

JAM-PACKED FROM COVER TO COVER WITH C64 INFO

COMMODORE FORMAT

If you've got a C64 then get this

ISSUE 60 • \$3.50 • SEPTEMBER 1990

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Reviewed: 1991, Escape from Arth
and Treasure Isle

Rated: The latest G208 software

Explored: Your C64's inner secrets

Explained: Games programming



Future
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September 1995 • Issue 60

COMMODORE
FORMAT

CONTENTS

12 Going On-Line

Stop computing in the dark - we show you how to get in contact with millions of other enthusiasts with our essential guide to getting your CM onto the internet. Get the names of free information, entertainment and software files.



This feature is a guaranteed cyber-motivator: super-highway internet-to-tele-telecommunications free zone. *Free.*

14 GEOS

Business Fisher reveals about the latest essential software for your GEOS setup.



Use GEOS to make money with profitably, the hottest source outside from CM.

5 ON THE POWERPACK...



Blimey!

Ho, Ho, Ho! Read Corner-bell, but the title "Blimey" marks more on the topic than that, though - we've also got the development version of Super Pac Tennis, and some excellent sound and light demos courtesy of the Windows team.

6 Power Central



Are there? They're always, but that's not it? There's got to be.

How fast promises of up and coming ideas that you'll be seeing on your CM in the very near future.



What are you? That's Blimey, Oh is it? There is page 6 to that end.

20 Potted Guide

Sometimes, based the Mighty Boon to get a guide to writing games, so we had, if you want to start on the road to programming your first Potted on your first day.



REGULARS

3 News

If it's happening on the CM, it's happening in this month's news. (Only, the news doesn't hold true - there's too much relevant stuff in there too.)

9 Contact points

We're not the only people who publish about the CM, you know. If you want to hear another side of the story, read the feature reviews.

10 The Mighty Brain

After turning down the opportunity to work with Stephen heading on his new book (he didn't want to show him up), TMB sheds a few more letters.

22 Buy-a-rama

Our regular small ad column takes a more positive turn this month, though the people advertising refused to write their words in reverse.

GAMES

8 Supportware

This month's PD column looks at a brand new scheme from Jon that's 100% free you more good games for even less money.

21 Game Diary

Super Pac Tennis gets closer to completion, as the Windows team try to track the code.

23 Gamebusters

Get those games instead of be a gaming genius, by eliminating this month's tips column.

SERIOUS

15 True ROMantics

The central suspicion from games ever decide into the heart of your machine.

16 Techie Tips

No problem is too big or too small for our resident expert Dr. Frank. He is good to you all.

18 Back to BASICs

In keeping with TMB's discussion on page 20, this month we cover the beginnings of adventure writing into just one page.

Still here



CPM will change the way you use your C64 from now on, instead of using a computer on your own, it's time to connect it to the rest of the world, and share your

thoughts into the electronic meeting pot that is the Internet.

Playing cyberspace wads, if you haven't yet been online you don't know that you're missing megabytes of free software, the ability to send messages to any other user in the world at the click of a button, and access to the largest information database on the planet — the planet. And, finally, to be online, to write, and you don't see this. Turn to page 12 for more details.

Amazingly enough, the C64 isn't really cut out for the world-wide web, a network designed for 68k colour machines and non-proportional fonts. If anyone out there would like to write a utility to make the most out of it, though, we'll happily pay them and put it on the coverpage.

Another feature in this month's CP is Jon Neff's "superscience" column. Though in itself the science is a great idea, the reason for its existence isn't very nice — despite the many months and grams that no new software is released on the C64, when thousands of products new, exciting games, the response they get in the way of solid orders was distinctly wabey. Jon feels that commercial C64 software is no longer viable — where are you going to sell them if it's not coffee to support us, we have to support the coffee to return? It's unfair to expect people to carry on producing new old existing games when a lot of people just need for the physical version to be distributed. This is elaborated on page eight, but personally I'm surprised that the people who support the C64 get so little response from you, the people who benefit so directly from their actions.

The next issue of Commodore Format will be on sale on September 25, and if you're looking for games, you can all around and wonder how it's going to be more than a little bit special. In fact, it's going to be an issue to remember.

Simon Stammers

News

being established to provide a contact group and clearing service to owners of all 8-bits, including C64s, C128s, Spectrums, F000s and Games. The organisation has been established by a management committee of representative users of all the machines concerned.

As an offer to all those looking for an active group to join, Commodore Format readers are invited to a free live membership '92 sale to Jon and Valorie my best life — and. Just send two first class stamps and a return address label to the BBS C64 contact, Brian Wilson, 28 High Street, Sutton, Surrey, GU6 3PA.

They're back

Despite receiving a kiss that glowing review in last month's CP, The Ultimate Commodore Database has returned triumphant with a new, improved map. Coming off-line 2500-2500-2500, it should contain a lot more information to help your C64 hobby as well as an abundance of free software to keep it up with. Issue 2 is following the format, and is available for £1.50 from PG Software, 41 Broadway Road, Wokingham, Wokingham, Berkshire, RG4 5EQ. Alternatively, you can send along an SAE for a free copy of our catalogue, detailing the many top PG titles available.

PD forever!

If Public Domain software is really your thing, you might want to get hold of Public Domain 64, the ultimate guide to public domain heaven, featuring reviews, prices, interviews, news, and a free thing that goes on and on (programming too, mainly). It costs just £1.70 and you can get it by writing to: The Northwood Team, Marlowe Park, Wotton, London E17 3J4 for more info. Alternatively, ring 0181 621 6026.

Hoogeveen?

Peter Hoogeveen, creator of the first new European international, is proud to present several new games to the world, primarily the main himself and available through Europeans. As well as many top titles favoured like titles and things coded by CP, he's making new games like Combining Quest available to the general public. For more information, write to Peter Hoogeveen, De Raast 43, 7103 HD Hoogeveen, Holland, or ring Holland 02686 73467.

Getting serious

The Independent 64/128 Association, formerly run for the benefit of Spectrum and Sasi-Coupe, is



The Ultimate Commodore Database. Leave free will helpfully send you a free issue information.

Commodore Format

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See also General Fund Project 83.
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Pixelated

Anyone with a serious passion for the moving (and pixelated) image will already know that the London Effects Animation Festival will be running from 20th September at the London Effects Animation Centre, holding workshops and hosting talks by such renowned figures as Brad Bird's Productions, Walt Disney Features, Ray Harryhausen, Medialab, New Wave Entertainment, Cinecitt, Frame Store and Virgin Interactive Entertainment. It's one of its industrial light and magic will also be—turning up.

Get Animated!

If the LEAF wasn't enough to keep your creative juices flowing, you should be thinking about going along to the Museum of the Moving Image where, from 17th September to 20th October, the Get Animated exhibition will be held. The organizers will be encouraging everyone there to participate in the making of a short film, called 'Going to the Pictures'. The session will also include training sessions on the World Wide Web. If you're interested, you can contact the London Festival Board for details of the one, though.

Cheap publicity stunt

If Aija's political (but ultimately wasted) election wasn't enough to give you doubts about the reason for your being in and the way it's run, Tony Puggins sent a lettering into College Green to hand out copies of their latest game to MPs who haven't already voted the National right thinking voters. It's all unclear, say Puggins, whether Blair will want to act like a leader and do the political wrongs, become a leader and do the right thing between you and anti-European issues, or

become an effective leader between the left and the right factions of the party. Here at CF at Aisha, we really don't care.

Ah, I see.

Though it has to be admitted that the average quality of public domain software is generally poor (with exceptional packages standing out), there is apparently a fringe of new programmers who aren't really happy sending their work to normal libraries, for fear of it being buried down on the grounds of quality. It's for this reason that Tantalus Productions has started up a library as a home for badly written software, working on the basis that no-one will feel apprehensive about sending over the most embarrassing piece of code.

Quite what the attraction is here we're not sure, but if you're rubbish and you'd like to spend a few hours rummaging through the mountains of stacks for that your years have produced, write to Tantalus Productions for more details at 15-80 River Lanehead, Byfleet, Surrey, GU24 0JG. You can't send in more than five collections (don't put just a little or have!) You can also find a valuable way to share your programs and knowledge with others to the greater good of us all—no!



Writing political statements is cheap, looking politically stupid, it's not.

C64 Score

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POWER PACK

Super Pac Twins demo

Tap — is the game name — has been blowing through these early stages in our early feature, and now leaves your choice to play what the Commodore Subzone has come up with so far. It may not be the most exciting, playable game yet, but this is because you're getting the chance to see a game in the making, following through its development. You can use the options to send your Pac off in any direction you like and, as the story this month says, the fire button doesn't do anything so yet.



Super Pac Twins — it's now it's here! It's not quite finished, but it's worth a look. It's yours if you can get your hands on it.

In fact, I think it's time for a competition — it's now how good you are at game development. What you have in front of you is the bare bones for a Pac game, but very little beyond the original theme (and of original design). Well, if you can think of a brand new, original gameplay idea for the brothers to include in this arcade clone to make it extra-special, you could win something nice. In fact, you could win a (great) mystery bundle of C64 games or tape, to be made to your wishes. You don't have to come up with the machine code, graphic design or even full concept, but if you can think of something that is to be featured for the game, you could be a winner.

Send your entries along to Andrew Fairbrother, Willy Dando, Title (20) Mac De Hart, Commodore Format, Future Publishing, 30 Monmouth Street, Bath, Avon, BA1 1JN.

Road Course

From the author of Model Commodore a similar idea game, Road Course, which simulates the highway situations or a man intent on reaching his destination. It may intend on revenge. A man

intent on justifying an outrageous plot paragraph.

Why was a man? It was right of the road (don't see the Jolt) — why? He has no hair, no eyebrows, and no highway code. It's a tough, far-reaching world out there, and only the 30 survive the high-octane, six-cylinder turbo-dielectric race called simply "The AAT".

I have so much better news. Use the joystick to



Road Course — it's now it's here! It's not quite finished, but it's worth a look. It's yours if you can get your hands on it.

control your car, amongst the swarms of other vehicles blasting past with no regard for anyone's safety, pushing left or right to steer, and forward and back to accelerate and brake. You will sound your horn at other drivers, should you ever go fast enough to present a danger from behind.

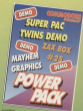
Mayhem graphics

If you don't know of Mayhem, they're a British-based group of C64 fanatics, who's kindly got



Well you can get this out of this magazine, for a start. But a nothing. We love Jacky — he's his

This month's tape has a slightly different flavour, thanks to the Mayhem squad.



together several demos specifically for Commodore Format, to brighten up both your screens and your days, and show you exactly what your machine can do. The first of these demos is a graphics piece, that you can look through using the space bar. Could it be simpler?

Zax Box #25

The second Mayhem demo in this month's tape is a selection of tools, to push your C64's muscle chip to its outer limits. Once the demo's loaded, you'll be presented with a screen displaying the frames available, and a number for each. Simply type the number to hear the relevant tune.

Before you get to the stage, you'll come across another handy and genuine, at which point you can be free to get a little amount with the new demo codes, but to include mostly things — everything they do, whether relevant or not. Oh well. Most from the Mayhem squad meet yours, together.



It's that music selection screen. You don't believe us about the experience, do you? It's



POWER CENTRAL

Once again, the office degenerates into a bunch of screaming writers wrestling for the joystick when the games arrive...

Misfortune

Red Bytes



You can see the screen unnecessarily filled up with graphics, but isn't that a catastrophe wearing a hat? No—except just for you. Actually, I'm sure there's a catastrophe...

Though Misfortune was officially the debut product of the international software team Red Bytes, Misfortune is said to be the first they've ever written. Red is starting to take hold of the games, and

inspired by the cunningly named Red Bytes, and challenged by the antics of good, headed up by Dozer. When his editor gets cited by ERT's foot, Dozer decides to prove himself as a true leader and take the best game in hand to make it a 100% something.

That's right—it's a horizontally scrolling platform game with a man of average, unreluctant looks, and a dinosaur who, despite being green, can't help looking just a bit like Mayhem, coming through what could pass for Mowbray.

Having said that, we shouldn't imply that Misfortune is just a remake of Mayhem—your mission is to guide Dozer to the five keys left on each of the five levels, then onto the five keys on the other three (no hidden compartments on the planet, to steal Dozer's before, 500000000000—you can keep your words, unless of darkness and all domain, Bible, but we're going to take you for a big one. This isn't as easy as it sounds, though, as the worlds are all pretty hefty and you can only carry one key at a time, making for back-and-forth across the noobie terrain, with God-punk that

read once you've got past them. Normally the world's a flat in a game, Misfortune uses it to an advantage, making the repetitive journeys a little more taxing. Red spinning across an empty, desolate level.

Thankfully our little dinosaur friend doesn't have to work completely unarmored—instead of the Mayhem style of bouncing on heads, Misfortune has four a dinosaur chest enough to use a gun.

explode or bring heads some bullets in, if you manage to get hold of a power-up, other forms of red objects.

So while looking forward to Misfortune as it promises to be a good platform romp with a fair bit to see and do, we'll have to wait to find out whether it lives a Mayhem death, but given the quality of the previous version it shouldn't be too far off the mark.

Twin Terrors

Red Bytes



The appearance of the little people you find before the purple platforms, while the purple aliens, running around on their own, and the one you get Red Bytes.

You'll have thought there'd be a limit to the amount of work you team could undertake simultaneously (but somehow Red Bytes are finding their difference between Misfortune and another, more futuristic platformer, Twin Terrors).

The plot here is largely irrelevant, suffice to say you're a lone specimen (or one of a pair if you're playing a two-player game) as the title would lead to suggest, battling against a series of weird aliens on a set of five screens. As you can see from the progression, the level layout is all fairly simple, leaving the game's challenge for the alien to defeat.

The best way to think of Twin Terrors is as being from the Bubble Buddies school of game



These two screens were even purple, but it plays computer game style, you can jump up like Dozer and knock the power up out with quite a bit of force.



The results of a particularly early jump, in which the red alien detective finds himself above the game when through the appearance, quality.

design? You have to fight against an ever-increasing army of odd ball guys, who always get more advanced, learning more skills as the game progresses. The rocket launcher you're normally only given most of the ends you come across. Though some boss battles are a few more hits than others before they'll die. Also, with the progression in hardware, the game becomes a little more unpredictable, so they give the ability to walk, making that nice when you're lined up by BLOODING straight into you, jump, meaning you can no longer hide in safety at the top of the screen waiting for a chance to drop down and dispatch some instant-killed beasts, and over the back.

In all, *Team Terror* is definitely the winner of the two (but *Blaze* does not've looked at this month, but in CP's opinion anything that incorporates the relative pleasure of *Blade* should not get to be worth a try.

Super Nibbly

KIDUB



You'll notice a definite change of play - make your moves later the longest possible route of all paths.

Quite why the Hudson/Emulion have decided to release a 1988 game in 1998 is a mystery, and whether Super Nibbly has actually added anything to the original has more quite been questioned, but Super Nibbly is rock, giving the world another version of that classic snake puzzle. You may have missed it, but you had your very own personal version on CPMS Power Pack, to help you to con-



Super Nibbly - this should have taken shortly before the phone realized that this isn't an eight track, is actually not the best.

vince yourself that these old games really are worth the effort.

The less familiar ability is simple - you're in control of a foreign snake, that's not absolutely anything out of the ordinary. The more he sees, the longer he gets, until he fills the entire screen with the head segments he's gained from eating. When you place a snake like this on an empty screen full of pits, you come up with gameplay similar to the classic *Teenage Mutant* game, where two players frantically surround a screen trying not to get caught up in the deadly maze left by their opponents. The difference with *Nibbly* is that the only ball on the screen is your own, that, though it isn't infinite length, gets longer every time you eat one of the many pits scattered around. The aim of each level is, of course, to empty the screen completely of pits, allowing victory yourself.

ADD it has to fit the equation, and you've got real problems. Most of the traps aren't difficult to navigate as the maze isn't complex enough for you to get lost in, instead blocking off effective escape routes and turning the gameplay on its head completely - the problem now is calculating a safe route around the trap without blocking your self in, and making sure that the walls and holes you're taking will be clear of taking the time you get to them.

In all, this is a fairly playable title game. To be honest I don't really appreciate an eight ball, so there aren't too many positions to the old theme, but there's a lot to be said for cross-game games - mixing *CompuLink* with *Panic* makes for some new levels in strategy, and *Nibbly* does full advantage of this.

Starforce

KIDUB

Space invaders has always presented problems for me. Despite being the original game that pushed the videogame industry along in leaps and bounds, the many spin-offs it spawned just confused matters. Was *Starforce* the first to have aliens that flew straight at you, or was that *Doom*? Which one had a mother ship? Who was responsible for the bases you fell around? Was *Tempest* just a three-dimensional version of the same game?

Whatever, *Starforce* is a basic two player Space Invaders clone, with a horde of alien marching steadily down



If you look closely, you'll see that little alien sitting inside their ship. It's not looking good for the Earth boy, is it?

The popper thing, occasionally breaking tanks to launch these aliens in two and three, while you sit at the bottom either waiting to be killed behind a shield that's being constantly tormented by alien weapons, or depending some means later paths to the nearest room.

Unfortunately that's all *Starforce* seems to be - there's the invaders, and you. That's it, and the invaders, normally, choose make an effort to add something to the game they're doing, but not this time. In fact, *Starforce* takes something away - almost every shooter game featured an alien screen's worth of aliens, starting with as many as 40 on the screen at one time, it seems much bigger spaces, only filling up 10 ships in each attack force. This increased space also means that your ship effectively moves slower - though it may travel at the same speed, it takes twice as long to get the weapons firing size of any bullets, which is difficult played from the sheer top of planets to hit on a screen that size.

Oh well, it'll be *CompuLink*, and if you haven't got a copy in your collection you're missing out on the granddaddy of all programs up, but if you have, there won't be much point in looking forward to *Starforce* - sorry.



Why do aliens always attack in straight lines, anyway? They crash the bit into the bit into the bit, they just disappear like chips on a circuit. They're everywhere, it's true.



SUPPORTWARE REPORTWARE

Jon Wells of Visualize is so disheartened with your miserable bunch of skinflints that he's stopped commercially selling software for the C64. I like to start a page on a downer, me.

Ever in this year, Jon Wells (head of our parent Magazine's) Distribution 60 has been cracked and distributed all over the world by the rough, home-based pirate network and so, even though there were a lot of people using the package, he didn't get a penny back. This would be irritating enough were it not for the fact that companies like his are continually being pressured into producing more games for the C64, even though nobody buys them when they do finally appear. It's for this reason that Jon Wells has set up SupportWare, a brand new way to get software for your machine.



Do you think you're a little called *Escape from Aris & Treasure Isle*, but you don't want to have about that.

SupportWare makes every month the PC, even for the fact that you don't have to pay for the first version—by sending off a disk or tape and the cost of the return postage, you can receive the full package, free. From cheaper than a PC library. The other major difference is that the software is not actually in the public domain—it's full, copyrighted software and cannot be sold for profit, even if that profit is the fee paid a PC company makes from duplicating the package.

Once you've decided you like the package and want to keep it, the SupportWare scheme comes into action. We are encouraged to send a con-



The knight with adventure games is that they don't let you go your own way.

tinued (with a guaranteed minimum of \$10), not as payment for the software but as a way of saying "Thanks—I liked that one, is there any more?"

But why?

It doesn't make much sense, does it? It isn't approved about other people cutting in on his profit, is why else it not today? He has his reasons.

"SupportWare has been introduced as a last resort, to boot out the market, giving everyone a copy of the product and thus destroying piracy. I have nothing to lose, and an already-developing software on the PC, but I'm kind of the bit and would still like to support you, if, and only if my efforts are supported in return."

So it's decided, then—this scheme is your last chance to pay full commercial software from the files of Visualize and Protron. If you order the software, like it and decide to reward the author's efforts, the scheme will survive. If you get a copy and at last, thinking "tomorrow else will pay", you'll have doomed the future of a scheme that could bring you some of the cheapest high-quality software in date.

So, if you want to get hold of the first in the SupportWare series, send a first class stamp and a disk or tape to SupportWare, c/o Jon Wells, 5 De Grey Road, Kings Lynn, Norfolk, PE22 4PL.

Package 1: Escape from Aris & Treasure Isle

Originally released over a year ago, *Treasure Isle* followed the fortunes of a young lad out to find an enormous stash of gold and rubies. It checks out adventure style, much more than 80% when he returned to, commenting that apart from a few problems with the screen (the bit that understands your instructions), it's an immensely playable game. Of course, all best adventures are an acquired taste, but if you'd like to get into the genre, *Treasure Isle* is a damned good place to start.

Escape from Aris was a completely different style of game, with a space-man-hunting around a lovely, flexible planet trying to get back on the surface to his homeworld. The variety of props, coupled with the different types of fast guys you'll meet along the way make *Escape* a fun little exploration game that received 70% this time last year, and is definitely worth a second look.

Having said that, being stranded alone on a hostile planet isn't a situation we should make light of, is it? You may have been stranded in a town or small village before, but at least you had a chance of slowly working back. You could ring up a friend and get a lift, or find a bus stop or train station. People tend on Aris don't have those facilities. How high can you jump?

NEXT MONTH

We'll be diving into the delights of the next.

SupportWare packs to fit the

shells, featuring *2000* and *Dragon's Lair* on the pack 2, and *City Builder* and *Rescue Mission* on pack 3. By that point, we expect you to already be enjoying *Escape from Aris* and *Treasure Isle*.

Contact points

Stop the presses! Hold the front page! How come you're never around when the superhero is? What do you do with your suit? Where do you keep the hairgel? Or the cape, for that matter. Does the 'S' shrink in the wash?

'Zine 04

Steve Rogge • \$40 • #108
68 Alhambra Rd, Pigeon, Devon, TQ4 4JH
The 20-page 40 format zine comes complete with a disk, though the author offers a tape to mail to make sure tape readers don't miss out of the fun. Issue 04 contains game demos from Binary Zone, programs from Labyrinth and a Phoenix World news.

Have you ever had the feeling that you're being hunted down? The cover sports a globe, with the coastline. The wonderful world of the C64? Though it'd like to point out that CP received the zine on 6/1/95, after we'd sent issue 38 to the printers on 1/10/95, but before the issue hit the shelves on 1/10/95. Pleas, eh?

Anyway, this issue contains a very large BASIC Labyrinth, fantastic hints, reviews of Funhouse and Ombra, plus an interview with Don Knapp from MegaZone Software. Other high

points include a news page that openly discusses CP (Good - not) and a vaguely militant C64 column the cover page. In order to get things off to a good start, the authors have also included a survey to give them an accurate idea of what makes you tick.

All in all, 'Zine 04 is a good zine. Though it's quite well priced, its layout and visual quality will resemble photocopied sheets, but the information is all there. 'Zine 04 is a magazine that you should consider buying - you could benefit from it, and it could benefit from you.

4/5

Commodore Magazine

Dean Suttler • \$30
68 Alhambra Road, Cumbey Estate 2,
Gosport, BH12 5JT
Commodore Magazine is a fanzine built up of 16 A4 pages, containing news, tips and game reviews. The news, a slice on Euron's activities in the C64 market, is so strongly typed straight from the pages of CP that it's painful to read. Everybody has to find a source of news, but there's no need to rip it out of another magazine.

It's 90 cents down rather heavily on fanzines, but there are a lot of things fanzines should and shouldn't be, and it matters to the reader - no one wants to spend time reading what they already know, and new or relevant information should be presented in an interesting or entertaining way. C64 continues with an A-Z look at some of the best software houses who had anything to do with the C64. The only letters here that don't remind you of the good old days are 'S', 'E' and 'C', which were left blank, the competition being to provide entries for those letters for a mystery game.

When someone has a passion for the C64 (or the Amiga), C64 authors produce a fanzine. They get the chance to explore new directions in publishing and see exactly what they can do with paper and ink. Instead, this fanzine submitted to reviewing old reviews and talking about events long gone. Great.

2/5

Oh, come on

Without putting too fine a point on it, there are a lot of good fanzines out there, and there are a lot of, um, other fanzines looking about as well. It seems a shame for people to lose the opportunity to produce a fanzine on a few pages of the standard, run-of-the-mill material. The point of a fanzine is your freedom to do the things that normal magazines can't get away with. Some fanzines fill their pages with wall-to-wall information, others are take a more relaxed, less formulated approach. However they do it, they do it.

If you're producing a fanzine and you want it to stand out, why not do something a little different with the space? Take a page to write on about how much you loved ERM, or do a feature on the best game music. Tell your turnout to the next level, or spread yourselves gently about people (actually, don't). Whatever, if you want your mag to stand out, it has to be special.

There's a wealth of viewpoints on our cover issues, and a lot of different voices are all over to hear - don't get drowned out in the crowd. When you've got the chance to say exactly what's on your mind, so don't waste it.



So what's the point, then? What happened to that? Well, this is a little example.

THE MIGHTY BRAIN

Another month, another stack of letters, another 2502000 seconds, another 648254 breaths. A brain can get really bored, you know.

"talent and, most importantly, money"

So like to start up on that favorite for the C64 which would give away readers' games. It's games and my own terrible constructions. I don't have a disk drive or printer or any special programs. What I do have is enthusiasm, writing talent and most importantly, money (about \$200). I'd like to know what equipment I need to produce my favorite. How much do I need and where to get it from.

Also, how can I reproduce the games I made and readers' games. How much does it cost and where can I get it done or buy the equipment I need.

John Coffey
Os Waterford

Well there — put your money away for a moment. Producing a feature needs to be an expense as you think. You'll definitely need a disk drive and a printer. But you could put both up for under \$100 in the Business section. The C64 software is a little more difficult, as unless you can find what

you're looking for second-hand you might have to resort to C64GS utilities (that's the job, but not before you buy a second disk drive (you — you'll really need it).

When you've read the DeskTop Publishing software to turn your words into pretty pages and you've printed them out, all you need is a photocopier to turn one collection of issues 44 pages into a whole bundle of fanzines. The easiest way to get access to a photocopier is to go to either your college, local library or copy shop.

Duplicating software is nowhere near as easy though, especially on tapes. Your best bet here is to distribute the software on disk, as you can duplicate them quickly and easily on your test C64. We use a professional duplicator to produce our Commodore and they won't duplicate anything in quantities under a few thousand.

With a lot of patience and a lot of hard work, it's really possible to produce a fanzine on your C64, and spend the rest of the money on games. When you've finished, send a copy to CP and we'll be happy to run a news-story on it. **TMS**

"a future issue?"

A big thank you to all the team who make Commodore Forum possible every month — keep up the good work!

Now, can you please answer a few simple questions, your mightyness?

1) Would it be possible to dedicate a page to a future issue to the rest of staff and print a group picture?

2) What magazines are Steve Gilder and Cliff

Anderson writing on now?

3) Is Jon Wells still programming games for the C64?

4) How about a demo of SECS for the Powerpad?

5) Can readers submit articles for publication in the magazine?

6) I'm sending some tips for Gamemasters. I hope you (edit some of them, as they took a long time.

And Peter,

Manufacturer

Why thank you. The upcoming year, let's get to your questions.

1 Your dreams will come true next month, when we talk to everyone who was over on CP, anyone else, and then some.

2 Great! Currently reading on SFX, we intend to do a 4 mag, and Cliff's doing the pages of Super (they look beautiful). They must have passed through the chain.

3 Yup — look at page 20 for more info.

4 SECS is, unfortunately, disk only, and just wouldn't work on tape. But look and act fast.

5 Sure — you can submit one...

6 And they're much appreciated. In fact, you find you've dominated page 20 with your Action/Reality expertise — not one. **TMS**

"how to write games"

We need more if you can help out with this, but I've been wondering how to write games on my C64. I've been programming in BASIC for a long time, and have just started learning to work with machine code.



Could you write games? Do you really believe we'll tell you how in the space of a page?

Robert Jones
Arlington

Oh, the cheat — of course I can help. Writing a computer game isn't a small task, though, and it would take a lot of space to show you exactly how to do it. Though I can't take up enormous areas of the way the editor gets miffed if I read on his (she). After a short session in terminal text, I've managed to count (page 20) for The Mighty Brain's Future Guide to Writing Games. That should help you get started. **TMS**

Short cuts

Please send me Rainbow Islands.

Maxham, (single) w/

Andrew King, Dublin

Yes. Go away. **TMS**

What do you eat, Steve?

Tony Marledge, Glasgow

I'm on a high-carb diet. **TMS**

Take a leaf...

Brimmy! Only half a page left to tell you about this incredibly useful book...

An Introduction to 6800 Machine Code

By S.A. Peacock

£2.95 • ISBN • 0896-08868-102-0

At the risk of sounding like a programming fanatic, you really should be giving your C64 a few instructions one day. This month's *CZ* features a guide to writing games in BASIC, as well as the Mighty Book's guide to writing games in machine code. At one point, to be mentioned: An Introduction to 6800 Machine Code, a book by Bernard Babbot publishing itself seems as an invaluable aid to all readers everywhere, and then some.

Why?

Well, 6800 is a difficult language to learn, made harder by the fact that the instructions aren't made up of words like PRRST or GCFD, but acronyms like LDR, which don't exactly tell you if you don't have a handy reference to exactly what they do. This is where *Introduction comes in* - despite being published several years ago (but never revised), it's probably the most indepen-

dently written 6800 thing that you can find.

The book starts with a gentle introduction to the way chip works, covering subjects such as binary, hexadecimal, and binary coded decimal. Once you're got to grips with the various counting systems you're likely to come across, we enter the realm of registers, learning all about the different variables you can work with in the language, and exactly how to use them to their best advantage.

From this point on, the book takes you behind the scenes - you'll find a complete translation of every command available to you while programming, exactly what it does, what flag it affects, which registers it corrupts, and what its assembly code is. You'll also learn not exactly how long certain machine takes, as well as the best way to use the various stack and I/O functions.

To help you get further, the appendices contain handy example listings compatible with the C64, so you can get what you've learned into practice straight away, and more programmers can see just how effective machine code can be within a short

space of time.

One thing the book doesn't do is go into the specifics of the C64 - it concentrates on the 6800 and the machines that use it, and in that it doesn't tell you all about sprites, loaders and so on. However, if you're been keeping an eye on the Making a Murderer, Diary of a Game and Ninja Turtles columns, you won't need that, will you?



The book doesn't cover the software format.

Go on - summarise it

All in all, *Introduction* is an excellent book for you to collect, whether you're an experienced reader or a fresh-faced beginner, possessing of the points and nuances of machine code machines. It serves as an invaluable reference guide to every command available, and for only £2.95 you should run out and get a copy. It won't be the only book you'll ever need, but it's definitely one of the best.

85%

THE DARK KNIGHT RETURNS

BUT IS THIS THE BEST BATMAN EVER... OR THE WORST?



Two-Face in issue 3 of SFX, The Science Fiction Magazine



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GET CONNECTED

Everybody else is doing it, so why won't you? *SF* shows you how to get online with your OS/2, and join the party with 25,000,000 other people (I love statistics, me).



What is it?

The internet is the name given to a worldwide network of fibre optic cables, government lines and telephone lines that join together the thousands of computers attached to it. By getting your computer to dial up a local part of this network, you can send and receive information from any other machine on the network instantly. Because your information can be sent at the speed of light, there are few physical boundaries — you may be communicating with a machine halfway around the world, but all you'll notice is a slight lag.

So we have a computer network that allows people to exchange ideas and information free of the restraints of geography. This means that if there's a particularly good OS/2 site in America, you can read their forums, download their software and get it with their permission as if they were next door. It also means that the teamy people who keep the classic game *Duress* can get together and chat about it, despite being on completely different continents.

What's on it?

File transfer — The net is first and foremost a file base, types of data.
Electronic mail — By far the most useful service the net provides is the ability to send a message to anyone attached to the net, at which point they'll be able to pick up the message and read it, up to a day before the same letter will have arrived by normal postal systems. When you take out an account with a local service provider (the people who your OS/2 might get a service from the net, said), you'll automatically be provided with an address. Commodore Format's address is 28 Richmond Road, 14 years at Fulwider, which is a Company in the UK.
Software — There's lots, anyway. As well as your own OS/2, there are a lot of other computers connected to the net, some holding databases of information just waiting for you to use. The standard method for this is the *gopher* protocol, known as FTP for short, which allows you to look through the contents of a computer anywhere in the world, and pick out the files you'd like, dragging them back through the network. When the telephone line ends onto your OS/2, in effect, these computers are waiting for the file transfer, asking orders and downloading software as requested, the only difference being that you don't have to dial, and the software is dumped straight onto your computer, allowing you the freedom to store, copy, edit or the postal service.
Open discussions — As well as the more private form of messages (email), there are forums for open discussion known as newsgroups. Anyone can join in, and the messages

You've played all the games you can be, and written all the letters you need.

You've done your homework, accounts and checked the lights with your OS/2. If you're especially keen, you may have even tried programming it. In matter what you've done with your machine, it's always been online — you can see only the data in your file and the books on your shelf for information.

Computers are inherently powerful machines, and this power is harnessed when you link them together, especially when there's a vast amount of information to share. This is where the internet comes in — it's the combined resource of over 20 million people, which is probably just about as unmeasured as you can get.



They're made of online OS/2 fans, such as the Chicago Urban Commuters Users Group, which is not generally known. You can find more at compuserve.com/cucug.

passed them by anyone else, and post messages themselves. This system allows lots of people to talk to each other and exchange ideas, help, information or inside news and gossip. Obviously each group is based on a different topic, so to talk to other C64 users you'd go to that specific newsgroup. Detailed lists of all the groups available can be easily found, but if you want to save yourself the hassle, why along to COMMNET.COM, the group-dedicated to Commodore machines.



See don't think it's obvious, did you? This picture of the obvious (and commercially successful) 68K was found on the net, proving you can find information on just about any subject simply by looking for long enough.

What you'll need

You're probably guaranteed by now that going online with your C64 requires a fairly large outlay on your part. It's not as big as you think, though. There are only really four things you need to get online: **A modem** - This is the box that allows your computer to talk to other computers over a telephone line. It basically converts the signals and routes you send it into specific high-pitched tones that the line is best at carrying. Ready to be downloaded back into a computer signal by the computer that received them. You can get one of these modems from (anyone's suggestion -) DixieTel.com, ranging from roughly \$115 for the standard to \$280 for the fastest, one that's a tiny bit more reliable.

A phone line - In case you were wondering, you'll need a phone line

and you'll have to pay the phone bill for the time you spend connected - at the end of the day, BT will send us with that of your money.

An account - Finally, you need somewhere to

keep half the signals you send it and half from here to be stored to avoid being sent to go. Two good service providers are IX, who charge a £28 setup fee followed by hourly rates, ranging from \$50 (\$80) and DixieTel.com, who'll send you a \$15 initial fee, then £12 monthly after that (plus \$100, 20% 120%).

Basically, not too big a fee, the program and, despite being a silly name, it's one of the most widely available, being one of the communication and file transfer

these options by making out the charges and checking for any errors that could occur.

Have fun

And that brings us to the end of our Internet guide. There's a lot more to the Internet, but the best way to learn is to get on there and find your own way around. When you get online, drop us an email at com64@stetnet.com, but we doubt you'll have the time - there's so much on the Internet that I'd love you a chance to explore. And when you find you're not enjoying, why not try adding to BT Online magazines, our groups or PD libraries. We're just the beginning...

May 5, 1995

The Power of Minutes, WebPages



I read that it takes three to successfully visit for a Kilobyte website. What happens if its five or 10 percent the reader?

Hey kid, if you're looking for a tip of this, you've got to go on the page and I gotta tell you, you'd do it to a certain extent of that software. Because I believe that we'll have a lot of Kilobytes in it that is to be a page to read someone who can't do, right?

So there, off course, through the software developer of that that related to an every year, that then, it's your chance to great questions in the area of the other. Webpages, the net, you know.

FLYING TURTLE PAINTER?

We could see it in your eyes. Email - from Newsgroups - wwwnet. Two authors at the speed of light - alexandria@pub.com. When you're ready to explore the delights of FTS, here are the places to go, the host name is the address of the machine, and the path is a rough guide where to go when you get there to find the good things. These are repeated by the first backslash: comp.commodore.com/pub/fts/

Everything from 2808, through programming utilities to games. If you want it, it's all here, in one easy-to-navigate archive. www.commodore.com/PROGRAMS/04/

Stuffed full of good software for those who're using their C64's to control MIDI music devices using an www.commodore.com/04/

What? You don't know C64's are used on the C64? Well, this is the best place to find all those exci-

tant utilities to run on the operating system. <http://www.commodore.com/04/> (Note - that's nothing on this one other than PD games. Lots of them. Lovely games. October games here - www.commodore.com/04/ Where to find a host with even more fly sites listed. If you're not happy with the list we showed you, I'd like to - it's all wanted... we do it as an archived comp.archive/04/

Software from the newsgroups that matter the most to our beloved machine. www.commodore.com/04/ The place to go for a copy of www.commodore.com/04/ Some, one of the handiest utilities you'll need for maintaining those lovely graphics. <http://www.commodore.com/04/> This area is for technical C64 information only - basically collected full of interesting websites, all the way from Finland.



GEOS

Andrew Fisher reviews *RUN* magazine's GEOS compilation disk, as well as the month's hottest new GEOS utilities.

The double-600K compilation disk that *RUN* magazine created is now distributed by Creative Micro Designs, though the UK site is handled by ERES. It comes complete with a manual listing all the software, and (possibly displaying paper versions of the cover fronts that come with the package and the two 600000 of city

PD and shareware

If you've spent any time reading Andy Roberts' articles about the joys of PD and shareware, you'll probably be slightly annoyed that there isn't more GEOS software available under the aegis. This is because you're wrong.

Kingway PD check out 20 disks full of GEOS shareware, and will happily send you some for £2.00 per disk. Before you order anything you'll want a catalogue, though, so send an SAE to Kingway PD (C/O 28, 72 Glenrose Road, Brentford, SE15 7SR). They'll also give you a free disk for every 10 disks you order.

The 60700 is another source of GEOS PD, and though they limit you to two disks per order, it'll only cost you the disks and an SAE. Again, there are 20+ GEOS disks amongst the collection of over 100 titles. You'll have to be a member to get the software, so why not write to John Sandwell at 40 Brooklands, Luton, Beds, MK11 1PQ, Bucks, DN6 5BA.

And then, of course, there's the geoChat, who carry over 200 utility disks, 60 text disks and 40 graphics disks. Each disk costs £1.25, and you can look and match the software to fit to your own tastes. The downside is, of course, that you have to pay to use the library, but why not write to Frank Cassidy, geoChat, 95 High Bank Road, Creighton, Manchester, M20 4FS.



ERES is really making a break for it with its belated version of the classic *Stratagem* game.

all provided by Susan Lamb, a well respected GEOS artist. You should note, though, that the disk contains software that will only run on GEOS 1.3 or 3.0, and costs £25.

Powerful utilities

GeoAnimator is a package intended for the creation of cartoons. It works from a script created in geoWrite, using graphics you've created elsewhere to create glorious pieces of animation on your O4. As a package, it's definitely a hard sell



When ERES has really been making for it - a music synthesiser that set my walls.

to use a O4, as cell animation is something too rarely appreciated by 16-bit machines.

It's also had packages like the geoWrite file Manager (a what can that possibly be?) and Benji Duper for transferring multiple files. I don't remember these for creating self-loading disks and Pattern Editor 2.0 (which help you use your O4 screen like geoWrite).

geoChart

If you've ever needed to produce graphs on your O4, you'll know that there aren't any dedicated packages for the job, other than those that incorporate large, customizable spreadsheets, like Mini Office 2. Though geoChart works with data produced by geoWrite, File or Chart, it's a light, flexible graphing tool that's quick and easy to use.

geoChart is capable of producing bar charts, pie charts, percentage bars or line graphs, working with up to four sets of numerical data. You can even save the final image as photo copy (a special GEOS format) for use in other GEOS packages or simply print it out.

You can get geoChart from ERES for £20 by writing to ERES, 59 White Road, Tottenham, London, W11 0AG.

All the best tunes

For the most original tunes, geoWrite's G20 is sound effect generator and a music sequencer. The sound effects are generated quickly and easily with buttons and sliders replicating full scales of figures defining attack and decay, and though the music editor requires a bit more keyboard work, it's equally as simple to use. Thankfully, the authors dropped some relatives in favor of a bit of notes, making their package accessible to the musical naïf. The files you create can't be played through geoWrite (Music included) or with emulators created with geoWrite.

Just for fun

It takes a certain kind of geekitude to appreciate the kind of games that always crop up in graphic environments. Despite it's version of the classic Macintosh board game, in which you have to guess a pattern of pegs, and geoWrite's a *Checkers* clone, adding nothing to the genre (I think - where are we going to see another game?) it

NEXT MONTH

If you thought that image morphing was something only

used by TV advertisers when they really want to get noticed (or Michael Jackson when he wants to make a new video or face),

then again - your O4 is now capable of identifying images together using the, don't tell me, let me guess - old geoWrite (how 2003? Any? No?) and there'll be more news and screenshots next month.

TRUE ROM-ANTICS

File processing is the order of the day, as the page degenerates into a squirming mass of technobabble, courtesy of Jason Finch.

OPEN

Function: Open a file

Call address: \$F0C0 (\$0470)

Parameter passing: None

Preemptible routine: GETLFS, SETNAM

Error reports: 1, 2, 4, 5, 6, 240, HEADST

Stack requirements: None

Registers changed: A, X and Y index registers

Description: This routine is used to open a file on one of the multiplexed channels connected to the computer. It can only be used after it has been set up with the OPEN system. It's the machine language equivalent of BASIC's OPEN command so you must specify the file number, device number, secondary command and format. Its parameters have to be passed directly to the OPEN routine but you must call GETLFS and SETNAM beforehand. Both these routines were covered in CPMS.

Example: In BASIC you'd use OPEN "1,1,"\$F0" to implement this in machine language you would first call the GETLFS routine to set the file number, device number and secondary command accordingly then call SETNAM to set the file name. Finally you'd call the OPEN routine.

LDX #1

LDX #1

LDY #1

JOB GETLFS

LDX #4

LDX #0-FILL\$0000

LDY #0-FILL\$0000

JOB SETNAM

JOB OPEN

RTN

FILL\$0000 DIT *FILL\$0"

CHKIN

Function: Open a channel for input

Call address: \$F0C0 (\$0470)

Parameter passing: X index register

Preemptible routine: OPEN

Error reports: 0, 3, 5, 6, HEADST

Stack requirements: None

Registers changed: A and X index register

Description: Any file that has been opened can be defined as an input channel by using the routine. The device must be an input device, otherwise an error will occur. If you are getting data from a device other than the keyboard, you must call this routine before using either the CHRIN or GETIN routines for data input. When you call CHKIN, you must specify the file number that is to become an input channel. The computer will then work out the device number by checking the parameters of that file. If it is a device on the serial bus, CHRIN will automatically send the link address and secondary address if you use specified in the SETLFS command prior to opening.

Example: You've already opened file number 2 with device number 8 using the OPEN set up command, so now you want to instruct the computer to prepare for input from the device. Therefore you have to call the CHKIN routine, specifying file 2.

LDX #2

JOB CHKIN

CHKOUT

Function: Open a channel for output

Call address: \$F0C0 (\$0470)

Parameter passing: X index register

Preemptible routine: OPEN

Error reports: 0, 3, 5, 7, HEADST

Stack requirements: At least 3

Registers changed: A and X index register

Description: In the same way that CHKIN defines input channels, any file that has been opened with the OPEN routine can be defined as an output channel by using the CHKOUT routine. If you are outputting data to the screen you do not need to use either the OPEN or CHRCON. When you call this routine, you must specify the file number that

is to become an output channel. In all CHRCON, the computer will then work out the device number by checking the parameters of that file. If it is on the serial bus, CHRCON will automatically send the link address and secondary address prior to opening.

Example: You've used OPEN to set up and open file 3, so you define the file as an output channel.

LDX #3

JOB CHKOUT

CLALL

Function: Close all files and channels

Call address: \$F0E7 (\$0517)

Parameter passing: None

Preemptible routine: None

Error reports: None

Stack requirements: 10

Registers changed: X and Y index register

Description: This routine will close all open files and channels. It doesn't matter how many files you have opened whether they are input or output channels - this routine closes the pointers into the open file table which closes all files. If you call the CLRCON routine which resets the channels, you don't need to set up any registers prior to calling the routine, as JOB CLALL will do the job.

CLRCON

Function: Close all open channels

Call address: \$F0C0 (\$0470)

Parameter passing: None

Preemptible routine: None

Error reports: None

Stack requirements: 4

Registers changed: X and Y index register

Description: This routine closes all open channels and restores them to their original default values. The default input device is set to 0 and the keyboard, and default output device is set to 0 (the screen). If one of the channels to be closed is on the serial bus, the LRASTER or LARXCON routine is called as appropriate. The CLRCON routine is called automatically when you use the CLALL routine. If you are calling the routine directly, you do not need to set any registers and therefore its usage is simply JOB CLRCON without any other instructions being required.



TECHNICAL TIPS

What would we do without our resident Dr Finch? What knowledge! What expertise! What bedside manner!

And in particular the possible word processor, you will find that you can do all sorts of impressive things. (MSB goes out for graphics and shows you to how loads of different fonts in all sorts of styles and sizes. Get in touch with Electric Blue)

Entertainment Software should be able to provide you with a book.

3 - To centre something on the paper you could use the printer's built in centring command. This will be given in the printer manual which you should try to get hold of if you haven't already. A slightly more obvious method involves working out how long the text is that you want to centre, then calculating the number of spaces that you would need to put before it to position it correctly. Bear in mind that the printer carriage is normally eight characters wide. The following short program gives you a small demonstration. Lines 30 and 40 do the maths, lines 50 to 70 represent the text to print the spaces, and then line 80 prints the bit of text afterwards, hopefully in the centre.

```

30 OPEN 4,4
30 TS="TITLE OF REPORT"
30 L=LEN(TS)
40 SP=ABS(80-L)/2
40 FOR K=1 TO SP
40 PRINT#4, " "
50 NEXT K
60 PRINT#4, TS
70 NEXT 2
80 PRINT#4, " "
90 CLOSE 4
  
```

The BASICs

- 1 - What is the best BASIC programming book for the Commodore and how often is it available?
- 2 - What use is BASIC lightning to a budding programmer such as myself?
- 3 - Is it possible to program simple games

such as Bomber, Pac Man and Space Invaders in BASIC?

Simon Hinton, *Chisleborough*

1 - There isn't any particular book that stands out and about 'hey I'm the best' at the moment. The best way to learn any programming language is to experiment with other people's programs, and indeed with your own. So long as you have a user manual or a programmer's reference guide, or some other book that contains a list of the commands and how to use them, you can't go far wrong. And write some short programs and see what happens. The way I learned was to buy some books that had loads of BASIC games in them. By typing these in (then I picked up quite a bit of programming knowledge, and then I'd change things a bit to see what happened. Different types of games will give you different programming experience. Typing in an adventure teaches you a lot about string handling and substrains, whereas typing in a car racing game would teach you a lot about sprites and graphics. Find some old coin-puller mags and books at a car boot sale perhaps.

2 - It depends on which BASIC lightning you are talking about. There was an extended BASIC called lightning and there was a compiler called lightning. The extended BASIC will be reasonably useful when you have learned the normal stuff, though if you don't learn to rely on just the normal commands that are in an offer, you may find it frustrating when you need to program something that doesn't use the extended commands. It fits the compiler you're talking about, then it will simply speed up all your programs by converting the BASIC into some other form of code which runs a lot faster. Either way, don't worry about missing out on BASIC lightning.

3 - Perfectly possible. The first game I ever bought was called *Superman*. It was a pretty addictive Pac Man clone that was written almost entirely in BASIC. Loads and loads of games have been produced that haven't even got the first few lines of machine code in them. All this means is that they run a bit slower and not quite as smoothly as their machine code equivalents. Remember a BASIC game that would run in BASIC and, allowing my age, it was possible to get hold of a BASIC version of that when I was a kid.

Hungry printer

- 1 - Has ordinary typing or copier paper to used with the Commodore 128? I've been using paper with holes down the side, but anything else just gets chewed up by the printer's feed.
- 2 - Can characters be printed any larger than the standard size (ie height and width)?

3 - How do I centre a word on a page-graph on paper?

Paul O'Brien, *Leeds*

1 - Define the paper that you are attempting to feed through the printer as carefully as that, there is no reason why it shouldn't work. The paper that you are using at the moment, with the holes down the side, is known as tractor feed. Other paper refers to what is called letter feed. This means that the paper is creased half-way down two surfaces and the refer to such that the folder between everything pulls the paper through the printer. If you don't have the appropriate width on your printer set to letter feed, the paper won't be pulled through correctly as the printer will be expecting letter feed paper with holes in it. If you have that set the printer over to letter feed then I can't see why your paper wouldn't work. The copier paper should cause no problems.

2 - Not very easily in the simple version. However, if you get hold of the MSB software package,

www COMODORE 64 BASIC 92 www
64K RAM SYSTEM 384K BASIC BYTES FREE
JERRY.

BASIC to feed in machine code programs. That means you can write your own programs.



Lottery fever

To share any chance of a program to help people select their choice of numbers for National Lottery entries appearing on a future cover page?

Mark Ross, Dundee.

Well I thought a question about the National Lottery was likely to appear here sooner or later and, why, here it is. "Sure a pound is an instant" and all that. The lottery is entirely random, and so all you really need is something that will print out five random numbers between 1 and 49 without repeating any. There's a lot of talk about hot numbers and cold numbers and series of numbers and sure like that but, well fine if, you aren't going to see what's happening, so you may as well just close your eyes and stick a few pins in the game card. Okay, so it's cynical and annoyed that I haven't seen one anyway yet, but that's really got nothing to do with it. The program below creates an array PG which I find lists with the numbers 1 through to 49 inclusive in order. Lines 50 to 70 perform a cunning bit of zig-zag pattern which shuffles everything up and forms 49 x 5 random array with no repeated numbers. The best we can then printed out.

00 100 0 14143-0800-700

10 >

20 DIM P(4), J(49), K(49) DIM I(49)

30 FOR S=1 TO 49:GOTO 40NEXT S

40 >

50 FOR S=1 TO 49:GOTO 60 NEXT S

60 FOR S=1 TO 49:GOTO 70 NEXT S:GOTO 50

70 NEXT S

70 >

70 >

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simulate the real location numbers whenever you see labels being used. Also, to BRT instructions you need to give the \$R command to a monitor which displays the memory contents. You then need to change these directly:

2 - The address \$BASED is part of the Random ROM and is called when you do a job \$BRT which is the official address for the ROM routine named \$STOP I haven't power this one in True ROMMonitor yet, but

essentially it tests to see whether or not the \$STOP key (as in the \$R \$STOP key) has been pressed. If it has, the job flag of the status register will be set. However, you also need to call a routine called \$DTRM which updates the system clock calendar.

That's done with a JSR \$PFEA, so you will understand that command for its direct equivalent JSR \$PFEA providing it is over both these routines in CPU.

3 - The previous machine code tutorial series was designed with beginners in mind and hopefully gave people a good start in learning the language. But the best way to learn is to experiment and to write your own code to see what happens.

Combining your general knowledge of the language with information from sources such as Teachal Tips and my True ROMMonitor series, you should be able to program some pretty nifty bits.

4 - I can be as technologically advanced as the rest of them, you know. If you've ever had them check out <http://www.fox.html.com/monitor> which is the official address of my home page.

5 - I'm starting to think that the letter was actually drafted for an ad magazine or something because it's not looking particularly Christian in the manner. I guess I am obliged to mention Future's site at <http://www.futuremagazine.co.uk> which is utterly brilliant. The BBC's new Hit reviews seem bogus and I've feared that the ultimate in pieces to read is <http://page.fish.com.uk/mag/Play/Text> which should keep you amused for hours.

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Headbanging

I think my drive drive is slightly out of alignment because it hasn't been working too well lately. It is a 141 and I was wondering if you know of any cars for sale a problem so I don't know of any repair shops near to where I live. I have heard someone that there is a technique known as "bumping"

that forces the drive head back into alignment. Is this true and if so, how does it work?

Michael Peters, Chester

There is a technique known as BUMPING, yes. It is possible, it's called reverse bumping and it tends to make your drive drive sound a bit rough if it's about to die up. The following program is the accepted way to reverse bump the drive head and it comes out the end of my floppy a hundred times.

Make sure you have an old disk in the drive in case you don't want to die, and don't do the program unless you have to. It is not for the faint-hearted, program makers, people with back aches and so forth. If you type it in really on your disk it will be very loud, but it won't do your drive any harm. Having said that, neither myself, Commodore or Future Publishing are accepting any responsibility for the effects this program might have. (After - 80)

00 100 0 14143-0800-700

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40 >

50 FOR S=1 TO 49:GOTO 60 NEXT S

60 FOR S=1 TO 49:GOTO 70 NEXT S:GOTO 50

70 NEXT S

70 >

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Web weaving

Our editors have brought loads of new computing equipment and we now have access to the Internet and World Wide Web.



The best news of 1994 isn't the Internet

It's the Internet. Here's why.

<http://www.commodore.co.uk>

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Coded message

1 - How can I display a text message on to the screen using a machine language monitor rather than an assembler?

2 - What does "JSR \$BASED" do?

3 - What about more machine code tutorials - the last series was terrific!

Chris Carter, Northern Ireland.

1 - A machine language monitor works in the same way as an assembler. However, you have to



BACK TO BASICS

Basically BASIC takes a slightly different turn this month, as we venture into the realms of computer game authoring, and create games that are masterpieces of prose.

Arising, isn't it? You get a tutorial going and three months later, someone asks you: "Oh, well — told you your facts, facts, this is going to be fast. If it's too fast, we'll explain the three points next month. We're going to write a text adventure, and you're going to write most of the program for yourself."

The parser

The core of your text adventure will be an:

```
INPUT C
IF C$="WORTH" THEN GOSUB...
```

This is the part of the program that takes a command from the user (INPUT) and acts on it (IF C\$=). For every option, you'll need a new IF and a new sub-routine to send the program to.

The map

All text adventures are based on a map. Let's make ours four squares by four squares, giving our adventure 16 locations in all. We'll arrange these locations in a grid, and place some links between them.

They aren't big or as wide as being physically small, there aren't really enough locations on the map to make a full, big adventure. You could make yours bigger, as long as you locate the rest of the program up.

For each location on the map, we'll create a string of four characters, stating whether you can go in any of the four possible directions. Using the order N, E, S and W (clockwise), we'll treat 'Y' or 'N' as signify a passage. Location 1 is NYNS, 2 is NBYN, 3 is NYNS, and so on. Take-out all of an paper for now, as before we put them into the program we have to understand the format's dimensions. They aren't identical, but they'll make the programming a lot less ambise.



Dimensions

Remember string variables? A\$="BIMBO" means that from now on, PRINT A\$ will display my name. We want to be able to store a lot more than one piece of text, so we use a dimensional variable: DIM D\$(10)

This allows us to create a variable with slots, that we can use like this:

```
D$(1)="ONE BIT OF TEXT"
D$(2)="ANOTHER BIT OF TEXT"
PRINT D$(1)
```

The big question — why? Well, this means that if the descriptions for the sixteen locations are in the dimensional D\$, and the location number of the player is in L, we can print the description of the current room with PRINT D\$(L)

We do the same for passages, by dimensionalizing P\$ or F\$ strings, each containing the NYSWS, etc. You can get a letter out of the middle of a string using:

```
M$=MID$(P$(1),3,1)
```

The MID\$ command takes three parameters in brackets. The first is the variable, P\$(L), the second is the position (MID\$(character 3)), and the third is the length to copy. With this line in particular, M\$ will have a 'Y' or 'N' depending on the state of the sixth byte. You should use a test command like this whenever you want to send a player off in a particular direction.

Directions

The most important element of a text adventure is being able to move around. The easy way to move someone on a map is to use their location number and apply a universal rule. As we know the paper can't swallow off the edge of a map (because there's no door there), we can use some simple equations.

To go north, subtract the width of the map from the location number. For instance, if the player is in location five and the map is four rooms

wide, going north is the same as 1-1-4, which means the player is location 1.

To go east, add one to the location value. To go south, add the width. To go west, subtract one. Try it in your head — it works.

Your turn

Right — show it all together, and what have you got? It's not going to be easy writing the full thing yourself, so here'll be an example on most months' coverage of exactly how to do it. If you're keen following the BASIC series and have a manual at home (you get one with your C64), you should be able to muddle through.

This is, of course, a text adventure without objects to carry, puzzles to solve, people to meet or any challenge at all, in fact. That's some real month, when we get to the next installment.



Remember this, the first SuperDiskWare release (see page 16): should you boot that? And what happens if you're late for work in the morning?

Learn to READ

There are two commands that'll really help you on your programming task, called READ and DATA. Let's take a look at a simple program.

```
10 DIM P$(16)
20 P$="A:1 TO 4"
30 READ P$(1:1)
40 PRINT A
50 DATA "0000", "0001", "0001", "0001", "0001"
```

Line 10 sets up the dimensional variable, and lines 20 and 30 create a loop to run five 30-line times. READ takes the next piece of information stored with the DATA command, and stores it in the variable stated. As we've linked P\$ to the loop, returning to the end with the variable, the information will end up in P\$(1), P\$(2), P\$(3) and so on. This technique for reading is most descriptions as well.

Having a hard time finding support for
your Commodore?
Thinking of upgrading to a new machine?

STOP!



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If you have enjoyed our previous Q&A and hardware features in Commodore Format then this is a city square for you.

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THE MIGHTY BRAIN'S POTTED GUIDE TO WRITING GAMES

Every month, someone sends a letter asking how to write C64 games. Now, once and for all, here're the answers.

So you want to write a computer game, huh? Unless you stick with packages like *SEUCK*, you're going to need to know how to program, which is a much tougher affair. Indeed, first of all, you're going to have to figure out what language to use, which depends largely on the type of game you want to produce.

Adventures — These are the easiest form of game from a programming point of view. Because you can get away with writing adventures in BASIC, without having to go into the realm of the *Graphic Adventure Creator*, etc. The month's *6502* tutorial is a rough guide creating them.



Job — game's games. Nothing's quite so easy as writing my friends stuff, but the lesson.

People games — You needn't start panicking yet, as though most people games are written in machine code, the procedures involved in moving bits around a screen or sliding bits around aren't all that complex at all, and won't stretch your fogging coding abilities.

Assembly games — This is where the hard work comes in. If you want to move a sprite any faster than a gazelle per fortnight, and you want to create a game that relies on fast, sensible action, you're going to need to know machine code by rote.

6502

Being going to assume that you've decided to take the plunge and go for the machine code option. There are a few things you're going to need:

Reference — the best reference for the C64's processor comes in the introduction to the *6502 Processor* from *Brain Books*. It details all of the commands the processor will accept, and provides



For take you great of experience, but you also you count write something so fast as they'll.

handy notes on the way numbers are stored, what all the flags mean, etc. If you're coding, you'll need this book in something very much like it.

An assembler — these are programs that turn the assembly-level commands you type into the raw numbers that the processor understands. You don't really need one as you could do the conversion in your head (well, I could, but you'd have to be insane). *6502* is a sturdy, comprehensive PC assembler that's available from most PC libraries. A nice thing — it's possible to work without one, but the ability to assemble your program, test it, then test up your assembler without having to wait for a tape is quite an important one. Buy it at all ages before you catch your first bug.

Every issue of *CP*, even — if you look at past issues, you'll notice entire produced game stories, chronicling the development of some top C64 games. Though essentially these were 10/10 for me in exactly what goes into producing a game, you can pick up on and if handy tips on how to get those extra special touches in your software.

Reference — programming in machine code is like teaching someone to eat by telling them which muscles to move to pick up the fork, how to scoop up food, where the mouth is, how to get the food into the mouth without dropping it, how clearly lips to push in, and when to swallow. The hard part isn't in their working out why your subject just stuffed a forkful of rice up their nose.

Bye

And now, surely enough, you're on your own. We'd love to stay and start a machine code programming tutorial, but it's probably not worth it — these things work best when figured out alone.

THE TOP 20 CODING RULES

1. **DO** sit down and plan your program on paper, for a good idea of what you're doing.
2. **DON'T** rush into the project without knowing whether it's going to work.
3. **DO** make sure your game design is original enough to warrant the effort.
4. **DON'T** write a game you wouldn't want to play to death yourself!
5. **DO** stick to a theme you like, as it'll provide you with endless enthusiasm for the subject (clear this, etc).
6. **DON'T** remake an old remake of an old game. Use an original idea.
7. **DO** recognise the size of the project you're undertaking. You want to know how the actual low starty evenings of your life you're effectively throwing away.
8. **DON'T** draw the loading screen first — so many programmers fall into that trap, and end up with disks full of loading screens but no games to attach them to.
9. **DO** optimise your code. When you think it's routine, look at it and see how it could be streamlined for efficiency.
10. **DON'T** spend too much time doing this — you've got to finish the program, remember!
11. **DO** get your game playtested, by friends and family for their opinions.
12. **DON'T** ignore the invaluable advice they give you.
13. **DO** spend time going over your game seeing what you can improve.
14. **DON'T** call a project finished unless you're completely satisfied with it.
15. **DO** send it to a PD library since it's finished to get it seen by the masses.
16. **DON'T** start calling your first ever game for C64 a classic.
17. **DO** help other beginners out there starting out on the trail.
18. **DON'T** ignore advice or tips other coders give to you.
19. **DO** send your game to *CP* to find out what we think of it.
20. **DON'T** get offended if it doesn't score 100% — these things take time.

DIARY OF A GAME

In their second month of development, the Kubiazyn brothers twist their brains around the coding work to be done...

What haven't you been keeping up with the game diary? The cat was sick on your copy of CDS. Great. Oh, okay then.

The diary so far: The darling Kubiazyn brothers have spent all the night gaming at Professor's just waiting to spend it all saved. Of course — it's an attempt to save programming expenses with the super-charged, super-fast, Super Pac, Tennis, Little did they realize what they set out on their journey that Big Jack McCoin turned just around the corner. Tonight's episode: The cat, falls out my wife. But first, a word from our sponsor — don't touch that dial.

Week 5: Paul

Started the very end of last month, I started to create the main game code. This involves coding all of the routines that will be used

in the first game, such as sprite movement, scrolling up the screen, collision detection and so on. I wrote the game over routine. The first piece of coding this month was a simple pointer reader and sprite movement routine that would move two lines centered sprites on top of each other. The reason I chose this method instead of using multi-colored sprites is that you can get a much better resolution but still keep some color.

Ten minutes later, I have full control over player one, and can now move him in any of the four directions. I haven't written the routine to handle any actions when the player presses the fire button yet, because we haven't decided exactly what it'll do in the finished game. Whatever happens, it'll end up doing something special for the suffering Pac.

Week 6: Mark

I've been very busy this week, designing the sprites for the main character, as Paul had been working at the job for only going ten-four frames to work with. My drawing task this week was to create all of the character sprites for the character's movement, which isn't easy. One big change to the game style is that the sprites are drawn as mirrored views — normally, though Professor's is viewed from the top, the characters are viewed side-on, which means that looks a little weird.

Super Pac Tennis will look a bit more sophisticated than the normal style of Professor graphics, as the characters will only open and close their mouths when they eat things, as opposed to all the time. You can see from my original drawings that I was going to have a hard time getting the graphics onto the SGA, so I dug out FRODO for my postage.

Week 7: Paul

It took Mark two frames the sprites I'd been waiting for at work, and so my first job was to set the animation routine that will update the sprite pointers for every two pixels it moves on screen. The reason I posted two pixel gaps is because the sprite moves a total of sixteen pixels in one gap, using eight frames of animation. If we had five different positions for the character to be in, we'd use the sprites in the sequence 1, 3, 3, 1, 3, 3, 1, 3, 3, and 2.

The next step was to do the collision detection, to make sure the character couldn't move through anything other than a pit. This is a fairly straightforward routine which I already had, as the opponent is most games. All you really need to do is move the sprite's X and Y co-ordinates, then look at the sprites above, below and to the sides of your character in an array table of tables of numbers representing what's sitting on the screen in a more accessible, simplified form for quick access.

As I said, the routine was easy enough to code, so I made a start on the monster routine. Mark's routine hasn't got on a routine that would show four minutes of independent speeds and animation frames. The standard routine adapted by most Professor games is to count the bit for locations the player occupied, then take each great test to see when it's of your speed path.

and, if possible, follow that path you. In SPT, I've added a random element — the ghosts will follow you but occasionally they'll stay from the beaten path, adding a little more tension to the game.

Week 8: Paul

The monster routine took about a day or two, but I'm not too happy with the amount of memory and processor time it takes up. I spent a while optimizing the code, which is always an important step in writing large, time-consuming programs. I also wrote the routine to remove the power pills from the screen when the player runs over them.

While I was busy doing this, Mark began creating the levels for the finished game. The way of work it was spent plotting. The addition of all those collision detection for ghosts meant we had the fun beginnings of a good game.

NEXT MONTH

Don't miss the next exciting episode of *Diary of a Game*, in which our leading duo wrestle with the main level designer, and make their way through sound-effects modules in an effort to get the game to music. Don't read month, try not to have nightmares.



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GAMEBUSTERS

If the time in your game just refuses to last, Or there's a difficult level you just can't get past, Or your mad joystick waggling's resulting in smoke, Look at this page - you may find... oh god.

As well as the low fall of Action Replay codes, we've seen along many levels of top tips for other games. We haven't got space to print them all, but we've managed to fit quite a few in...

Batman the Movie

On level three, when you have to chase the three punks. For correct combination of coordinates is the green spray can, the purple cream pot, then the yellow spray can.

Last Ninja 3

On level four (the basement), you need to work your way into a stack of crates to get past. When you get to the stack, it's possible to keep going back from here to the power lines to collect the hand-burger for an extra life.



Thruster produced a lot of utterly top games, one of the best of which was the physics game, Thrust.

Reaching Power	Launchmate
Credit card	Bank
Star	Games Groping Wonders
Star	Tech Research Lab
Horn	Hunts (Police and Paperwork)
Powerful	Conder
Furniture	Games
Battery	Just Words

For in-game music, you'll need to collect the headphones and tape recorder. If you just want to increase your score, break everything after you've won, and that should give you some scores.

Thrust

Pressing F8 and F7 together will also start the game, making those tricky levels easier to play. For infinite lives, load the game then read your machine (with the life button) and type:

POKE 4126,234
POKE 4140,234
POKE 4141,234
END:END

Rick Dangerous

Enter PLLCRATE on the high score table to repeat on the level you last died on. If you've got an Action Replay playing 2763,173 will give you infinite lives. If you're playing the sequel, entering 48 5826 8V760 on the high score table will also give you infinite lives.

Hudson Hawk

On the 800 screen, push the joystick up, down, left, right, left, down, and up. The screen should now flash and you can start the game with infinite lives.

The Untouchables

On the protection screen for this excellent multi-loader, type the word TECHNICAL. Now you can start the game and press:

F7 to top up your energy
F8 to top up your time
END to end levels

Alternatively, type MURPHY'S DOGS on the high score table, then start the game and press G, P, and B to stop levels.

REPLAY

Following last month's lead, here's another batch of Action Replay codes courtesy of our mate A&F Power.

Blades	2700,165	Lives
Blades Impossible	4097,173	Lives
Reactions	3288,272	Lives
Robby Gambark demo	4070,0	Lives
Pink Frost	3874,173	Lives
Just	1080,173	Lives
	1000,00	Money
Just Command	2000,168	Lives
Position	3000,200	Lives
Star	3507,173	Lives
Putting Money down	1180,180	Lives
Reactions	1180,180	Lives
Systematic	3073,173	Lives
Spill Penetration	300,173	Lives
Streakway Rider	3013,173	Lives
Symphony	3000,00	Time
Synthesizer	3013,173	Lives
	3013,173	Score
	3000,173	Money
Super King	3003,173	Lives
Twister	4011,0	Time
	1401,000	Score
	1010,000	Energy
	4011,004	Lives
	4010,234	Lives
	4010,234	Lives
Trashman	1017,0	Time
Time Test	1704,200	Score
	1700,0	
	1700,0	
Trivial City	6700,173	Lives
Ugh! demo	6700,173	Lives
Video Dishes On	4000,173	Lives
Arms demo	1000,173	Lives
Address Family demo	7003,173	Lives
Suburban Commando	2110,150	Level 2
	3000,168	Level 2
	3000,173	Level 2
Torture 2 000	1010,00	Lives
Toots	6300,173	Lives
	1144,44	Money
Tronch 70	1100,100	Lives
Unhatched	2000,0	Lives
	3000,231	Energy
	2000,0	
Return The Bowls	400,173	Lives



How did the software shape up? How did the hardware hold out? What PD is worth pursuing? It's

BACK ISSUES



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