

- The single joystick control method is the key to long-term survival; the double joystick method will just confuse you.
- Don't rush around the screen — your weapons are more effective when you're standing still.
- Never put yourself at risk for the sake of bonus (such as gold, silver and so on).
- Taking the shortest possible route isn't always the best idea — if you're out of lives, you'll have to go home.
- Bonus lives don't appear very often, so when they do, use them.

Extra points is especially useful on level two, although it tends to happen only on other levels.

- Don't waste time looking up the sky — they're traps, mines, and complex obstacles (and the PlayStation version even has!).
- Muted Maniacs about the screen banging its fists on the floor, which causes the whole arena to shake violently. The best approach is to shoot his left arm first (until it disappears), then repeat the process on his right arm. Then, staying on either the left or right of the screen, repeatedly shoot until he's completely dead. Don't be tempted to shoot him from above or below — it's too hazardous.
- Scorefire is, strangely enough, the hardest of the three bosses. The only way to kill him is to load every single segment of his surrounding shell until only a crater remains. The bottom segments are difficult to shoot, because he moves around so quickly. It takes days to keep moving it all there — the timing machine are fairly accurate, it's a miracle you appear, grab it.
- Eat My Dustball is much the same as the Muted Man, apart from being a little faster on his capacitor tanks. It will take a few more shots than before, but again shoot his left arm, then his right, then stay on one side of the screen and shoot until the fighter is no more.

The National Lottery?

Yes, simply by sending in your final 804, megat, cheats, PC cheats, solutions and general game-solving information, you could be in with some exciting prizes. You could be in with a chance of winning the national prize (that's right, a whole pot) of prizes. If you know an eight-figure town about, the opportunity is a special bonus. Or how to protect all the final questions in level 10, let us know. Drop your guesses in an envelope, then post it to: Andy Palmer, Knowledge, Gameplay, Commodore Format, 100 Moorhead Lane, Bath, Avon, BA1 1BB. Don't forget to include your full name and address, along with some sturdy stamps.

MAKING 10TH DAN

Prepare to be stunned, amazed and completely baffled by this month's game diary, as Jon Wells attempts to explain the difference between a sprite and character editor. Higher maths, anyone?

The editor's progressively busy and at the moment, the busy button on the toolbar (or should that be character's editor) just for 10th Dan - although I find plenty of problems to work through to get there. The Loading/Introduction and 2nd sequence boxes are also ready, so there's been some progress on the music front too.

But before I get into that, though, you might be interested to know that you're able to edit from 10th Dan's shaping up for yourself in the near future. If it goes according to plan, there'll be a demo of the game on the CD-ROM pack before the general release in the spring.

Anyway, enough of the waffle. As you already said, the sprite editor's finished, although it's now an official sprite/character editor. Why? Well, I tested various sprite and character drawing/undrawing methods, and found that the fastest was horizontal-column, character-to-sprite conversion, so this is what I'll be using in 10th-Dan.

Getting into character

The problem with a normal sprite editor is that you need to provide a conversion routine at the data intro-graphic. To remedy this, I decided to turn the sprite editor into a sprite/character editor as well, but only use the sprite-to-sprite, but there's also no need for a multiplexer for the sprite character pair. When you're drawing graphics in the editor, the data as though you're drawing sprite graphics - the character set will exactly same as before (16 bit x 16), but the sprites are stored into the Character Set memory bank!

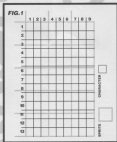
There are a total of 13 character columns, each of which is 8 lines across wide. There are 16 lines for some sprite sets of 16, with each character in memory 16 lines in height, while each character is 8 lines high by 8 pixels wide (8x8) - 64 bytes.

Each character/character-column has its own independent memory location. This method also has the added benefit of enabling me to call in character sets and point any column in any of the 13 character columns within the 16-sprite-block that holds each sprite. This is getting a bit complicated now, isn't it? Well, it should be, because I don't understand it either!

Seriously, though, to understand it properly here's a butcher's cut at Fig. 1. See the 13 columns of Characters and the 16 sprites that makes up the whole grid?

Well, that's how the new memory is set out with each byte's graphic block! The whole point here is

that you can use the existing columns to build other information frames, which will save more memory! When a figure is walking, for instance, its head is up, as only the lower part of the body moves.



A moving discovery

I've already started developing the sprite and editing in the game. At first I had to draw the frame of the foot from the standing position to the jumping position. The general difficulty - for now, that is - was repeated line editing. The trouble is getting the feet, how they connect, if you go up for with the feet but frame is drawn's line properly and the animation looks like what you got it. Well the I came up with a better method, whereby you draw the feet frame first - after all, the standing frame is already present.

This approach is much easier to follow - it can see where the frames are heading and connect them accordingly.

Only a few are complete, so far, but you'll see more in just a sec. If you look at the sprites on below you should see a mixture of 12 approximately, there's still work for two columns of course, and some of the figures will be modified to work around before the first version appears.

Well, that's about all for this month. In part two you'll be looking at the more used in the game, how the control system works, the problems that appear as a result and how they're solved. Don't miss it!



So, what's facing the way?

This diagram represents the different data memory layout of the sprite and character editors.

Order, gentlemen, order!

If you've been wondering how you'll get hold of a copy of 10th Dan, you'll be pleased to hear that you can receive your copy now! You don't need to wait and money is paid ahead your name, address, the money (1000) or standing order) and details of the game you're after. However, it's a wide range, about 20 previous CPs for details info in envelope and

send the whole lot by. Available. 9.95 (1000) 10th Dan, 10th Dan, 10th Dan.

That may be true as the game is ready, you can let your name and you can send your cheque or postal order accordingly. However, desperately needs your support, without it, it won't be able to continue producing progress for the 10.

GEO PAINT

Last month Russ Michaels, the boss of Electric Boys Software, waxed lyrical about the benefits of GEOS and its word processing proggy Geowrite. This month he returns to talk you into buying Geopaint – not that he's biased or anything...

Geopaint is the second main application that comes with the GEOS/2.0 package. It's a high-resolution art package with a difference. Unlike most art packages, Geopaint has an area covering about six screens of visibility (3-level), which represents the true size of an art page.

What happens when you print a picture from your local art package, such as Art Studio, is that the picture is enlarged and is stuck to the page. The effect makes it look like two pictures, and the fact that the actual image only creates a window of a page in its true size means the size of your drawings can extend from the rest.

Geopaint's advanced features enable you to scroll up, down, left and right to any part of the screen so you can design your picture according to their top dimensions. Take a look at the Statue of Liberty screenshot – in a standard art package this would be all you would see, but with Geopaint you can fit in the whole statue, and print it out exactly as it looks on screen.

All the usual graphic utilities are included: box, line, circle, M, ellipse and spiral. You can also include text that shows up at the font, style and size available in the Geowrite program. You also have access to the main desktop's resources of the Photo Manager and Gossip, so you can cut out and copy any

part of your picture and place it in a Photo Album for later use. Any of your pictures in a montage type of window, you can even copy it to another part of the screen, or just delete it.

Objects from the Photo Album

can be copied into the Gossip and placed on any picture at any time. They can also be re-sized, either up or down, to fit in a user-defined window (the Statue of Liberty got was originally too screen-wide), and if you end up with jagged edges after enlarging the image, just activate the automatic smoothing function and they'll be smoothed out.

This is Geopaint's most useful feature – being able to use one object from another page at any time.

Any objects cut from a Geopaint file can be pasted into Geowrite documents, which is handy if you want to design your own logos and messages to give your documents that professional edge.

Geopaint also has an interesting useful zoom mode for doing those extra fine details. Not only can you view the zoomed part of the screen, but you can also view it in the original size at the same time, which means you can judge the general impact of any detailed changes as you make them – a bit only that

Geopaint is a three package, which means you can only use one colour per 8 by 8 pixel block. However, the size of the editing area makes it easy to separate different colour objects, and considering Geopaint is intended for designing artwork for subsequent printing, and that most people haven't got the luxury of colour printers, you must argue that it is as profitable to multicolour anyway.

You can also design images to make your own stickers, (Oh yes, I'm in a hurry)



Geopaint is capable of handling highly detailed images like the one shown here. It also has a wide range of features available for budding artists.



Of course, you need to get hold of the GEOS package if you want Geopaint.

PAINT THE TOWN!

Geopaint comes with the main GEOS package which also includes

Geowrite, Gossip, Word and Draw. It's the most money value, 3-in-1 package

of the Boy's latest product guide by sending your name, address and five 10p coins change to: **EBE, 1478 Brighton Road, Purley, Surrey CR2 6JH.**



SSH! LISTEN

Have you ever wondered how programmers manage to achieve all these wonderful sound effects? Well, we convinced 10th Dan diary writer, Jon Wells, to let us into his secrets...

The Commodore 64 has some of the best machines when it comes to producing sound effects. I use the big old-fashioned sound card and the chips inside for all my sound effects, but I use software for all musical and sound effects. There are 16 channels on the 64, 16 to use memory for all musical and sound effects. There are 16 channels on the 64, 16 to use memory for all musical and sound effects. There are 16 channels on the 64, 16 to use memory for all musical and sound effects. There are 16 channels on the 64, 16 to use memory for all musical and sound effects.

For sound, usually you normally allow how long, or if you want to produce a sound effect, you can produce a sound effect for you.

The sample question

When you think about the best way to produce a sound effect, there are many things to consider. The way that you understand the way that computer hardware works, through sampling, sampling in where real things are digitised into bytes for the computer to use. On the 64, you can produce a sound effect in a number of ways. You can use the built-in sound card, or you can use an external sound card.

The way that you produce a sound effect is by using the built-in sound card, or you can use an external sound card. The way that you produce a sound effect is by using the built-in sound card, or you can use an external sound card. The way that you produce a sound effect is by using the built-in sound card, or you can use an external sound card.

1. If you're using machine code then you can use the built-in sound card to produce a sound effect. If you're using BASIC you can use the built-in sound card to produce a sound effect.

SSH!

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Effects Install

Change the FS number to line 3 of the new sound effects routine on page 12 for the number of sound effects you wish to install. Each sound effect consists of eight different option numbers, which is why each DATA line in the installation program has six more than the one sign. The eight DATA numbers in each line represent the following in this order...

- 1 - Effect PITCH
- 2 - PULSE WAVEFORM PITCH from 0 to 255 only
- 3 - WAVEFORM CONTROL
- 4 - ATTACK (ORIGIN CONTROL) CYCLE
- 5 - SUSTAIN (RELEASE CONTROL) CYCLE
- 6 - EFFECT PLAYED SPEED
- 7 - FILTER ON OR OFF 1 is on 0 is off

3 - VIBRATO LEVEL

The vibrato level slowly scales the effect from the PITCH up to the speed (FS) amount and back down to the PITCH, where the whole process begins all over again in a continuous loop. Changing the speed will alter the way the VIBRATO operates. The SPEED can range from 0 (normal) to 127 (maximum), but adding 128 to the SPEED number reverses the process, thus the range spans from 128 (normal) to 255 (maximum).

To approximate different voice together add two to the WAVEFORM CONTROL number - see 17=2 - 28 for triangle signs. This produces a more lively sound, which was used for the more voice last effect.

SSH! LISTEN SSH! LISTEN

SSH! LISTEN SSH! LISTEN

SSH! LISTEN SSH! LISTEN

SSH! LISTEN SSH! LISTEN

SSH! LISTEN SSH! LISTEN

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SSH! LISTEN SSH! LISTEN

SSH! LISTEN SSH! LISTEN

of the game, and using the same technique to make a game as efficient as possible. Using programs, the programmer might — and don't forget to think up on your own! — do:

Call SID

There are two ways to produce a sound. The first is to have the software generate the sound. The second is to have the software call a program that generates the sound.

The first way is to have the software generate the sound. This is done by having the software call a program that generates the sound. The second way is to have the software call a program that generates the sound. This is done by having the software call a program that generates the sound.

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SID specs

| VOICE 1 | VOICE 2 | VOICE 3 | TYPE |
|---------------|---------------|---------------|--|
| \$D400-\$D470 | \$D407-\$D476 | \$D40E-\$D47E | Pitch low byte |
| \$D480-\$D4F0 | \$D487-\$D4F6 | \$D48E-\$D4FE | Pitch high byte |
| \$D400-\$D470 | \$D407-\$D476 | \$D40E-\$D47E | Pulse waveform low byte |
| \$D480-\$D4F0 | \$D487-\$D4F6 | \$D48E-\$D4FE | Pulse waveform high byte (bits 0 to 15 only) |
| \$D400-\$D470 | \$D407-\$D476 | \$D40E-\$D47E | Waveform control |
| \$D400-\$D470 | \$D407-\$D476 | \$D40E-\$D47E | Waveform control cycle |
| \$D400-\$D470 | \$D407-\$D476 | \$D40E-\$D47E | Suboctave control cycle |

KEYWORD TYPES

| | |
|--|--|
| 07 = Triangle | \$D417-\$D426 = Filter value control |
| 08 = Sine/cosine | \$D440-\$D449 = Volume control / Filter mode |
| 09 = Pulse (PULSE the pulse waveform) | 15 = 16 = Low pass |
| Highbyte bytes (to four the effects) | 18 = 23 = Band pass |
| 028 = Random noise | 19 = 24 = High pass |
| \$D410-\$D420 = Filter pitch low nibble (bits 0 to 7 only) | |
| \$D410-\$D420 = Filter pitch high byte | |

\$D400-\$D470: Pitch low byte
 \$D480-\$D4F0: Pitch high byte
 \$D400-\$D470: Pulse waveform low byte
 \$D480-\$D4F0: Pulse waveform high byte (bits 0 to 15 only)
 \$D400-\$D470: Waveform control
 \$D400-\$D470: Waveform control cycle
 \$D400-\$D470: Suboctave control cycle

\$D417-\$D426 = Filter value control

\$D440-\$D449 = Volume control / Filter mode

15 = 16 = Low pass

18 = 23 = Band pass

19 = 24 = High pass

\$D410-\$D420 = Filter pitch low nibble (bits 0 to 7 only)

\$D410-\$D420 = Filter pitch high byte

\$D410-\$D420 = Filter pitch low nibble (bits 0 to 7 only)

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\$D417-\$D426 = Filter value control

\$D440-\$D449 = Volume control / Filter mode

15 = 16 = Low pass

18 = 23 = Band pass

19 = 24 = High pass

\$D410-\$D420 = Filter pitch low nibble (bits 0 to 7 only)

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\$D410-\$D420 = Filter pitch high byte

BUY-A-RAMA

FOR SALE

Amstrad CPC664 games, color monitor, joystick controllers. Also SX4000 console, game and tape. The lot for £40.
Phone: **Jalinder on 004 177188**
04-keyboard, datasets, joystick and games. All for £50. Will also consider exchanging Amstrad Vicky Barwood, 26 Oakton Road, South Droyles, Surbiton CB3 7HS.

C64 games 104-116 tapes for £1.50 each. Will also accept. Also for sale, a V65 16 with datasets - but no power pack in games. £5. Send £40 for complete lot.
Contact: **17 Wellington Ave, Northampton, Northamptonshire NN1 4BY.**

Master System 2 with Neo Grid, Rampage, Dynamic Duo, Moonwalker and Alien Syndrome. One complete, C20 set.

Phone: **Neil on 0875 583 (after 9pm)**
Commodore 64, good condition. Replaced datasets, one joystick worth £20. You purchase the 0070 £7000000000000000. Also 20 games. Contact: **Brian, 40 Hudson Ave, Milton, Northampton NN17 3YF.**
Original 04 disks and tape games, you have them. For £45 set, send an £45 to Mike, 3 Woodside Cottages, Highwood, Elmstretton, Essex SS16 0BD.
16k tape games from £15 to £15. Budget to completion. All boxed. Plus C64 tape and tape. Plus books. £40 for lot.
17 Line Green, Exeter, Devonshire EX2 1JH.
C64C 16k drive with software, datasets, printer, tracks (16k) tape and tapes. Games on cassette/cassette, including Turn and Go, Omega 1989 set.

Phone: **028 8266.**
Start System, Beta-Command, Berman, Action Replay cartridge V6 and six game collection M.

Phone: **061 788 1076.**
40-Cas games for sale, including Eddis Kadd, Jump Challenge, Rule Test (simulation) and Horizon. 20 Marshall Games, matrix, Tombridge, Kent.
C64 and 16k disk drive. No 1025 printer, sound expansion system, Action Replay, 0070-0070/0070. 2100

Phone: **0283 862176.**
076-4 computer, datasets, systems, 10k games and some educational software. £70 each.

Phone: **079 507490.**
C64, datasets and games £40. Two 16k 16k disk drives. C64 cash. 0070M and disk. 100 30 disk games, 200 tape games, utilities, games, music and Commodore Plus/Minus 1 to 20.
Phone: **081 282 0877.**
C64 tape players, all tapes, 100 disks, datasets, printer, joysticks, mouse, lightpens and more. Perfect for beginners. £160 each.

For details phone: **0223 633000.**
C64 games—originals from 70s, including Deluxbox, 20 Crown and others. For a complete list send an SAE to Mark Hamilton, The Harvesters, Garsdale Road, Wethering, near York YO78 1AA.

CT280 for sale. £70 with games in box and disc. Games like Gemini/Gem, Lightpen and tape disc (includes with the manual and books).

Phone: **now: 0875 733911.**
C64 (as new), datasets, no joystick and all tools. Also original boxes with manuals. C40 each.

Phone: **0800 880406 (toll-free).**
Approximately 60 C64 games, plus Commodore Format PlusPacks £10-47. £40 + 10k mouse. £5. Action/Replay cartridge (boxed). £20. Plus more.
Phone: **Paul on 01783 848077.**

Commodore 64 games for sale. Very cheap.

Phone: **0223 648100 for complete list.**
Top lot, 10 tape drives, two datasets (new opening), two joysticks, tracks software (200-), magazines and tapes (200-), and books. Offered? **Contact: Mike Summers, 11 Cumberland House, Warwick Road, Fenelon, Leam PP9 1LR.**

Datasets drive for sale. First customer free disk. For more details, send an SAE to the Mailbox, 24 Riverside Ave, Poole, Dorset PO15 6AS.
Games order - £5. 16 budget games - £10. For 16k price games - £15. Light pen and games - £10. Keyboard - £5. Pairs Programs - £10.

Phone: **0223 710000.**
Start Master Set Programs: the amazing tape start game. Start a master tape & 16k, or a 16k tape. £40 & 20k. Also, five disk and cassette-only programs. Contact: **Barrie Messing, Southy Cottage, Worthington, Dunfermline, Scotland DD1 5DR.**
Commodore 64 with 16k 16k disk drive, disk controller, 10 disks, joystick, mouse, mouse mat and keyboard. Based on new 0010 case. 2000 gpd.
Phone: **0445 800068.**

We're Here, Target, Rompage, Rompage, Ghoul 17 (Scots), Lightpen, Kite Box Man - £1 each. Also see more - £10. Contact: **Richard Hetherington, 14 Cherry Orchard, W-2-S, Stroudville G64 1JH.**

WANTED

Tape and/or disk contacts wanted. Can't wait to buy games, etc. Contact: **Gavin, Stephendy, Eglington, Croydon, Surrey, Sussex SA4R 5SE.**
Urgently wanted: **Barbarian from Progress, Fester Disk system, but will consider tapes. Note: I need the adventures/puzzle game, not the fighting**

game. Contact: **Tony, 4 Muttons, Haversham, Bury, Stotfold MK3 8LJ.**
Wanted by private collector: software for the Commodore C64 and Plus 4 computer. Anything considered? **Phone: Peter on 044 488417.**
Very cheap 16k 16k disk drive (last in good condition). Will pay for postage. **Please write to: Brantingham, Macclesfield, Cheshire, Eng.**

WEEK with manual on tape in disk. **Whips maximum price. Contact: Richard Hall, 57 Whitton Road, St Johns, Worcester WR10 4LE.**
Wanted: **A sound/lightpen on tape - we pay it in under. Contact: Stephen Palmer, 13 Southfield Road, Bursley, Bromley, South Yorkshire DN10 2PB.**

Multi-player **Exotic Manager** by Cui on tape - will buy 10 from you. Contact: **Stephen Whittington, 11 The Obelisks, Stoke, Cheshire CH1 6AA.**

C64 tape of **Pillboxer** and **Puzzler**. £10 per set to 1575 10th. Contact: **B Alan Cross, Oxford, OX4 5AJ, UK.**
Disk drive: **Commodore 64, Great Glass Stone, Plus instructions for Drive and Prosys 1/10 to 1 (Booklet) Street, Hales, South Essex SS11 1PB.**

Wanted on tape: **Worthington (Mathematics), Speltzound (Mathematics) and (Arithmetic) (Arithmetic)**. Will pay £1 for each original game. Write to: **40075/1, Whitchurch, Shropshire ST 4 6BTF.**

Big lots of wanted urgently on cassette. **Please phone: 0875 55890 after 9pm.**

PIN PALS

Love programming the C64? Post a pin pal? Then please write to me stating your name, address, age and sex. Contact: **Debbie O'Neil, 3 Craghill Road, Nelson, Lancashire BB9 6JH.**

BUYING? SELLING? WRAPPING? OR DOING SOMETHING ELSE THAT THE REST OF THE CF WORLD SHOULD KNOW ABOUT THEN COMODORE FORMAT IS THE BEST PLACE TO ADVERTISE...

And it's so easy to fill in this form and sending it off to Buy-A-Rama, Commodore Format, 28 Monmouth Street, Bath BA1 1QH, and it's free! But that doesn't mean you can take liberties. It's not worth a line. Don't be mean and you will be heard.

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WELL 'ARD ROM CHIPS

The US has long been famous for its hardware experts - jets, missile launchers and now JiffyDOS, a new ROM replacement chip for the C64. Russ Michaels gives you his best arms dealing pitch...

JiffyDOS is a replacement chip set for your computer's ROM and your drive's DOS ROM. It gives you 104 of 128 new disk access speed you've always wanted, plus a whole new range of DOS wedge commands to make using your disk drive completely fast.

There have been a number of speed enhancement ROM replacements over the years, such as Disk Doctor, Speed DOS, Duplex DOS and a few others, but none have combined the best of both worlds: have been as compatible as JiffyDOS. The ones that may have been faster, probably fast even, but fast only because they avoided the waiting and error-checking procedures that ensure your data and files are uncorrupted. Besides, at up to 15 times faster than standard ROM chips, JiffyDOS is more than adequate.

Permanent boost!

JiffyDOS should not be confused with hardware upgrades, such as the Action Replay, which have

inherent disadvantages. Because JiffyDOS is an integral part of your system, the speed increase it produces is permanent, permanent.

On the other hand, are deactivated by the software and then reactivated is only effective for the instant for you load, so multi-task games would continue loading extra levels at the usual slow, cumbersome speed. Where a cartridge becomes ineffective, JiffyDOS keeps on going. It doesn't just work with PRG files either - it speeds up all forms of disk access, PBL, DOS and DOS files and those programs that incorporate them, such as games, word processors and databases are all enhanced.

Fast-loading is not the only benefit, though. JiffyDOS also includes you with a whole new set of DOS wedge commands that make using your computer easier and more enjoyable. The built-in commands enable you to perform extremely fast functions without having to type in long commands.

Instructions. You can format disks fast, save, verify, delete and remove files with just a few simple keystrokes. In addition, a standard 31-command menu feature makes things even easier. These include: directory listing, either your screen or printer; function key definitions; scrolling; a built-in file copier and much more.

Plus, for the individual, is a comprehensive help guide that lists all commands, what they do and how to use them.



Multiple drives

JiffyDOS is the only system that offers multiple drive support for operating up to 4, 15, 17, 19, 21 and 24's HD and FD access. Drive with your 24's, 25's, 30's, 41's and 42's in both 54 and 128 modes. A C128 with 15, 17 or 19, 21 drives is the mode because you faster than with their already need, built-in built-in.

The two-drive copier enables you to copy files of any storage type from different drives, including HD, FD, Floppy and Commodore PBLs. The current device number can also be toggled for a multi-drive system.

Quick and easy

JiffyDOS is so easy to install, nearly anyone can install it. A complete, easy-to-read instruction guide tells you step-by-step through the installation of the new chips for both computer and drive. Even those who've never seen the inside of a computer before should be able to install JiffyDOS after an hour. Installing JiffyDOS also gives you an extra switch on both your computer and drive, which you can use to turn JiffyDOS off if needed - just a little matter of fiddling with a couple of screws and off you go. And for those of you who aren't quite confident enough to attempt the installation, the Western Design company is willing to do the work for you. So, what are you waiting for? Get your orders in now - the sooner you do, the sooner the 15, 17, 19, 21, 23 counts.

**WHERE
TO
GET
IT**

JiffyDOS uses Western DOS and DOS depending on the type of drive you have. If you want more details, then grab a copy of the JiffyDOS manual printed from by scanning your name, address and two fresh check stamps to: Western Design, 2370 Brighton Road, Torrey, Surrey, G86 2JH.

Take command!

Okay, so what are all these new wedge commands? Well, below we take you through some of the shortcut keystrokes that JiffyDOS offers you. So you can save yourself a bit.

Built-in DOS wedge commands

| | | | |
|----------|-----------------------|----------|---------------------------|
| 01 | Display error channel | 04 | Copy custom file |
| 02 | Initialize drive | 05 | File (format) disk |
| 03 | Remove file | 06 | Format (initialize) file |
| 04 | Reset drive | 07 | Verify file |
| 05 or F1 | Directory | 08 | Set default device number |
| 10 or F2 | Load a BASIC program | 09 | Save a BASIC program |
| 15 or F3 | Load an ML program | 10 or F5 | Save a BASIC program |
| | | 11 or F6 | Save a BASIC program |

Additional wedge commands

| | | | |
|--------|-----------------------------|-------------|---------------------------------|
| 00 | Disable 1541 floppy head | 02 or F0 | List BASIC PRG from disk |
| 07 | Disable JiffyDOS F keys | 03 | Set sector interface |
| 05 | Load/unload file | 04 | Unsave BASIC program |
| 06 | Toggle printer's own output | 07 or F4 | List text file from disk |
| 08 | Set destination drive | 08 | Copy file |
| CTRL W | Mark/unmark use file | CTRL A | Mark/unmark all files to copy |
| . | Verify program | E | Load and execute ML PRG |
| CTRL D | Toggle default drive | SHIFT/ENTER | Load and run final file on disk |

BLITZ 2000

Mankind is boldly going where no-one has gone before, and, true to form, it's kicking every grubby little alien ass it comes across on the way. Rod Lawton leads the offensive...

Imagine you're piloting a night sophisticated spaceship. Imagine it won't go up or down. Imagine you don't have much fuel. And imagine you're the only person standing between the universe as you know it and other universes.

The bad guys are called Oons, and they keep building these incredibly rotating space colonies all over the moon. Another only chance you have of saving the Earth is to wipe them all out with your not terribly powerful spaceship.

Actually, although it won't go up and down, it will go from side to side. And you can drop bombs on the colonies to destroy them. This is a pretty smart idea, because even though the moon doesn't have much gravity, it does have some, and unless you can knock down some of these buildings, you'll be dragged to the surface and turned into meat paste (meat and spaghetti paste, actually).

Since there are 20 colonies to be destroyed, there are 20 levels to the game. And, not surprisingly, each one is harder than the last. To begin with the enemies are a bit tame. They just sit in their houses, waiting out of the windows (and, I would bet, I wish they'd, waiting for you to come in) to take you out. And again they know off a particular or so minute, but you can tell they're not quality weapons aimed at you. (Once you're reasonably familiar with enemy you get a jet on the beach and another level of fun.)

Then it's on to the next mission... until you die. But if you get good-enough, of course, you will eventually finish the game.

Nothing doesn't die yet, there are some vulnerable items, like diamonds and pearls. Very useful, yes? No, they don't give you immortality or extra weapons or anything like that, but they're a great target against inflation. Do avoid the markets, though, because they're not too hot on the Equity market right now, and they'll wipe your spaceship out, too. (2000 won't challenge your grey matter too much. You probably won't even need any, actually. It's all a predictable, unchallenging puff, and while it's pretty enough in its own right, it's rather like going back ten years to play some of the really early C&A stuff. The gameplay is dead simple, and the graphics are crude but effective. It's later fun translates to poor up and another ten minutes to get down again. Not of a new breed game really.

69%



These Oons are of 81 types. Don't they realize that if they don't build these colonies, I suppose there's no keep blowing them up?



And if you get bored at all the rotating rectangles that you're blowing on the moon, Oons, you can blow on the jet on the beach and another level of fun.



I'll just practice my few remaining maneuvering skills for a sec...



... Right, now that I can pilot this thing, I'll just practice dropping bombs on some unsuspecting aliens and their pretty skyscrapers.



Wow, just look at this colorful moon colony. I think I'll just pilot a bomb down here. That sounds so nice.



All you have to do is press fire to play, but remember it's a good idea to avoid markets... unless you're bored of being dead.

WHERE TO GET IT

Blitz 2000 is available from Videotext for £7.99. The web site to send your request to is On-Site Products, King's Lynn, Norfolk, PE30 3PH. Or you can phone 0953 760013.



PD FORMAT

Megademos need to be a bit special to gain a place in the annals of history. Andy Roberts reveals the top ten demos of all time...



Part 4 of the Europe demo boasts an impressive array of concentric circle motion.

Europe

Tough

This demo consists of 12 different parts, each one created by a programmer/development team from one of the 12 different European countries – a very clever concept indeed. After the intro section, which features the standard yellow-stair-on-blue-backdrop

logo, here's what you get...

Part 11 This section features a remarkable Apple effect, in which concentric circles of different colours spin out from the center of the screen. This is an effect seen in dozens of different Amiga demos, but this is its first incarnation on the humble C64. Very, very impressive.

Part 12 It may look unimpressive to the uninitiated, but the opponents come incredibly close to work for the programmer. Over a backdrop of music and

The Top Ten PD Demos

1

Dutch Breeze

(Blackmail)

This is an increasingly popular demo, both here and throughout Europe, and it's one of our personal favourites. It boasts several innovative and polished sections, along with some stunning sounds. Perhaps the most memorable section is the 'tribute' to various C64 artists, which features artwork taken from several classic home-gaming screens.



2

Top Priority

(Comix)

The legendary Cyberburner produced several demos for the C64, but this was by far the best.

For those of you who aren't familiar with Mr C, he

specialised solely in quality samples – good quality samples, particularly. While the demo has only four sections, none of which are stunning, the music and synchronization effects make this a quality piece of software.



3

Electric Cafe

(Lack and Dore)

The writers of Disaster (Monday and Terrence) City were legends in the Commodore scene (which was, incidentally, the starting point for the entire 'demo' scenario). They also found time to produce several demos, including this one. It boasts some amazing spinning heads, accompanied by Kraftwerk-esque samples. Nothing amazing, but ground breaking in its day. They also created Digital A&E, which sadly escaped inclusion in this top ten list.



4

Wild at Heart

(Panasonic Design)

Another of our favourite demos. In fact, we think it's the 6th best to one of the best ever on the C64.

Panasonic's demo always had a strange effect – in fact, you can't know what to expect when loading one for the first time. This production has some funny, innovative and downright bizarre effects, complemented by slick programming and superb music.



5

The Equaliser

(Panic! Graphics)

This is another demo that first appeared on

Commodore nearly seven years ago, when it caused quite a stir. It's basically the C64 version of the TV show's title sequence, and the Electroband music is almost spot-on. Nowadays the quality is a little lacking, but a classic nevertheless.



More power for your Pack!

Not content with turbo-charging the recent PowerPacks with logos, pictures, and loading screens, Electronic Arts has also developed a new utility especially for disk owners who are fed up with the slow loading times of the older

PowerPack versions. The *FastPack* Transfer system enables anyone with a disk drive to transfer software from the CP PowerPacks directly on to disk. The whole thing is incredibly simple to use. The only drawback is that it only

works with the loading system used on issues 18 to 49's tapes, so not every PowerPack can be transferred. Still, it's a valuable and time-saving utility that no disk-based CP freak should ignore. For more info contact Electronic Arts PD.



writing messages, too different logos stretch and/or scroll up and down the screen.

Fun 3: Another piece of technical wizardry. This part starts off with a colourful bitmap picture, along with some tiny rotating logos and an on-screen directly scrolling message. After a short time, the picture begins to jitter around at incredible speeds. Quite simply awesome.

Fun 4: Remember that old test 'em up called *Don't Remember* the reflected sun that rippled across **Fun 2** features this impressive image fading around the screen at staggering speeds.



Who goes, less and is broken to contain within on part 4 of the *Evangelion* demo.

the surface of the logos? Well, the built-in editor has a full-screen operation of the same effect - anyway nice it is too. It also loads a familiar tune: *Domino Demography* the Pat (Shag Boy) track should keep *Jason Fresh Happy*, at least.

Fun 5: This section, which falls from *Belgium*, is probably the funniest part, aside from the rather funny loading screen. A rotating globe made up from a mere 256 multicoloured pixel sources

There are literally hundreds and hundreds of demos available for the C64. Some are just static pictures, some simple music compilations, but some are interactive and creative masterpieces. A megademo

doesn't have to have millions of colours or flashy effects to be considered a classic, but it does need to be memorable and set standards for others to follow. Here's what we came up with...

6

Ducks

(C64)

Budnick is an accomplished (and somewhat infatigable)

Amiga coding team, which has produced several renowned demos and adventures. One of its accomplishments was the legendary *Circle Fun* series, which was the inspiration for this particular production. It has a humorous, almost *Chitchee-quip* quality, and some very impressive samples.



9

Graphixmania 2

(C64)

This is yet another classic megademo that set new standards for animation and push, hence the name. Its most impressive quality is the way in which the sound and images gel together perfectly, particularly on the *Lost* section. One of the joys was to create a megademo, comprising of several different classic tunes. It must be megademo treats.



7

That's The Way It Is

(C64)

Charles Demers, aka *TBC*, was one of the creative behind the legendary *Members of Herbie* team (see the interview with *Jason Ter* in CP96). Not only did he write the music (played and danced off) by his band, but he also produced a number of demos (including *Knuckle One*, another one of our favourites). This demo set several standards in the industry, namely, polish, slickness, and enjoyability.



10

Thrust Concert

(C64) and (Amiga)

Bob Hubbard was a legend in the C64 world, pushing up credibility with each successive issue (he also started out, like many accomplished programmers, on *CompuLink*). His music for the *Planet* game, *Thrust*, was good enough to make *Steve's The Computer* editors, believe it or not, write this demo, which features a band playing the music. It's simple, but enjoyable.



8

Terminus

(Amiga Footpad)

Quite often always seem to retain their entertainment value, even though some of them are laughably old. This demo is based on *John Gargano's* space-time epic *Dark Star*, and re-creates the sequence when a bomb is dropped on to a planet. It has a unique music quality, enhanced by the quick scene changes and suitable sound effects.



So there you have it - the top ten demos of all time... maybe. Perhaps you don't agree with our choices, in which case let us know. In fact, why don't you jot down your top ten demos on a postcard and send them in to us at PD Forum, Commodore Forum, Future Publishing, 20 Housworth Street, Bath, Avon BA1 3BW. And just as an extra incentive, the first letter pulled out of the office hat will win some free software. All the usual rules apply and *Karen's* decision is final.



Big teeth in the dark. Master of Europe's demons - all it needs now is the grey suit!

around the screen like something out of an Amiga game. Indeed, it bears a striking resemblance to a *Flowerman* videogame - see a couple of years ago. Part 2: Add what would you expect to follow the most exciting section of the demo? That's right, the least exciting section. The part includes interesting scientific notes that produce hideous (horror effects, and), to be frank, I couldn't have pressed the space bar any quicker.

Part 3: Another simple section, consisting of a colourful logo and some rather funny DTP movement. E, and that's about it.

Part 4: Plasma is an effect that seems to be appearing in more and more CD-ROM demos, and this demo has it's own version too. This particular section utilizes extended background colour mode to produce some funny character-based effects, along with the usual music and scrolling message.

Part 5: Another technically-impressive section, which has five different colour splits on every resolution. It may seem close to the average CD-ROM standard, but glitch-free video splits are difficult and timeconsuming to the best of their. Again this is merely a split-screen, and you might be marvel at the sheer talent (or madness) of the programmer.



Part 6 features the latest plasma effect to keep up the ever-increasing competition...

Mayhem gets taped

Remember the *Mayhem* in Masterland Demo that we mentioned way back in DFWT? You don't think you just a little annoyed that the compilation was restricted to disk owners only? You were? Well, you'll now be able to enjoy that long-smouldering grime from your home, because the entire *Mayhem* is now available on cassette, which should please more than a few of the old and evil *Discworld* fans.

Once again, the compilation includes three enormous playable levels (which are actually run-down versions taken directly from the finished game), a number of bonus secret demos, and even the ever-popular MC *Mayhem* music videos.

If you've been *Mayhem* for good let's face it, who isn't? With a tape deck, give this hulking garbage a try. For more info contact Binary Zone PD.



Part 10: This part is both innovative and fun to watch even though it's incredibly hard to read. It's basically a circular scrolling message, which bounces smoothly around the contours of the screen. Heck, you may not be able to read it, but boy does it look good.

If you expect really hard you might just be able to make out the circular message in part 10 of this demo.

Part 11: Another simple section, consisting of the huge **TOUCH** logo that moves up and down the screen. And the relatively simple effects you'll find some very clever things at work. Another section for the technically-minded to gaze at.

Part 12: The final section is, well, basically a test card. Ever watched BBC early on a Sunday morning? Well, this is the sort of thing that you'd expect to see, along with the appropriate sound effect. Slipping in an impressive theme, and even considerably in terms of quality and simplicity. The whole production is extremely well put together, and includes some very nice music to accompany the effects. It's a very good example of an ambition and programming fan, and is an absolute must for any self-respecting demo-collector.

85%



Part 13 comes in the form of this TV testcard - which is pretty handy for checking your colours.

PD Format Directory

It would be heaven, order, and overnight receipt to be guaranteed any one particular library - PD software is free, and most libraries will have the latest software in stock. Their only aim is to spread the network and produce the PD Format directory.

If you're more oriented PD software before, write to a few libraries (including an IBM) and see for an up-to-date catalogue. Some libraries only stock disk-based software, so it might not be a good idea to mention whether or not you have a disk drive. To make the search, we may specially mention the companies that have CD or disk (CD) up to the computer's needs. (If you wish to read)

If you're not a PD library and don't find your company listed here, write to us at: PD Format, Commodore Point, 80 Brookwood Road, Bore, June 8 1998. And if you're a programmer or PD library manager, that's also the address to which you should send your hard copies.

Binary Zone PD/ The Guild (T & G)
24 Portland Road, Doncaster, West Yorkshire W6 10R

Electric Boys PD/CD
178 Brighton Road, Patey, Surrey GU24 0BP

Free PD/3
4 Burton Avenue, Ouse Valley, Wigan, W6 6SA

KAPO (F & B)
1 Rutland Place, Glasgow, Scotland G4 6EA

Kingsley PD/CD
21 Glasgow Road, Bradford W6 9R

MS PD/CD
1 Walsden Close, Burnley Park, Northern North Devon EX20 1SR

Magistrate PD/T & B
21 Todd House Lane, Portlough, Bally Hill, West Wicklow W6 6SA

FLUX/CD
c/o Wrexham Amateur Radio Club, County Antrim, Northern Ireland BT26 9BA

Stonewall Plus (D)
Puffinsburgh, 84 High Street, Farnham, Hampshire GU10 1TG

More PD games!

Since the 'Top 50 PD Games' feature in DFW2, Binary Zone has been inundated with orders. In response to such an overwhelming demand for low-cost software, Jason 'Kam' Blackburn is already making plans for a second Public Domain games compilation, which should be

available some time this month. Binary Zone's software label, *Pygmalion*, has recently received plenty of games, which may also be suitable for inclusion on the compilation, along with several other classics. Watch this space.

Once again, Jason Finch pulls his undies on over his tights and dashes to the rescue of some Commodore users in distress.



Life can be depressing when you can't sort out your blocks or fonts.

TECHIE TIPS

Blockhead?

Dear Techie Tip,

I've recently purchased a used 1M1 disk drive for my C64 and have been having trouble formatting disks. Whether I use the 'disk' function from DOS or the format on the Action Replay II cartridge, most of the time I get only 80 blocks free.

Occasionally, I've been able to format several disks properly, but then it returns to 80 blocks instead of 160. The problem is I'm not sure whether I've a disk fault or whether the C64 is to blame. I have done what the IBM 1 is recommended, i.e. I step through the disk head heads adjusting and if it's at the wrong position.

OS Lead, *Prague*

Before you start working in costly problems, you should check out the disks that you're using. It could be that they're of low quality. You should be aiming for disks of WFFP, lock-out free grade ones. The 40TFS can cause a few problems with the 1M1. However, if that's not the case, it's probably a problem with the head alignment of the disk drive itself. Realignment is quite easy if you know what you're doing, but then again, it's quite risky if you aren't. So, if you don't get any joy from the high-quality disks, send it off for repair. *Jason*

Mister Spritz

Dear Techie Tip,

1. How do you change the shape of a sprite?
2. Can you have a picture on the screen looking with a 2M17 command while you're still moving a sprite with a joystick?

3. I'll only ask and can you spritz with ease?
James Masterson, *Oxford*

1. Sprites, traditionally, as they're called, are controlled by locations 2048 (the sprite used to 2067) (the sprite screen). If, for example, you put the sprite data at location 400, you would do POKE 2048,400. The blocks by 64 because each sprite block uses 64 bytes of information, the last of which is ignored.

If you have a lot of sprites, you can put the data at locations 80, 160, 240, etc. There you would do POKE 2048,160 and so on. Basically, the command is POKE 2048+(64**N*), where *N* is the sprite number.

2. Spritz is the location of the data and must be divisible exactly by 64. If you have lots of sprites you may have to start considering bank switching, which we discussed in an earlier issue.

3. If the sprite screen is done through a machine code interrupt, then yes. But it's done through BASIC then, no, because no other BASIC commands can be

executed while a new I

command is being

3. No-one has a cheat, you know! *Jason*

On reflection

Dear Techie Tip,

I have written a program with a lot of different modules that do different things depending on the value of the variable *X*. At the moment the program works out when I do with my finger the following:

```
100 REM DISCOE 0467 10:00
120 IF X=7 THEN 1000
130 IF X=4 THEN 1010
140 IF X=3 THEN 1020
150 IF X=2 THEN 1030
```

```
150 IF X=5 THEN 0500
160 GOTO 0
```

Is there an easier way to do the same thing? I've tried using DIM X(5) but I can't get enough of the numbers on the 60-character line. Help would be greatly appreciated on this one!

Paul Smith, *Birmingham*

The ON command is definitely what you need, but the key lies in getting it up to what you only have, say, eight numbers on each line. Each consecutive line starts with either the ON X(8)GOTO, and ON X(8)GOTO, and so forth. If you're still unsure, try the snippet below. *Jason*

```
100 REM DISCOE WHAT TO DO
120 ON X GOTO 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070
1300 1000, 1010
140 0N X - 8 GOTO 0999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007
150 0N X - 7 GOTO 0999
1600 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070
170 0N X - 6 GOTO 0999
1800 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070
1900 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070
```

```
1 0N 0N X - 5 GOTO 0999
1700 1700, 1800, 1800, 1900, 1900, 2000, 2000
2 0N 0N X - 4 GOTO 0999
2 000 2100, 2200, 2300, 2300, 2400, 2400, 2500, 2500
3 0N 0N X - 3 GOTO 0999, 0999
```



Want to see that even Squinty has trouble getting hold of a second word processor?

Lights, camera... word processor?

Dear Techie Tip,

I am an amateur but an extremely eager and fast learner on my first job using my trusty C1280. I can't shake the thought of having to use a PDI as currently using the Rapidly word processor, which is pretty good with fast and easy editing. However, I could do with a better word processor, particularly one with instant editing. Does anyone anywhere know of a better word processor for the C64? One which is geared to the fast production and editing of large quantities of text? I have already used IBM Office, EasyWord, Microsoft, and Interword, none of which is the best. Also, is there a spell-checker program available anywhere?
Lorraine Corbett, *Chichester*

I've always found that the best word processing package for the C64/128 is SuperWord. The fact is that, apart from the EasyWord which was very good, SuperWord (US version 8.0) is the column editor on the C128—in C1280, of course—and can handle over 500 of text. You can work on two documents simultaneously and can set up macros in handy at



minutes of operation quickly. It includes a spell-checker that, bear in mind the "Go to Spell-checkers" when putting your life's work in their less than capable hands.

I have a spelling checker, it came with my PC.
I rarely make typos for my most important e-mails.
I've run this program three or five times over the past few days.
I'm sure your phone has to be better parked in its weight.
My checker should be able to

As to where you would get hold of a copy of the software, I'm not entirely sure I went out of circulation many months ago, but you may pick a copy up in Bournemouth (especially if you aren't a married ad, what will be his, of course - I am) or in your local free-ads paper. Jason

Up the creek!

Dear Techno Tips,

Repeat though a sort of foreign line of CD-ROM info and included an online database. They plug into the system ports, but I don't seem to have any games that use them - and I haven't got a clue how they

work. Could you tell me please, and also give me a 36002 code for locating them? Thanks.

Paul Murphy, Peterborough

A few of the early games released for the CD30 worked with patches. A lot of them were on cartridge for some reason or other. Let me get back to you with technical details. A patch is connected to 3602 Complex Interface Adapter 1 and to the 3601 360 chip through the 36004 ports, with its value being read from locations 36018 and 3601A. You really ought to read them through machine code rather than BASIC. However, if you use the 3602 command and the 3602B the appropriate locations, you can use the following list of code to work out what the patches are up to: Jason

```

36 0000 PAD0E 000000 000000 000000
10 0100 0-0 00 00 00 00 00 00 00 00
40 0100 0 00 00 0 0
36 01 00 0000 0000 0000 0000 0000 0000
10 0100 00 00 00 00 00 00 00 00 00 00
36 01 00 00 00 00 00 00 00 00 00 00
36 01 00 00 00 00 00 00 00 00 00 00
36 01 00 00 00 00 00 00 00 00 00 00
36 01 00 00 00 00 00 00 00 00 00 00
  
```

```

170 01 00 00 00 00 00 00 00 00 00 00
180 01 00 00 00 00 00 00 00 00 00 00
190 01 00 00 00 00 00 00 00 00 00 00
000 01 00 00 00 00 00 00 00 00 00 00
  
```

```

320 0100 0000 110
240 0100 00 00 00 00 00 00 00 00 00 00 00
260 0100 00 00 00 00 00 00 00 00 00 00 00
280 0100 00 00 00 00 00 00 00 00 00 00 00
300 0100 00 00 00 00 00 00 00 00 00 00 00
320 0100 00 00 00 00 00 00 00 00 00 00 00
340 0100 00 00 00 00 00 00 00 00 00 00 00
360 0100 00 00 00 00 00 00 00 00 00 00 00
  
```

```

380 0100 00 00 00 00 00 00 00 00 00 00 00
400 0100 00 00 00 00 00 00 00 00 00 00 00
420 0100 00 00 00 00 00 00 00 00 00 00 00
440 0100 00 00 00 00 00 00 00 00 00 00 00
460 0100 00 00 00 00 00 00 00 00 00 00 00
480 0100 00 00 00 00 00 00 00 00 00 00 00
500 0100 00 00 00 00 00 00 00 00 00 00 00
  
```

Short and sweet

Dear Techno Tips,

Wonder that it isn't possible to abbreviate the 36002 sequence so you don't have to type the whole lot in and can fit more on to one 36002 program file. How is this done?
Jeremy Heywood, Manchester

Well, I'm not sure where you fit your abbreviation to your group like that, but it's certainly true. The technique enables you to put more commands on a line by abbreviating, say, four letter commands to two characters. However, you should be careful when using abbreviated commands. If you can't remember with the first two letters of the command in length, you won't be able to do the thing when the command words are expanded again - and so all those nightmares that can lead to.

To obtain the abbreviations, you need to key in the first one or two letters, then, holding down the 36002 key, type in the rest and the prefixes a

prefix system. The PREFIX is the command in the extension. You can abbreviate the 0's a quarter inch. So the command 78 is

the 36002 078807

A. For example, to abbreviate 0020 you would press 0, release it, then press 0, release it, then press 0, release it, press 0, release it, then press 0020 36002 while you tap 0.

Commands requiring just the first letter before the 36002 separator are ABS, AND, ASC, ATN, CHR, CLP, COS, COM, DATA, EXP, GOS, GND, IMP, FOR, FWD, GET, GOTD, INPUT, LET, LIST, LOAD, MOVE, NEXT, NOP, OPEN, PEEK, POKE, PRINT, READ, RIGHTS, RND, RUN, SAVE, SUB, SWP, SWPL, SWR, SWPR, SYS, TAB, THEN, USA, XAL, XDRPH and XDR.

Commands requiring the first two letters to be typed are COMSE, GOSUB, LEFTS, RESTORE, RETURN, STOP and STRL.

And that's it, all other commands have no abbreviations. Jason

QUICK SHOTS

■ I was going through my collection of old magazines the other day when I found the Doublet? issue. I was wondering if it's still going and if it is, how can I join?
Chris Neville, Manchester

LG07 only managed to produce seven issues before it ceased publishing, and unfortunately no-back issues remain. Jason

■ Is it possible to get hold of a CD-ROM drive for the 360?
Ian Marshall, Glasgow

Not that I know of. The Electric Works Software company is buying hard drives from America through, and don't forget its amazing offer of getting hold of a 1041 disk drive for a penny short of seventy quid. And that's definitely something worth writing up for Jason

Re 360-36000, but these American 360000 drives (Electric Works Software is planning to launch) are capable of storing 3.6MB. Pretty hot stuff!

■ Your section is brilliant but why not why can't I do the pages long?
Patrick Kelly, Bedford

Because that wouldn't leave room for much else. Jason



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