dateline : 2004 . . . .

# commodore 64
## rise of the machine

**commodore scene ed talk**

Here we are again for the second part of this bumper two edition special.

Just as I was getting to grips with these two issues, many new features just HAD to be put in and that meant a re-write and re-layout of these two issues - phew !! Some articles have had to be put in before they were too far out of date and it would not have been fair on the authors to not include them at all. Hopefully they will be in 'some sort' of order and will read okay ;-)

**Page Count** : As I have had to move lots of pages around on a near daily basis, the amount of pages may seem a bit on the thin side for these issues, but don't worry, you will still get your minimum 180 page quota for the full binder by the end of the year and, knowing me, you'll probably get quite a few extra's too !

**CSIS** : I am currently completely re-writing the CSIS listings and I hope to have the new catalogue ready for the next issue. The catalogue won't have any prices or postage costs in it as they will be supplied on an additional sheet - this means I won't have to reprint the entire catalogue everytime there is a price change. The new catalogue will be in colour and will be supplied free with CS2004.

**CSDOOM64** : Things are just starting to happen at last. After a long time of people offering help, advice and 'no way's, W H has stuck his neck out and offered his services to sort out the music for this project. Now all we need are some programmers to bring life to the game.

**geoTELEGRAPH** : Part of the next issues geoTELEGRAPH section will not only be about the PostPrint2/3 upgrade - but - it will also be in colour and it will be printed from my Commodore using GEOS. This year will see CS2004 having a large proportion of its pages given over to the geoTelegraph section. There are many reasons for this not least of which is the fact that a lot is happening in the GEOS scene this year, new programs, new deals, new hardware, etc, etc. Also, I have neglected to include Todd Elliots excellent geoPublish tutorials and I hope to rectify this situation this year and publish his entire series in CS2004 this year, I will include screenshots too ! Now all I have to do is practice how to convert the Commodore PP2/3 to PDF files so PC users can download them ;-)

Subscriptions : I mentioned in my recent inter-

view that I didn't see any point in continuing production of CS if the readership fell below a certain level. CS2004 has only just scraped through this figure to continue production for another year, in fact, there weren't enough re-subscribers until the middle of February ! At the end of 2003 there were 59 subscribers and despite a very exsspensive advert in Retro Gamer no new subscribers have come forward. At the moment CS2004 is struggling along with just 35 subscribers - this is not good news :-( Where did all the subscribers from last year go to ?

Despite the lack of subscribers for this year, I am still upbeat about what is happening throughout this year, there are shows to attend, new magazines to help out and lots of projects to get stuck into. Lets see how this year pans out and hopefully CS will still be here in 2005 !

**Shows** : Yet again it is looking likley that Micro Mart will be making a show of themselves and hopefully the retro area will be there too. Another show that myself and Shaun will be attending is the Jagfest UK 2004 (see next page). We met these guys last year at the last MM fair and they invited us to join them, we are happy to obligue !

**C=VGA** : I know I keep saying it but we are getting there slowly but surely. Neil is currently trying to source a specific type of osciloscpe so he can test the outputs from the prototype. This is not as easy as we would have hoped and is proving to be rather difficult to achieve.

The magic figure of US$1,000 has been raised to push the prototype along to this final stage of development. I will be closing the 'pre-orders' option for this device on April 31st 2004 so if you still want to pre-order then you can for another month, after that it will cease. I would remind anybody pre-ordering that you get the folloing benefits - (1) C=VGA at a lower 'cost ' price, (2) the top 10 customers will get somthing additional and special - not sure what that will be just yet though.

**Next issue** : Hopefully we will see more of regular features returning and also you can look forward to a new semi-regular feature on 4 player games ;-)

**DATA** : A new version/update of the excellent **PostPrint2/3** package has been released. Full details and copies of the files will be in the next issue.

**DATA** : Also in with the above news is a mention of a forthcoming **geoPUBLISH Upgrade** - now that is great news as geoPUBLISH has never had any upgrades and it is long overdue. No details just yet but as soon as I have them I will pass them on to you good readers.

**DATA** : More news from Maurice, the new **HD-DOS+** is nearly finished and will be shown at the next show in the USA. It will be making and appearance soon here at CS too !



**DATA** : LOOK AT THIS !!! The new **IDE64 V3.4** is now out. The new IDE64 comes with **CompactFlash** slot for CompactFlash (CF) Storage Card. The CF cards are available in the capacity of 32MB up to 1GB. Also, currently in the beta testing stage is the new firmware ~ it will offer many new features including support of partitions, relative files, large capacity media up to 128GB and will be even faster ! For more details pop along to ~ **http://www.volny.cz/dundera/ide64v34.html#**. Of course, this new IDE is available from the CSIS and I will include prices and updated news in the next issue.

**DATA** : What on earth is this ?



See page 34 to find out more !



12th and 13th of June 2004
Medway Manor Hotel, Rochester

A second festival of Atari featuring Jaguar, Lynx and ST, TT and Falcon.. (and some Commodore). Here you will be able to play all the great Jaguar games, link your Lynx's and show off those ST's/Falcons. We want to include as many of you as possible, and this time we have more room, well 1 more actually. There will be dedicated Jaguar, Atari Computer, and 8 Bit areas

Do you have a pet project on Atari, then come and show it off, do you want to play games then we plan to have at least 4 video screens available for Jaguar games not including the tournaments and people showing what their Jaguars do.

Trade/swap Jaguar/Lynx or Atari software.

<u>Who is gonna be there ?</u>
Allan Bairstow, Shaun Bebbington and a whole host of Atari guys !

<u>Features</u>
Licensed Bar

<u>Jaguar</u>
Battlesphere Tourney

<u>Lynx</u>
<u>Atari ST-STE-TT-Falcon</u>
Full Papyrus X demos, and sales.
CT60 Designer - Rodolphe Czuba (TBC)

<u>Atari 8 Bit</u>
The Devastator II, a fully functional MAME controller for your PC.
IDE Interface from Mr Atari

<u>Arcade</u>
Full box classic arcade machines (TBC)

<u>Magazines</u>
Premier On-line Atari magazine MyAtari, Commodore Scene, Retro-Mart, Retro Gamer

Opening Hours 10am - 6pm for Visitors
ALL DAY AND ALL NIGHT FOR WEEKEND PASS HOLDERS!! ( massive game sessions!! )

Costs
2 Day Attendance Entry will be £20 UK (setup starts Friday Night-dismantle sometime Sunday). This includes snacks and drinks for game tournies at night and early morning for those that can last!!
Want to attend for just a Day(9am-7pm)? Then the cost is £5

If you want to book, you can use Paypal, Cheque or Credit Cards then let Nick Harlow know at **nick@1632systems.co.uk**

**Compiled by Andrew Fisher and Allan Bairstow**

*Menu system by Danny Tod, with music by Andrew Fisher (CLOCKS by Coldplay)*

**GRUBZ PREVIEW**
By Singular Crew



The closest yet to WORMS on the C64! Play up to four players (with the Protovision adapter) or fight against the computer.

Use cursor keys to change options on the menu screen – e.g. to change screen type 0, 1 or 2 in the square brackets next to SCREEN.

**FLOPPY PARTY 2004**
To celebrate the recent Floppy party in Sweden, here are some of the best releases:

**BRIEF BURSTS OF HAPPINESS** – this demo by



Creators and The Dreams caught my eye for it's unusual style

**HARRIER/MAK** – the winning music by Maktone of Fairlight

**AL-DABH** – the winning graphic by Blackdroid of Wrath Designs

**FOREVER 5 PARTY**
And another recent party, which caters to Atari, Spectrum and Commodore fans:

**SHATTERED** by COSINE – a clever single part demo with a great bitmap

**SZENZACIOUS** by PADUA – winner of the real-time competition (for demos made at the party), this tells a funny little story (szenzacious means "sensational")



**CLUB STYLE** – the winning music from Jammer

**SCENETOWN2** – the winning graphic from Leon

**ZARIAROS**



By Frank Gasking, with enhancements by Richard Bayliss

Here's another great SEUCK game from Frank, with a great front-end put together by Richard. Watch out, it's really tough!

**2X2 EDITOR**
By Chico/Civitas



Here's an excellent utility for designing 2x2 character sets. You can work in single colour or multicolour mode, convert your character set into sprites and even restore the whole set if you make a mistake. (Press R to store, shift-R to restore).
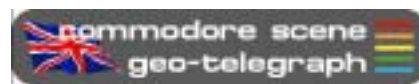


Yet again we are devoting most of the second side of this coverdisk to GEOS files. Many are just general files and utilities but they will all gbe covered in future supplements to the geoTelegraph section.

Here are the files :
**WCOPY** - A restricted version of the full **WCOPY+**, see the features on pages 9 and 46.

**CNTH711** (& related files) - see the feature on page 20.

**Pinball Spectacular** - this is the updated version by REMEMBER. See the feature on page 50

GEOS files :
**geoBEAP_2.0** - a superb conversion utility.

**DIRMASTER** - sort out your disk directories.

**geoZIP** - Zip up and unzip files on your c64.

**GEOCANVAS** - A ground breaking replacement paint application.

All these files will be covered at a later date but please feel free to play with them.

**commodore scene**
**letters & e-mails**

*I have kept this page short so I can get this issue out in a reasonable time frame.*
*So then, off we go ....*

Hi Allan,
Ta for CS2003/44, some interesting stuff but I didn't know Russ Micheals was still about. An apology in his interview would have been nice. EBES ceased trading owing me over £200 as I had ordered a new 1541 mk2 drive @£125 and GEOS plus some other bits and bobs.
I'm sure others had orders with them too. Still I suppose its water under the bridge now.
Thanks also for the XE1541 cable and software, I will be giving it a go later.

John Nixon

*Hi John,*
*Well, I did pass on your request to Russ (via a friend as I don't have direct contact) but as yet there is no reply, sorry.*
*Glad you like the XE1541 cable, they are very popular and once you get the settings right, they are a superb addition to your Commodore set-up.*

Hi Allan,
Many thanks for the double issue of Scene, Well done to Richard Bayliss for the excellent job of doing the coverdisks, in particular the SEUCK SPECIAL disk. That must have been a nightmare to compile ! As you're no doubt aware now I've done two new SEUCK games - please feel free to distribute them on the 'SCENE' COVERDISK free for all the readers. Any feedback would be appreciated concerning these titles. I've also enclosed a short feature to go with them. Is there any chance of putting Neil Kendall's back catalogue of games on a future coverdisk please ? Its nice to know that there's not just me in Bradford that supports the Commodore 64 ! Expect plenty of new features from me for 2004 ! Do you think you'll be doing another 'Arcade Special' soon ?

All the best, Yours faithfully
Wayne (ART RAVERS)

*Hi Wayne,*
*Thanks for your support, as promised, the SEUCK special 'eventually' made it to the pages of CS ! Richard has been doing a sterling job of producing coverdisks for CS for quite a while now, unfortunately, Richard has now had to retire from this post. Andrew Fisher has saved the day and stepped into the fray !*
*As for putting Neil's stuff on the coverdisk, I have no problems with that - Neil is reading this so how about Neil ?*
*There are plans for another Arcade Special,*

*it is just a matter of people sending in enough stuff to fill an issue and then I'll publish it - so, get writing everybody - ED*

Hi there,
I just found out about your site and I am so very excited about everything on it! Well done!
I own a c64 since 1983 and I still love the machine (even though I also own a very modern PC). I saw your setup list on the main page. Really impressive! Do you have any photos of all that pluged in on the commodore?
I have a couple of questions for you and I'd really appreciate it if you could reply. When the SuperCPU is installed can you still run the old games, or is it too fast for them? I mean I would love to create something similar to your system, but I would use it primarily to play games.
Also since you run your own Commodore magazine -fantastic idea btw- would you happen to know what happenned with that company, I think the name is Tulip, that stated that they'll bring back Commodore 64?
Anyway, thanks and I really look forward to hearing from you.

Nick Majors

*Hi Nick,*
*Glad to have you with us, new readers are always welcome.*
*In answer to your questions : most games are unplayable with a SuperCPU running at 20mhz unless they have been adapted.*
*Tulip/Ironstone partners have some plans in the pipeline, I have even had a meeting with them but at the moment everything is quite and/or secret - watch this space.*

Hi,
I received the binder yesterday and am very happy. The magazine is great, keep up the good work. I am happy to support the Commodore Scene and plan on continuing my subscription.

Thanks, Brian Trabert

*Hi Brian,*
*Thanks for that. I know that all the subscribers are quite happy with the quality of CS, its just a bit of a shame that we don't have as many subscribers as I would have liked to have :-( Well, there is a whole year to go yet so lets hope things pick up a bit - ED*

*Okay then, thats your lot for this issue. I'm off to attend to other non-CS duties and I hope to be back with you very soon - ED*

# Maintenance ~ *for sale or repairs*

Maybe you just bought a machine or you have an old machine you wish to sell! I will guide you through a few steps that may get your machine looking like new for sale or for your nicely cleaned work area. These steps are easily followed and should present no problems to most users, ok get out your duster and lets clean that mucky devil up.

The first thing we need to clean you machine properly is to open the machine up remove the motherboard and keyboard. Turn the machine over so the keys are on your lap or table. You will see that there are holes containing three screws all Philips headed.

Unscrew these as far as they will go the put the machine over a table and turn it right way up. The screws will fall on the table so you won't loose them! Now imagine the machine is hinged at the back lift it upwards from the front.

Be very carefully as there are two wires inside connecting the keyboard and led power light. Below is shown the keyboard connector this is removed by pulling upwards don't wiggle it as you will bend the connecting pins.

Now remove the led connector again this should be pulled strength upwards.

Now we can see our machine guts! You will also see in the top right a glass fuse, I have been given two machines where the only fault has been this fuse had blown. The fuse is available from any electrical store and costs a few pence only. I took mine to the electrical shop and asked for two the same as this please! (errm it's the none technical way to order fuses while ensuring you get the correct ones) You can test the fuse with a multi meter to see if the fuse has blown. On the two "dead" units I had I could see the wire had actually BLOWN away inside the glass. Its also worth checking the fuse in the Commodore transformer plug, a friend of mine was charged five pounds to repair his machine, from a none reputable electrical repairs shop. It turned out the only thing wrong was the main fuse was dead!

While we have the machine open for testing and cleaning have a look at the modulator. This is used for output to a normal television, sometimes adjusting this screw can gain you a better TV image. You can do this while the machine is switched on, but screw it all back together first! Tune your TV to a suitable channel then slowly turn the modulator screw and note the best position on TV.

Now we can remove the keyboard from the top of the case this is held in by twelve Philips headed screws.

Once this is connected you can use small blasts of compressed air in a can available from your local electrical specialists or p.c. shop. Gentle blasts of air will remove the dust from the motherboard. ***Don't use a vacuum cleaner as static builds up at the end of the hose, and if this touches any components it will ZAP them and your machine will die.***

While on the subject of how to kill a machine we touch up on electrostatic discharge OUCH ! You know when you go over to for example the TV and touch the controls and ZAP you receive a static electric shock. The same can happen while you are inside your machine, there are various straps you can buy to disipate the static but I just hold onto a radiator, which will draw the charge away. You may like to hold or at least touch a radiator before handling your machines motherboard.

Now remove the motherboard by unscrewing the six screws located in the corners and top middle and top bottom of the motherboard

SCREW POSITIONS
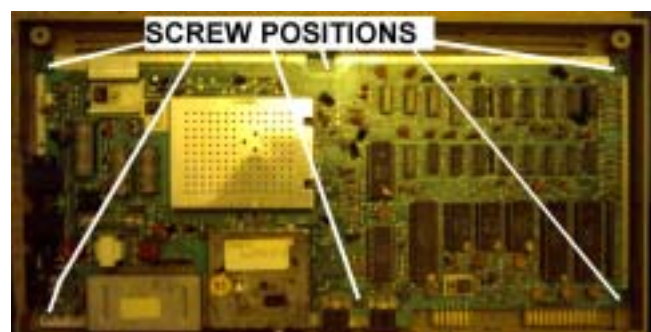
Once the Motherboard is removed place it on a flat surface where it won't get damaged. Now the outer casing of your machine can be washed and scrubbed with

warm soapy water. Ensure you leave the casing to dry out before re assembling!

It may be at this point you wish to do a custom conversion, the case can now easily be sprayed. Water and soap wont clean every mark and I have had some success using diluted thinners, test an area inside the case because thinners could melt through the plastic.

We can now turn our attention to the keyboard. Using a flat blade screwdriver we can lever the keys off the machine being very careful.



May not come across in the picture the amount of dust under the keys, I find this the best way to clean the keyboard but its very time consuming. Once all the keys are out (of course you need to know where they went to put them back!) we can clean the keyboard and the keys individually. Clean the keyboard unit



with a dry cloth, and the keys can be washed in soapy water.
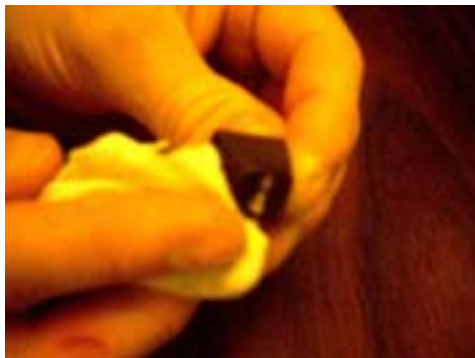
As you removed the keys you should have found a spring under every key, this returns the key back to its position. I find that stretching the spring a little before putting them back, makes the keyboard have a more new feel. Putting the keys back it's a long process but it will be worth it you just need to stick at it.



Now reassemble the machine and you will have a machine that's as good as knew, or better.

Final note I have had a machine given that produced no sound, I removed the SID chip with

two flat bladed screw drivers, one on each side and levered upwards. You must apply upward even pressure from both sides of the chip so not to bend the pins. Once the chip was out I cleaned the pin contacts reinserted the chip and when I powered the machine up BOOM we have sound. I suspect this could have been some sort of static build up under the chip? Anyone know what caused this?*

| | |
|---|---|
| Writer | Nigel M. Parker |
| Email | nigelp2k@yahoo.co.uk |
| Copyright | Commodore Scene |

WARNING
Playing with electric is very dangerous consult a qualified electrician, neither I nor Commodore Scene can be held responsible for any injury you cause to yourself or other people as a result of following this article.

*Apparently, the static charge build up electronic components attracks dirt, it then oxidizes on the metal parts causing it to encrust and eventually 'lift' the metal contacts apart. Removing and replacing the components usually is enough to make the contacts reconnect again. Obviously, cleaning them while they are apart is also bennificial. That is why it is important to clean the USER & CARTRIDGE ports when faults start to occour - ED

## 1541 #9
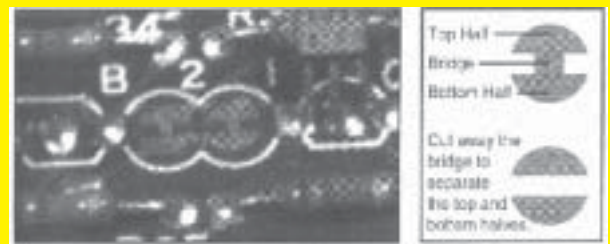


To switch your 1540 or 1541 disk drive default number to 9 instead of the original 8 you will have to open it up and locate the 'jumpers' that tell the drive which number it is.

For this simple task of making it device 9 we will need to **cut** the bridge between the two half moon jumpers on **jumper 1**. As shown above.

As the drive variants did not have the same locations for the half moons, you will need to locate and identify the correct ones for your drive :

1540/1541 - long board revision A
The jumpers are on the edge of the board and are marked **1 & 2**. Cut jumper **1**.

1541 short board revision A & revision B
The jumpers are in the centre of the resistors marked **B & 2**. Cut jumper **B**.

1541 short board revision C
Again, the jumpers are in the middle and marked **C46 & B36**. Cut **C46**.

1541C revision A
On the edge of the board marked **J1 & J2**. Cut **J1**.

*Oh no, here we go again - destroying perfectly good Commodores to make something else :-(*

# MIDIbox SID

Full details can be found at ~ **http://www.ucapps.de/midibox_sid.html** ~ my thanks to Nigel Parker for fowarding on this information.

Are you tired of virtual synthesizers, samplers and wavetable machines? Are you seeking for the unique sound of the vintage homecomputer days. Did you know that the sound device from one of the most popular computers of the 80's - the C64 - can produce awesome sounds like a modern synth? Did you ever build a low-budget synthesizer by your own? Well, maybe the MIDIbox SID could be interesting for you. :-)

MIDIbox SID allows you to control the SID sound chip over MIDI. This isn't a revolutionary idea, some people realized something similar some years before:
   * SID Homepage by Andreas Varga with some interesting technical background informations
   * SIDgroove a DIY SID synthesizer, Master/Slave design, well documented

   * Parallel SID - another DIY SID synthesizer - thanks to Buchi for the warning regarding the Audio Out of the SID!
   * SIDrack by Christian Catchpole
   * C64 schematics gives usefull informations for the filter caps and the output amplifier
   * SidStation - a commercial product with SID inside
   * HardSID - another commercial product with SID inside

MIDIbox SID is a non-commercial & "DIY-only" project. Beside of the common SID functions (three oscillators, triangle/saw/pulse/noise and mixed waveforms, independent envelope generators for the amplitudes, sync & ringmodulation, 12db multistate low/band/highpass/notch filter) it features:
   * 2 additional envelopes with optional non-linear curve which can be assigned to Pitch, Pulsewidth and Filters

   * 6 additional LFOs with different waveforms which can be assigned to Pitch, Pulsewidth and Filters
   * Fine Tuning
   * Pitch Bender
   * Portamento/Glide function
   * Delays
   * optional Oscillator Synchronization
   * Arpeggiator (a SID *must* have an arpeggiator ;-)
   * Poly, Mono and Legato Mode
   * Free controller assignments to Modulation Wheel, Velocity and Aftertouch
   * wave and CC sequences which allow more percussive sounds (Wavetables)
   * the wavetable sequencer can be combined with the arpeggiator in order to realize complex textures
   * LFOs, Envelopes, Wavetables, Arpeggios optionally syncable via external MIDI clock
   * up to 8 CV outs with 12 bit resolution (in experimental state)
   * OS independent SysEx editor based on JSynthLib
   * BankStick support (128 sound patches per stick)
   * can be used as .sid file player (see MIOS Download section)
   * optional minimal control unit (Step A)
   * the possibility to control up to 4 SIDs (Step B)
   * a complete control surface (Step C)

This is the horror of what is left after a project like this, my heart aches :-(

# YAK's Revenge

I'm still not sure how this project came about !! I think I was on the phone to Andrew Fisher and maybe mentioned wanting to do a Jeff Minter game with SEUCK ?!?! I've ALWAYS admired Jeff for his games, they're fun, mad and wacky - bit like me I guess (!). Anyway, I definetely remember getting the sprites sent to me from Andrew Fisher. I think he sent them to me in 1999 so they'd been sitting round a while.

Anyway, I had this accident with a machine blade at work last year (10 stitches in two fingers it hurt like mad - when it's cold I can really feel it badly !). I was sat around at home and the doctor told me to get some exercise for my fingers, so I thought "Why not have a go at doing the game ?". I didn't actually sketch any ideas on paper - the irony is while I could use a joystick to work SEUCK I couldn't actually write with a pen or pencil - my fingers wouldn't move that well !

So with tons of time to kill I began the job of creating this game... My initial idea was to have the player flying over the different zones just like in the Revenge Of The Mutant Camel games, various things would attack you and you'd shoot them. I planned to loop the same scenery three or four times to give the indication you were going through the same level (like Jeff does in his games) with a distance counter that would decrease as you made you way up screen. Anyway when I came to start drawing the background graphics I had trouble creating that 'look' that Jeff created in his 'Camel' games. As usual I ended up compromising, I kept the idea of levels (or zones as they're referred to in the game) and took inspiration from various Jeff games. Hence while playing you'll see elements of Gridrunner, Ancipital and Iridis Alpha in the zones. Enjoy it, This game is going out to all the Sheep, LLamas, Camels, Wombles and Commodore 64 gaming dudes out there !!!

## Techie Trivia

I began work on this a week before the BRIGHTON Back In Timelast year, I saved it to disk and took it with me. I asked Allan if he'd load it up so people could have a play. The disk would not load - I was VERY embarrased, I remember Allan giving me a funny look, I bet he thought I was a right banana head - HA HA !!! Whilst there I remember talking to a guy about myself doing a SEUCK 'MINTER' game and he was really interested asking what was going in it and was I going to feature certain MINTER games (he was quite obsessed bless him !). Right before I say anything else - A big - THANK YOU to Andrew Fisher who not only sent me the sprite graphics for this, he also entered the game into RICHARD BAYLISS'S SEUCK Competition last year. This is the first time anyone has done all the sprite graphics for a game for me, it saved me so much time ! While visiting Shaun Bebbington in October last year I managed to go on his laptop computer. I went to Richard Bayliss's Website (very nice - check it out immediately !) and read the rules of his SEUCK competition. The rules said you couldn't use graphics from other games. I mentioned this to Andrew, he said No problem cos' he'd hacked the Minter sprites from his games and then converted them to work in multi - colour mode as used by SEUCK - cool, What a guy !!! Listen out for the grunting Camels, I love 'em, the noisy beasts ! If you look closely you'll see I've re-used my starfield style effect in the IRIDIS ALPHA type Zone. Starfields are easy to create with SEUCK, You draw a pixel on a sprite then insert it in the object editor as an enemy and then just move it from top tobottom of the screen using the attack wave editor. If you draw 3 different colour sprites - one, white - the second light grey and the third, dark grey you create a multi-layered starfield. You could also draw stars in the background blocks so when the screen scrolls they'll move as well - it's probablybest if you draw these a different colour to the other 3 though so that the player can visually see the difference. The key thing to remember is not to overcrowd the screen with too many sprites, or they'll glitch, flicker, or disappear ! This is my first tribute game, I may consider doing another

Jeff Minter inspired game at some point. During the making of this game I thought about the game Richard Bayliss did for Commodore Zone called "Camels In Space" I also dug it out and played it, it's nice to see that people are still fans of the 'old school programmers', the 80's were the best ! Ironic really that after all these years people are turning out games inspired from their childhood gaming experiences. Fan based games rule, may they live forever. P.S. Richard Bayliss - please do a sequel to 'Camels In Space'. Art Ravers Fans (!) might like to note this is the first time I've done a wierdo score system. Basically I redrew all the numerical score counter 0 through to 9 and drew them as symbols instead ! I'd wanted to do this in a SEUCK game for some time, Come to think of it I can't think of any other SEUCK game that does this kinda' thing with its scoring system.

## RETRO WARS 2

After my 'Jeff Minter' tribute game I thought it would be nice to return to do another RETRO WARS game, retro gaming seems to have made quite a resurgence as of late. Also I had ideas from the first game (and sprites !) that I hadn't utilised. I decided to do the game in the same format as the original - i.e. The player works there way through the years progressively playing a game from the relevant year they are in. I sat down and wrote a list of games I wanted to include. I began with a totally new idea that I haven't seen in a SEUCK game and also thought would be quite different. The first level is a fruit machine type affair, the twist is you get to shoot the fruit !

There's a version of Missile Command in the game, and I've also included versions of 'Frogger' and 'Burger Time'. The Burger Time level is my fave of all the levels, it was quite hard to put together but well worth the effort. Although not as big a game as the original RETRO

*From page 13 ...*

After some preliminary test-runs the plans for incorporating the PSU in the C64 casing were rejected. Although the power consumption is low, things can get warm in there.

Once, I measured over 70 degrees from the CPU on an, admittedly, warm day while playing a DVD without any tasks running in the background. Probably the relatively poor airflow is to blame here. I am considering using the opening next to the power connector at the backside to get some airflow with a 40 mm fan located behind it. Maybe, it will not be necessary; I will have to do some more CPU-demanding tests here.



Ok, that is more or less how this Commodore got to run at a frequency 911 times its original speed. Last week I got hold of a box full with original Commodore goodies including a working C64, a PSU, datarecorder, joysticks and disk-drive (all this set me back a full 8 euros on Ebay, damn they get pricier every day), so a few things have been added on the to-do list:

- Getting the keyboard to function. I tried squeezing the standard PS2 foil in the keyboard but with limited success and destroying the original wiring. Neil who built the Commodore ITX-64 might provide a solution here.

- Fitting an optical mouse in the original joystick. This should be cheap, easy and fun to do. I"ll just have to provide some room and make the "fire" switch to function again :-)

- Hiding the camping PSU in the datarecorder. Fun and easy as well.

Incorporating an infrared led somewhere on the casing for communication with phone, PDA etc. The

M9000 has fast-IR on board you know…

- Improving airflow to cool things down, as mentioned in the text.

Now that this little project is finished, I will have to find myself something new to pass time with. Maybe I should have closer look at that new M10000 board. Nice.

Hmm, tempting, maybe try a smaller HD drive, fit it in a different case. Maybe create a whole bunch of retro looking EPIAs. Let"s see, if we could just find something nice to put it in…

(Oh-oh, the Geek inside and Nostalgia took over again)



I"ll let you know when the new toy is up and running.

Ciao, **DocLorren**

**http://www.mini-itx.com/projects/c64/**

......... from page 35

WARS I still think this sequel has a lot to offer the player.

**Techie Trivia**

My Ninth SEUCK game just in case you folks aren't sure ! The 'Missile Command' level came from visiting Shaun last year he let me have a go with a ATARI 2600 clone affair which is basically a small number of games stored in a joystick which plugs into your T.V. so you can instantly pick up and play !!!

Special thanks also to Shaun for help with the Q-BERT level, I was working on it and got stuck trying to recreate the graphics. I rang Shaun and he suggested I look for a pattern in the graphics, anyway to cut a long story short I went back to the graphics and got a reasonable rendition of the Q-

*If you subscribe to the excellent COPS mailing list - **cops-admin@videocam.net.au** - then you will recieve news about currently active projects. **Arndt Dettke** recently (sept '03) posted quite a long mailing regarding the upgrading of **GoDot**. It just shows how much time and patience some people have for a project that they truly believe in. Please on ....*

It's time to report about my current project that was initiated by Dale, Greg Nacu and Bruce Thomas (my thanks to you three for raising me from agony!)

Almost a year ago I started to code for a JPG loader for GoDot and I contacted Steve Judd who frankly gave me facts, source code, and executables to work with and to analyze them. I started with great enthusiasm and soon I was successful with a running decoder. I turned my efforts to the renderer (which is the part of Adrain Gonzales) but didn't really start off with it. The reason was that at that time my beloved second dog became seriously ill, and one day before Chistmas Eve we had bring her to her final sleep. Our hearts were broken, and I couldn't continue coding for a long time. (Have a look at her at **www.dettke.de.vu**)

It was Greg who dropped me an email one day whether I wouldn't like to participate in Wings development. Well, this was quite an honor to me to be asked for something like that, and I happily agreed. Sorry to Greg, I didn't do much for Wings yet, but remembered what I was after a year before: the JPG project. To get into the renderer I contacted Adrian and was very happy him immediately answering my questions. With his help I could quickly analyze the JPZ renderer, and recognized that my former plan (to write a GoDot based renderer) couldn't be realized. Decoder and renderer would occupy too much of GoDot's RAM. It wouldn't work that way. Either GoDot and the decoder/renderer would need as much RAM as the C=64 would have available.

So, what to do? Drop the project? Not Arndt Dettke! This was a major challenge! After much thinking I decided to take the \*original\* software (Steve's and Adrian's JPZ) and run it

\*concurrently\* with GoDot! My plan was to have two programs share the C=64 (remember: each of them in need of the entire RAM), like having two souls in one body. How to achieve that? Yes, an REU is \*mandatory\*. I run GoDot, let a GoDot loader retrieve the information the JPZ program needs (filename, drive, indents for JPG clip), and pass this information over to JPZ. For this purpose JPZ had to be patched, and luckily the routines to input the filenames in JPZ were long enough that I could patch them to GoDot's needs. So, what I implemented in JPZ was a complete facility to switch from GoDot to JPZ and viceversa. This would be the first advantage as compared to JPZ: you can use GoDot's UI (user interface) to select the JPG files to be displayed! And this would be the second advantage: You can use it again and again!

GoDot loads JPZ once, installs it to the REU and patches it to co-operate with GoDot. This is exactly the stage the program is currently. GoDot can display as many JPGs as you have on your disks, and can do this again and again.

*But my plans go further.* It is not enough to just display the JPGs, the real thing is to have the JPG \*converted\* to GoDot's 4Bit graphics format. Well, after Adrian's rendering (which BTW is \*so\* breathtaking I couldn't believe it!) the rendered data are still available! Why not take these data and simply transform them to GoDot? Ok, this was an easy task and it is already accomplished. I coded "mod.ConvertJPG". (Which in fact is actually a converter for IFLI since Adrian's renderer converts the JPG data to IFLI.) This module is running and does its work flawlessly.

*But my plans go further.* What about having a JPG image re-displayed without having to re-load it again? Yes, the data is still there, why not gather it again for display? This would be a \*great\* advantage as to JPZ since the loading procedure takes a fairly loooong time (of course). I'm currently working on this feature.

*But my plans still go further.* What if you could display \*any\* C=64 image as an IFLI image? Note that IFLI is the

graphics mode that provides up to 136 different colors on a simple C=64! They are actually fake colors (and not real) but our eyes don't care about real or not, they can easily be outwitted. So, what I have to do is write an IFLI renderer for still special purpose (rendering to an REU instead of rendering to disk). This is all easy because there's already a renderer available (svr.FunPaintII) which just has to be adapted. This will be done when the re-display feature is running.

Now, I would ask you for assistance here. Could some of you beta test the modules like they are currently? To find their faults and niftinesses? It would be nice to have either some who are technically skilled, and some others who are not. And please be prepared for fast updating periods. Everytime I remedy a bug or change a feature I would send you an update, and you shouldn't loose track. If some Commodorians would be helpful here, I would very much appreciate that.

And now for my announcements: In the course of coding the JPG stuff I encountered some bugs in GoDot which I instantly cured. These are bugs that relate to REU modules (I got aware of them because I concentrated on REUs).

One was in dev.REU. It caused the directory sometimes to display one file twice though it resided in the REU only once. This was a long known bug, and I finally found out how to cure it.

The other came to my knowlegde because Dale and Bruce asked me to perform a major update in the GoDot file and disk archive on my site. I changed the startup colors of GoDot for that (gray instead of blue background) and also changed the list of files which GoDot should automatically install in the REU on startup. This worked all fine until I tried to install additional modifiers to REU at runtime using mod..REUTool. To my embarrassment, I could install them but they wouldn't appear in the directory listing. Even more embarrassed was I when I noticed that they would load when I input their names manually (their names weren't on screen). What was \*that\*? I found out (and I needed a \*long\* search) that this behaviour only happened when GoDot couldn't find one or more files from the ini file. Realizing that, the reason was promptly recovered: GoDot's booter would incorrectly handle files that weren't present on disk. So, what we

have now is a new file "godot" (version 1.31) and a new "dev.REU" (version 1.04). Both are for download at my site.

Care for correctly renaming these files for use under GoDot. If you retrieved them using GEOS or Wheels you probably have their names in true ASCII format which a native Commodore application like GoDot wouldn't recognize. The names must be converted to PETSCII. Also, I provide MS-DOS filenames on my site (to have a majority of onliners be able to download them) and you must rename the files to their GoDot filenames (as mentioned above). Ok.

And now let me thank you for your patience to read this up to its end.



Have fun with GoDot!

**Arndt Dettke**
**GoDot C64 Image Processing**
**www.godot64.de**

BERT graphics. It's not a perfect conversion but the style is similar. Thanks Shaun !!! I also tweaked the Q-BERT level so that if the monsters aren't shot they'll still fit in with the next round of Q-BERT, You'll understand this better when you play though... I did intend to include Spy Hunter, Moon Buggy and also Light Cycles from the Arcade game 'TRON' but they were scrapped from the final game. I never drew any graphics for any of these levels, I just thought they would have been cool to include, I kinda' chickened out of doing them cos' I thought they would have been too hard to do... I also had the idea of a Lunar Lander level but due to game construction time it got thrown in at the end, albeit in a metemorphosised state.

*In a previous issue of Commodore Scene (before CS38), I asked if anybody could enlighten us on this device, well, here is that enlightenment ........*



## *The Amazing Voice Master*



"an amazing new product for your personal computer that adds a new dimension to personal computing. The voice master allows your computer to talk back to you in your own voice it will obey you spoken commands and it will write music for you as you hum!"

Sounds exciting and believe me it is!

Voice master by "Covox inc." was manufactured for a number of 8bit computer systems most notably for the Atari 800, xl, xe apple II+,IIE,IIC and the Commodore 64, the units were manufactured in America sometime in 1985 I think Covox as a company started in 1982 ( I could be wrong so don't quote me). Here we have another groundbreaking product that was way ahead of its time, the unit is also quite hard to find. Let's have a rundown of some of the unit's features as we venture into the amazing world of speech recognition, surely voice recognition isn't possible on a Commodore 64? Even today's latest P.c. systems still cant cope with voice recognition.



After calibrating the unit and putting on the stylish headset sorry no pictures of me looking like a secretary just the unit itself.

We are then asked to load the menu application from disk. Once Loaded, this menu gives some examples of what the software can be programmed to do.  The menu is screen with item options that are listed from 0 to 9. The actual software or voice recognition is written in machine code with the demo software and other applications written in BASIC, the idea of writing the software in BASIC is to show how the unit can be used in your own applications. Let's start from the top and work our way down.

**0 EDITOR**
Entering the Editor we are greeted with another menu of 8 items numbered 1 to 8
1 LOAD IN SPEECH FILE
This option is used to load a previously recorded set of speech data from disk
2 SAVE SPEECH FILE
This option is where we save our current speech data
3 SPEEK CURRENT WORD
With this option we are able to test our current word ensuring it has recorded correctly
4 RECORD CURRENT WORD
Here we can record word data.
5 EDIT CURRENT WORD
This option takes us to a graphical display, here we see our word data in visual format. We can scroll along the data, play up to a cursor position or play all the word.
6 CHANGE WORD NUMBER
This option allows us to change the current word we are recording
8 EXIT
Quits us back to basic. We could re- run the program by typing "run, this would return us into the editor menu, otherwise we need to reload the menu again from disk.

```
VOICEMASTER DEMO PROGRAM
RUN UPDATE FOR UPDATES
0)  EDITOR
1)  DEMO
2)  CLOCK
3)  CALCULATOR
4)  RECOG-DEMO
5)  BLACKJACK
6)  CALCULATOR-2
7)  HUM-ALONG
8)  COMPOSER
9)  END
        INPUT(0-9)
```

**1 DEMO**
In the demo mode we are given a short sample from someone saying "COVOX VICE MASTER" ter ter ter ter ter ter. The ter represents echoes at the end of the sound sample. We now are taken to a submenu with the following options :

F1 RECORD SPEECH
Here we are given the opportunity to record some words for playback. Once F1 has been pressed you are instructed to press F1 again this puts the system in a wait state, the system will then record at the next sound. Pressing z will stop the recording of sound. During sound recording the screen is blanked out to obtain the best quality recording possible. This is not a recording you can be proud of though! If you remember the game Ghostbusters where in the title music you could press a key and the commodore would say "Ghostbusters", you get an idea of the quality of these recordings slightly muffled and wet sounding. The sound also depends on what machine you record and playback on. Using a Commodore 64c the sound is more muffled and quiet, but on an old Breadbin machine the sound is clearer and noticeably louder. This is due to Commodore changing the SID chip on later production machines. Something else I have found is that if you first snap your fingers then when the screen blanks say your phrase you wont truncate any of the words. I have no idea how it works but the machine somehow clips of the clicking of fingers leaving just your voice, seems to be some intelligent processing going on behind the scenes. If you have one of these units try this tip if our always missing the first letter of your recording.

F3 PLAYBACK SPEECH
Here we can playback our own-recorded sounds, pressing the key plays back our sound recorded from the fist option.
F5 ECHO EFFECT
With this option we can playback our recording but with an echo. So for example if we recorded commodore then press F5 the machine would playback commodore commodore commodore commodore commodore commodore going progressively quieter.
F7 VARI – PLAYBACK SPEED
This is my favorite option this plays back the sound from a low slow deep version of your recording to a mini mouse fast squeaky version of the sound sample.
F8 SPECTRUM DISPLAY
With this option we can view in real-time sounds spoken into the microphone, in a sort of real-time graphic equalization display. Pressing SPACE bar will return us to the menu. This is such a cool feature the display is in "real time" also displaying the volume in a coloured bar starting green and ending red in the higher volume

### F2 DEMO RECOGNITION
We are treated with this option to a sample of what later to come in the program! "Wow cant wait" once we have pressed the function key we are taken to a new screen with the words please say VOICEMASTER , we now have to say VOICEMASTER and the computer calculates our speech pattern if it matches the pattern for the word VOICEMASTER we move on. Next we are asked to say the word COMMO-DORE then COMPUTER then the word QUIT. Once these have been successfully analyzed were taken to a new screen with just the words voicemaster, commodore,computer and quit. If we now say COMMODORE the computer should respond with "YOU SAID COMMODORE" once we say quit though we are taken back to the menu and the computer replies "GOOD BYE" You can keep saying Commodore, voicemaster and the machine will respond with you said ........ until you say the word quit.
### Q QUIT
Returns us back to the main menu
Interesting feature is if we leave the machine for any length of time within this submenu the computer will again replay the sample "VOICE MASTER TER TER TER TER".

### 2 CLOCK
Now we are getting to something useful this is a "SPEAKING" clock application using your voice for the speech. The computer will BLEEP until we set the time so we need to do that first by pressing F1 then entering hours minutes and seconds finally AM or PM. Now with the time set we need to record the sample data by pressing f8. This will then guide us through speaking the numbers 0 to 9 and the words am, pm and the numbers eleven, twelve, thirteen etc and the phrase "its time to wake up"Once enough data has been collected for us to have a speaking clock.
### SPACE BAR
this will speak the time in your voice.
### F1 SET TIME
This sets the time on our Commodore clock
### F3 SET ALARM
This sets our alarm clock time remember the phrase "its time to wake up" we recorded when setting up the clock, this would be spoken instead of an alarm sound. So you could change the phrase to suit your needs example "nigel don't be late"
### F5 EDIT VOCABULARY
Here we can re-record words if they don't sound right on our clock. Be warned it takes ages of practice to get the clock working properly, but if a jobs worth doing its worth doing well.
### F8 EDIT NEW VOCABLULARY
With this option we can start again recording data from scratch just incase you made a total mess of everything.
### Q RETURN TO MAIN MENU
Pressing this takes us back to the main menu.

### 3 CALCULATOR
Once the sub option has loaded, we are asked to build up voice sample data for the numbers 0 to 9. Then the calculator functions for add, divide etc. once the data is collected we are given a new screen, here we can enter a mathematical problem for our machine to answer for example we could type.
1+1+2+3+4
The numbers and mathematical functions are spoken back as the keys are pressed, once we press = the computer says equals then displays the answer. Now unfortunately the program doesn't ask for the words ten twenty thirty etc or the numbers eleven twelve etc so in this case we would be given the answer ONE ONE instead of eleven, ok its picking the application to bits after all it does work doesn't it? Ok it works but after creating such an amazing, piece of hardware and application software why let the whole thing down by a small lack of detail. Pressing q will again return us to the main menu.

### 4 RECOG-DEMO
This is the "Voice recognition and speech synthesis demo" training mode we are asked to repeat some colours then asked to repeat our speech as we are again asked to speak the colours described on screen this builds up an average of your voice pattern for the words. The final part of the training is to press F1 then say the colour we then move onto the next colour. During this Colour training we are also asked to say the word "stop". Then we are presented with a new screen if we say a colour the border of the screen changes to that colour and the word is spoken. For example if I said "yellow" the screen border would turn yellow and the computer replays the sample "YELLOW" pretty cool isn't it? I said you would be impressed with this hardware. Once we have had enough we say STOP and the main menu is automatically re-loaded.

### 5 BLACKJACK
This is a fully functional version of the game "black jack" but we have to say the words TWIST, STICK etc. instead of just pressing keys, have you ever seen this done on a P.c. before? Once blackjack has loaded we are presented with the applications submenu.

1 TRAIN FOR RECOGNITION

This again takes us through the training of our voice sample to the words twist, stick etc and the numbers 0 to 9, we are shown a number and or word and then asked to say the number out loud.

2 SAVE RECOGNITION TEMPLATES

Here we can save our voice pattern data so we don't need to re-train the machine each time we want to play cards! It takes about 5-10 minutes to do the training so loading from disk is way faster.

3 LOAD RECOGNITION TEPMPLATES

Yep her we load the speech patters data.

4 ADJUST RECOGNITION SENSITIVITY

Here we are given the chance to change some of the settings only MAX and MIN I usually leave these at their default values, as I have to admit I don't know what they are supposed to do!

5 GOTO GAME

This option takes us to a game of cards, we must SPEAK the amount we wish to bet. So if it was 5 dollars we would say "FIVE". All the games currency is in dollars with no way to change to pounds (at least it is on my version) then we would need to say BET! The computer then deals our cards speaking there names e.g. "NINE OF DIAMONDS, or FIVE OF CLUBS" etc these and the computers cards are displayed on screen. Once we have decided whether to stick, or twist here referred to as "HIT ME" to "twist" we issue the command "HIT ME". If we need to STICK we issue the command STAY and the computer deals itself until it either wins or goes bust.

6 RETURN TO MAIN MENU

Returns you to main menu oh go on just another game.

7 NEW GAME

This would start a fresh game and wipe all the winnings from you or the computer, normally the computer beats me, never was much good at blackjack though.

In the game saying "menu" brings us back to this submenu as does pressing the key q to go to the main menu we would press the key 6

**6 CALCULATOR 2**

This takes us to another calculator application although this one is a little special only a little because its basically the same as the first version, as we shall find out what is special.

1 TRAIN FOR RECOGNITION

This option trains the machine to our voice we are asked for the numbers 0 to 9 and the mathematical commands for add divide etc also the commands menu and clear.

2 LEARN FOR SPEECH PLAYBACK

This is where we record samples for the machine to playback for the numbers and mathematical functions

3 SAVE RECOGNITION TEMPLATES

Saves your training from menu item 1 so it can be loaded saving you the problem of re training the computer it takes to long and gets you mad!

4 SAVE SPEECH TO DISK

This option saves your speech samples to disk for later re-loading.

5 LOAD SPEECH RECOGNITION TEMPLATES

As it says loads your trained speech configuration data files

6 LOAD SPEECH

Loads the samples for replay through your T.V or amplifier.

7 GO TO CALCULATOR

Runs the calculator application, here though we can say the numbers "1 add 2 add 3 equals" and the computer will say the result. Again let down because you cant say "twenty seven" you need to say "TWO SEVEN" another application suffering from a little lack of thought and attention to detail sorry but it has to be said. You can say MENU to quit or press key q.

8 ADJUST SPEECH SENSITIVITY

Adjusts two settings on your speech unit these are max and min values, again I just leave them on default values and the unit seems to be functioning ok.

9 RETURN TO MAIN MENU

Yep well guessed! Makes a cup of tea and toasted sandwich (only joking ? )

**7 HUM-ALONG**

Once selected and we have pressed the space bar to continue we are met with an almost bewilder-ing amount of options the application allows us to

```
        VOICE HARP HUM-ALONG
              MAIN MENU

       PRESETS            INPUT MODE
    1 = PLAY ONE      13 = HUM/VOICE
    2 = PLAY TWO      14 = WHISTLE
    3 = PLAY THREE
    4 = PLAY FOUR        OUTPUT MODE
    5 = PLAY FIVE
    6 = PLAY SIX      15 = CONTINUOUS
    7 = PLAY SEVEN    16 = DISCRETE
    8 = PLAY EIGHT
                        DISPLAY MODE
    9 = DEFINE
   10 = SAVE/LOAD/DIR    17 = ON
                         18 = OFF
  INPUT PROCESSING
                         19 = END
   11 = DIGITAL FILTER
   12 = INTEGRATION TIME

                         CHOICE:?
```

turn our machine into a musical instrument. We can whistle to the machine or hum and the notes pitches are transferred to sound data that is then replayed via the SID chip.

   PRESETS
   These are preset sounds for example the first is a basic note but others are 2 voices combined with different waveforms producing surreal sounds.

   9 DEFINE
   Using this option we can change the sound produced from any of the presets numbered 1-8. We can change the pitch filter settings, Sound characteristics, attack decay,sustain and release. We can change the sound source for example pulse noise etc. and also set the ring modulation for the sound. In fact anysetting available to us under the SID.

   10 SAVE/LOAD/DIR
   Yes we can save and load our creations and also obtain a directory listing, the directory listing is nicely scrolled across the screen although this slows the whole listing down!

   11 DIGITAL FILTER
       We are given the ability to turn on or of the filter and set a filter value

   12 INTEGRATION TIME
       Can be set to long medium or short, this sets how our wobbly hum will be reproduced via SID. For example suppose you couldn't hit the note accurately and you wobbled up and down around the actual note, setting to long would smooth out the wobbles so the SID note would be a more stable UN wobbly sound. Didn't explain that very well did I. Another way to look at this would be Excellent singers set this to SHORT singers who sound like cats set this to long.

   13 hum/voice
   14 whistle
       These set up for input from you either Humming a note or whistling the note, select the preffered option either 13 or 14.

   15 CONTINUOUS
   16 DISCRETE
       These option set how the output sound in produced continuous will closely track the sounds you whistle or hum while discrete will produce sounds only in the range of a chromatic scale (12 notes per octave)

   17    ON
   18    OFF
   These options set the screen note out put to be On or off, On will display the notes you are humming in the bottom right of the screen.


   **8  COMPOSER**



MODE=DISCREET
INPUT=HUM(WHISTLE)   OCTAVE=NORMAL
SOUND=OFF            FILTER=OFF
NOTE=REST  VOICE=1   TEMPO=MEDIUM

       At last something that is actually useful, Using this option allows us to record onto a musical stave or into music notation our own musical creation by humming or singing a tune of our own.

   0 EXIT
       NO no this will quit the application don't do it
   1 RECORD
       Yes this will take us to a musical nota-tional display where we can whistle or hum our masterpiece and have it displayed on screen, oh did I say we can print this out (NO) well I just have done.
   2 PLAY BACK
       Plays our creation back showing the music on screen.
   3 EDIT
       We all make mistakes this option allows us to edit the music by scrolling left and right and changing the note pitch duration or entering rests etc.
   4 CLEAR NOTES
       Made a total mess of the whole thing this will erase the lot allowing us to start again.
   5 LOAD FILE
   6 SAVE FILE
       Er load and save your files with these options.

7 APPEND FILE
   Allows more tuneful whistles to be added onto a previous creation, allowing for creative breaks in between our masterpiece creation.
8 KEY UP
9 KEY DOWN
   Change the pitch of the notes by one semitone up or down, could be useful if you sing out of key
DEFINE VOICE
   This option is used to produce a custom sound from the Sid chip various perameters can be defined for example Attack. Sustain. Decay, release the wave type used for the sound,the octave or sound pitch, if the filter should be used etc.. we can create a custom sound set for 8 voices
LOAD VOICES
SAVE VOICES
   Yep loads and saves your custom voice configurations
Catalogue DISK
   Gives a directory of the disk, not as nice as before it just seems to do a normal catalogue and dumps the result on screen just like a "load "$",8,1" the out put is frozen on screen until a key is pressed then we are taken back to the composer submenu.

   Hopefully I have gone over some of the main functions of this Amazing application; it's just a piece of fun. The only thing left to say is that you can use the unit in your own applications. There are reference charts in the documentation for programming in basic and machine code. First you need to load the voice recording application called VM3.On once loaded your type sys49152 to run the application, now the recording software is in memory we can use basic commands to record sounds for example

   10 print chr$(147)
   20 LEARN1
   30 SPEAK1

   line 10 clears the screen
   line 20 sets the system to listen for a word this word is assigned the number 1 you can use (0 to 63) for recording data. Line 30 says the recorded sound.

   There are a whole host of extensions to the BASIC programming language that are added by the application, the playback routine can be used free of charge but Covox recommend you credit them somewhere in your application. This could be a powerful tool if someone talented enough took the time to produce applications to take advantage of the hardware. The manual gives an example of a keyboard application for the blind when a letter is pressed the key is SAID out loud.
   Something else on the disk is an application to backup the applications to another disk, or even to tape; as the hardware needs to be in place for anything other than sample playback there seems little point in copy protection (HURRAY....) Right once the BACKUP is run we are asked from tape or disk? We are then given a list of the machine code applications to back up selecting one we are asked to input source and press a key then asked for the destination tape or disk. The other applications are all in basic so load them and just save them without running them to back them up.

   Thanks for reading I hope you had as much fun as I did!

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   Basically I wanted to know the year 'Lander' was done, rather than wait for this info I carried on with the game. Andrew got the year for me (which I've since forgotten - sorry Andrew !), anyway I decided to put a 'Lander' style level in but I put a few alterations/improvements of my own - I was inspired by the game THRUST although it actually looks like the Mastertronic game "1985" ! The ending was a last minute thing too. I didn't plan it, it just kind of jumped in my head and was influenced by a combination of PARADROID and the arcade adventure STRANGELOOP ! I did have two other level ideas, these will probably go into the third and final game - RETRO WARS 3 ! I completed this project on NOVEMBER 6th - the day after my birthday... Unlike the original RETRO WARS I didn't time myself this time ! At the beginning when creating the game I did pinch the 'Joystick' sprite from the original Retro Wars, something I don't normally do. I also managed to re-use the bonus sprites that I drew in the first game but didn't utilise. If you collect all the letters (to spell bonus) dotted through the game you will recieve an extra life ! I also rectified the 'side effect' of the inverted in-game scoring panel (as mentioned in last issue!). Once again my 'Partner In Crime' - Andrew Fisher has added an intro and very nice it is too !!! A final Thank you must go to Craig Lightowler, some of the screenshots he'd sent me previously that I hadn't used were utilised in this game !

# The Desktop Commodore 64 Project

Saturday morning I had some time to kill and thought about putting my Commodore 64 into a p.c. desktop case from an old Acer machine. The first thing I did was to remove the Commodore 64 Motherboard from its case and check the size to see if it would fit. This is a simple process of removing 3 screws found on the base of the machine. Easiest way I found of doing this is to turn the machine over with the keys resting on your lap so the under side of the machine is facing up.



The screws are Philips headed so you will need a suitable screwdriver to remove them, unscrew them so as far as possible then when all three are unscrewed turn the machine over on a table, the screws will drop on the table so you don't loose them!

Gently turn the machine over and lift the top off as if it was hinged from the back. Watch out





though as the Led power light and keyboard are connected by cables so go slowly, once the top is open enough you can removed the led power cable and keyboard connector. Remove them by pulling upwards don't waggle the connectors too much or you will bend the connecting pins.

The commodore motherboard is Approximately 390mm X 180mm, another thing I kept in mind was that of adding extras to the machine e.g. cartridge like Action replay or Retro replay. I know the buttons would be inside the case
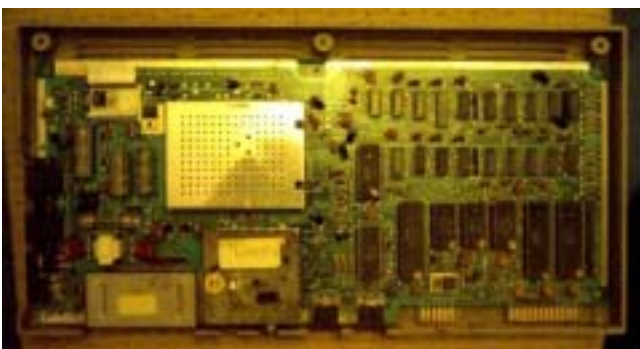


but we would need to modify the cartridge if we fit one. I thought of having the buttons on the case front. This modification would need to come latter, good to keep in mind though!

Now we need to remove the mother board from the base, this is held in by 6 screws there location is extreme corners of the mother board and one at the top middle the other bottom middle. The screws are Philips heads. Once these are removed you can carefully lift out the machine from its base. Now you can remove the bracket that has Power joy1 and joy2 on it again just two Philips headed screws hold this in place.

I then carefully removed the Commodore case stickers, as I knew these would be useful to add the finished touch to my machine case. I also removed the Led light from the top of the case so I could use this for the authentic breadbox red glow!



Now I checked measurements to ensure the Commodore motherboard would fit and then removed all the innards from the P.C. Desktop case.
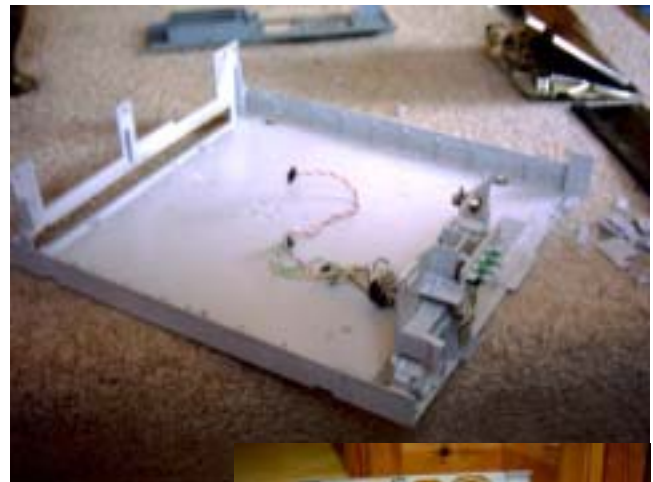


Unfortunately I needed the Commodore motherboard to the extreme right of the case when viewed from the front. This would then give me room to fit



extensions onto my machine, as discussed earlier, So I slightly corrected the P.C. Desktop case with a saw.
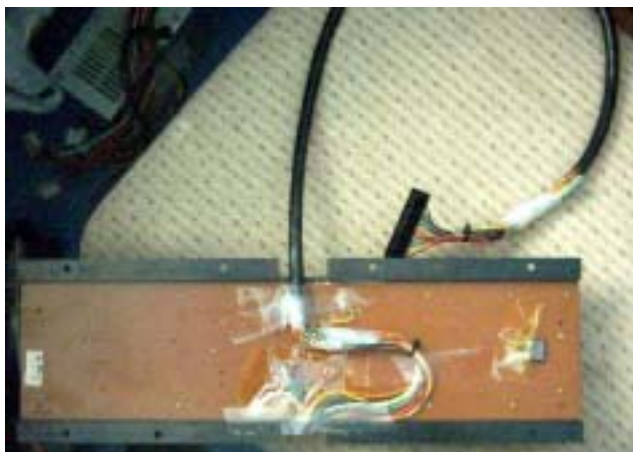
I decided to hold the motherboard in place with self-tapping screws. The screws were positioned from the top in to the plastic of the p.c. case. I had to cut away some of the case rear for the joystick connectors to fit through and the power. I slightly cheated here as I am still using the Commodore power supply and didn't even try using the

old p.c. power supply. The p.c. power supply is +5 and +12 volts the commodore needs +5 and +9 so I decided against using the p.c. power supply partly due to time. I have seen Commodore Scene sell a superbly adapted supply that would be far superior to any of my DIY efforts this will go on my wish list. I will purchase and fit a Commodore Scene supply at a later date, money permitting!







seems that for today anyway I have run out of time. Thanks for reading bye for now!

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Copyright      Commodore Scene

WARNING
Playing with electric is very dangerous consult a qualified electrician, neither I nor Commodore Scene can be held responsible for any injury you cause to yourself or other people as a result of following this article.



Here is a view from the rear and you can see how I cut out for the Commodore power supply and joystick ports. The only problem now is the keyboard, I decided to try and extend the length of the cables and use the standard commodore keyboard, as opposed to fitting an adapter and a p.c. style keyboard. I found a cable with enough wires (an old parallel cable) cut the keyboard connecting cable and jointed the two together. The end result wasn't very neat but could be adapted, for example you could put the keyboard back in the empty commodore case and have the wire running through the video connector.  I am going to use it as, or may make a wooden case to house it in.

**ART RAVERS GAME- OGRAPHY**
        1. LIPBUSTERS
   (WAYNE, additional graphics BARY BRIGGS)
   2. INSY WINSY SPIDERS
   (WAYNE & HELEN)
   3. UNIQUE
   (WAYNE, additional help HELEN)
   4. BALLOON ADVENTURE
   (WAYNE, additional help from HELEN)
   5. UNIQUER
   (WAYNE)
   6. UNIQUEST
   (WAYNE, Additional Intro and improvements Andrew Fisher)
   7. RETRO WARS
   (WAYNE, Additional Intro Andrew Fisher & Richard Bayliss)
   (Thanks also to Allan Bairstow & Craig Lightowler for Arcade game screenshots)
   8. YAK'S REVENGE
   (WAYNE, Sprite graphics by Andrew Fisher)
   9. RETRO WARS 2
   (WAYNE, Additional Intro Andrew Fisher & Richard Bayliss)
   (Thanks also to Craig for Arcade screenshots)
   (Additional help from Shaun Bebbington !)

**2004 : A NEW YEAR, A NEW SEUCK !**

Expect more titles from me and Andrew Fisher this year donewith SEUCK. This year will definetely see the release of UNIQUEST, which Andrew has been working hard on for some months now. I intend to do one more RETRO WARS game this year and there are two titles in the pipeline - one from myself and one from Andrew. I will say no more about these projects at the mo', Hopefully they might appear on a 'Scene' coverdisk before the end of the year.



I will leave you with the finished project. Ok it's not perfect but it may give you some ideas of your own. With an IDE adapter that could easily be fit I would have access to a CD-ROM and Hard disk drive. I would also still have space for a 1541 floppy disk drive and power them from the p.c. AT power supply or Commodore Scene Power supply when added. I May even spray the whole thing black when I get another ½ day free. The other things to sort out would be extending the Video connector and having a jack at the back for the composite output, but it

## More news on
# WCOPY+

Here's what's in the final version of **WCOPY+**, at least for the time being. I'm not going to add the ability to move into a subdir on IBM disks. That will have to come in a later version down the road sometime. When I do that, I will also add the ability to copy the whole subdir with all of the files it contains. I'll add that feature for copying subdirs to/ from CMD native partitions as well.

For now, that feature will have to wait. I've got to move on to the next project which is **PostPrint**.

What I DID add in this version is the ability to copy files from IBM disks to Commodore disks and have them written as SEQ files. The default is to write them as PRG files. So, if you use WCOPY+ as you always have, the files will be PRG files.

There are two hidden keystrokes to create SEQ files. When selecting a file with RETURN, use SHIFT-RETURN instead and the file will be written as SEQ. The data IS NOT altered in anyway, only the filetype byte is set as SEQ.

The other keystroke goes along with "t" when you want to toggle the file selections. Use "s" instead and the selected files will be deselected and the remainder will be selected and will copy as SEQ files.

You can tell which files will be marked as SEQ because instead of an asterisk for marking, there will be an "s".

The SEQ feature is not available in the free WCOPY version that can be downloaded from **cmdrkey.com**

**Maurice**

*It is also worth mentioning that you don't need **jiffyDOS** on your system to run **WCOPY**, unlike with CMD's other copy programs such as **FCOPY** and **MCOPY**.*

# *Commodore Publication ?*

*Dedicated publications for our Commodore's are quite a rare thing these days. Gone are the heady days of 'off the shelf' magazines - or are they ? ......*

Recently, there has been somthing of a a surge in intrest with all things retro and computers, even now, have their own magazines and fanzines. Most recently, however, in the UK we now have a regular retro magazine which seems to be going from strength to strength. Lets see what we have avaiable.



RETRO from EDGE does a very good job of enlightening the general public on what has been and gone in the recent past. This publication is very good but limited by its static history timeline, as far as they are concerned, the c64 died in the early 90's. It's also only published once a year.



MICRO MART has done a huge amount in recent years in promoting the current use of retro computers. Not only have they allowed Shaun Bebbington to write a regular column but they also allowed us to have a wonderfull retro area at their shows. These shows are very popular and a great place to meet like minded people. Well done guys.



gamesTM promised much in its initial issues but soon failed to deliver. Despite having a dedicated retro section at the rear of the magazine, they have insisted on rehashing old news and reviews from the 80's and 90's for the gulable public to read and re-read. Despite attempts by myself and others they simply ignored our offers of (free) help to bring them the 'here and now' information that the public crave for. I have cancelled my subscription and sold my entire 14 issue collection. I am so disapointed with this magazine that the last three issues didn't even get read by me and I couldn't even be bothered to rescan the above cover shot when it failed to scan properly the first time - such a waste. This was a golden opportunity for something quite special and unique but they blew it !

Enter the saviour of the day !

At the 2003 Micro Mart fair a guy called Martyn Carroll introduced himself to myself and Shaun. He said he was editor of a new magazine called RETRO GAMER which would be making an appearance in early 2004. We discussed several issues and

he seemed to take on board what we said and the ideas we put forward. As the magazine was all ready for printing we didn't have any input for the first issue (or the second for that matter), but Martyn said he would take our ideas on board and the magazine would not concentrate solely on the past.

When the first issue came out I was amazed to see that we actually got a mention in the news section. Better still, Martyn obviously liked what he heard from us and Shaun was asked to write a huge article about Commodore for the second issue. This article can be considered a definitive resourse for Commodore fans as I know that Shaun made sure all the facts were correct - thats the difference when you have somebody writing about what they know. Future issues promise much more indepth reviews and news of modern uses and hardware for the whole retro scene, not just Commodore and I am personally looking forward to getting my copies as soon as they are out.

Initial projections for RG where a little low as nobody knew just how popular/unpopular a magazine like this would be. They needn't have worried, the first issue completely sold out withing the first month. The initial quarterly run was brought forward to a bi-monthly issue and the second issue was also larger in page count. This too sold out with a short space of time.

What for the future ? Well, RG is now officially the UK's fastest selling magazine and is so popular that it is inevitable that it will go to be a monthly pulication.

Also, watch out for some familiar faces and names in future issues :-)

## Confirmed NEW Features for ...
### ... HD-DOS+

Here's a brief rundown of the new features:

* Native partitions operate a little faster.

* Built-in print spooler is functional. The HD watches for data being sent to device 4 (or 5) and captures the data to a PRINTER partition and while data is still coming in, it gets spooled out to the printer or printer interface attached to the AUXILIARY port on the back of the HD. The HD can capture the data much faster than most printers can. Even while data is still being sent to the printer, the HD can be accessed normally for loading and saving, etc.

* New features are implemented to aid programmers in accessing SCSI devices attached to the system.

* Two new partition types are added. Extended Native partitions and Extended Foreign partitions. Extended native partitions can be up to 4gb in size and include features that help new software operate more efficiently. Extended foreign partitions can be up to 8gb in size and are designed mainly for data storage that does not require a file system.

* As for the maximum size of SCSI mechanism allowed, nobody makes one that big yet.

* There is a reserved 2048 byte buffer in memory for future CD-ROM usage. Or for software that needs a large buffer.

* Disk images are supported. For instance, you can copy as many D64 images into an Extended native partition as you like and be able to access any of them as though they were a real partition. A D64 image can be attached to an existing 1541 partition. It will remain there until the drive is reset and then the original partition will once again be visible there. You can do this for as many partitions as you'd like up to the maximum of 254. You can store thousands of image files into an extended native partition. Over 23,000 D64 files will fit into a 4gb partition. D71, D81, and FD disk images are also supported.

* We've always been able to select a partition from the front panel switches, but there is also a new combination you can use. Press and hold the SWAP 9 button to move to the next partition or press and hold the SWAP 8 button to move to the previous partition. This feature allows you to have two or more disk image files visible in adjacent partitions and perform the same operation as if you were to switch disks in a real 1541.

The new system includes a new rom module that looks like a 1541JiffyDOS rom with a switch. This allows you to use either the new HD-DOS+ or the last one that CMD introduced. The installation utility will install both software versions onto the hard disk without losing any existing data in your partitions. An original HD Utilities disk is included along with a new disk with new utilities specifically for the new HD-DOS+. It also includes a manual supplement to go along your existing HD manual.

Maurice Randall
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High-Performance for your Commodore
email: maurice@cmdrkey.com or support@cmdrkey.com
web: http://cmdrkey.com

# Memoire's from Tom Brown's Commodore days ~ 2

*Thank you for your very kind reply and I am delighted to co-operate on a first hand account for your readers.*

You might also be interested to learn of the schisms within Commodore when they originally tried to launch the Amiga. The founder of the company Jack Tramele had them in litigation for years over that. I was at the NEC for the Which Computer Show and was invited to the pre-launch presentation; the kit seemed to be pretty much what Commodore needed to keep up with the competition but it's initial configuration was unworkable. The result was that it was withdrawn before the show and didn't see the light of day for about 2 years.

One of the more annoying aspects of Commodore's relationship with their employees was the manner in which they handled the move from Slough to Corby. Considering the institutional incompe-tence of the management the work force were incredibly loyal and many of them believed in the company so much that they were prepared to sell up and make the move. Some good friends of mine sold their houses in Slough and the surrounding area and bought homes in Corby, apparently confident in the future. Complacency can strike anyone.

Literally, within about 3 months or so they were left high and dry in a strange town without jobs and without prospects. Only a very limited number were able to make the move back to Maidenhead and the rest were abandoned. This was also the case for the local population of Corby who flooded in their thousands to get a job at Commodore. I attended some of the practical interviews at which ex-steel workers were tested for manual dexterity prior to being offered jobs in production. The work was of just too delicate a nature for men who had calloused hands from working steel and many were bitterly disappointed by their failure to secure jobs. Mainly it was women who were employed and the rates of pay were the absolute minimum the company could get away with.

Everything Commodore did was cheap; the new factory for instance was built to the very minimum legal requirements and for the lowest cost. They even transported all the old office furniture from Slough to ensure that we had really crappy desks and chairs in a new modern environment.

I was recruited from Rank Xerox and was offered the Earth to work for them. Two other chaps joined at the same time; Frank Murphy who looked after the North and Andrew Seal who looked after the Midlands. I looked after the South. In addition, they transferred one of their longer serving ladies from the marketing department to the sales department where, because she was completely untrained in sales, was completely out of her depth. Within 6 months all three of us had left in disgust.

We were never properly paid according to our pay plans, our commission was rarely calculated correctly and our expenses were continually overdue. At one point when I was owed in the region of £900 in expenses and had been informed that it could take up to 6 weeks to have it refunded I led a revolt, stormed into the General Manager's office and demanded to know who funded the company, it's bank or it's Sales Managers. We refused to put another penny worth of petrol in the company car or pay for any more overnight accommodation until our expenses were paid and we were given a suitable float.

When we joined we were promised suitable company cars. In those days I would normally expect to run a top of the range 2 litre car such as Ford Sierra. In common with my colleagues I was handed the keys to an ancient Ford Cortina Estate 1.6. It wasn't even a 1.6L, had no carpets or radio and was so decrepit the paintwork had begun to oxidise. To say the least we were underwhelmed and extremely angry and insulted. The old banger I was given was also so unreliable that it was the cause of a number of missed or late meetings. In the end, after it had broken down for the umpteenth time I refused to drive it again. The company then promised me that a new car would be provided and would be delivered to my home. Two days later the old Cortina was delivered to my door by the garage which had repaired it. I proceeded to kick the crap out of it and refused to accept it. Eventually after a couple of days the company relented and a brand new Sierra 2.0L was delivered; the engine seized on me after just 3 days.

It was fun working for Commodore, it really was - NOT.

*Kind Regards, Tom Brown.*

# Alan Cartridge
# Cartridge Corner

### A CARTRIDGE IN A BEAR TREE !!!

*Do bear's have trees? Oh well never mind ! Once again I dug deep into my vault of old but lovely cartridge games - Just for you ! You know how much I love you all don't you (!?!) Ahem, anyway on with the show...*
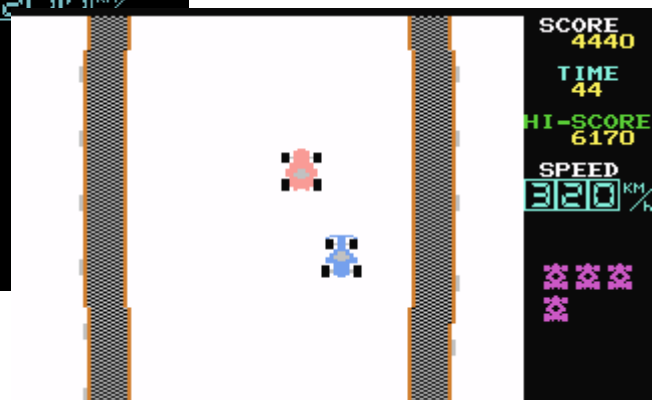
### LE MANS

Gosh ! Released in 1983 !!! It's another old time game and no mistake - like last times feature this is a PADDLES ONLY game (I do have a version on disk that allows you to use a joystick though...). Shown from an overhead (birds eye view) perspective the idea is to race your car up-screen for as long as you can. This is a one player game only. The paddle controls left and right movement and the fire button is the accelerator. Taking your finger off fire slows down and eventually stops the car. Graphics are, although very basic (the programmers have used the built in character set or ROM graphics as tech-heads would call them !), functional and portray the action adequately. You race against a time limit, if you pass 10 cars you get bonus points, reach 20,000 and the game allows you to keep going. It creaks around the edges and is definitely showing its age but there's something I really like about LE MANS. There's some really nice touches like when you drive in the dark, everything goes black, but headlights appear on your car so you can see a brief distance in front of you and you can just about make out other cars bumpers... When you hit other cars you get a flashing on-screen symbol telling you to go in the pits and when you pass other cars the

game marks them off on-screen for you - nice touch ! For such an old game LE MANS has a lot to recommend it, my one complaint about the cartridge version would be it's PADDLES only, surely a joystick option is not that hard to add... My best score so far - 19930
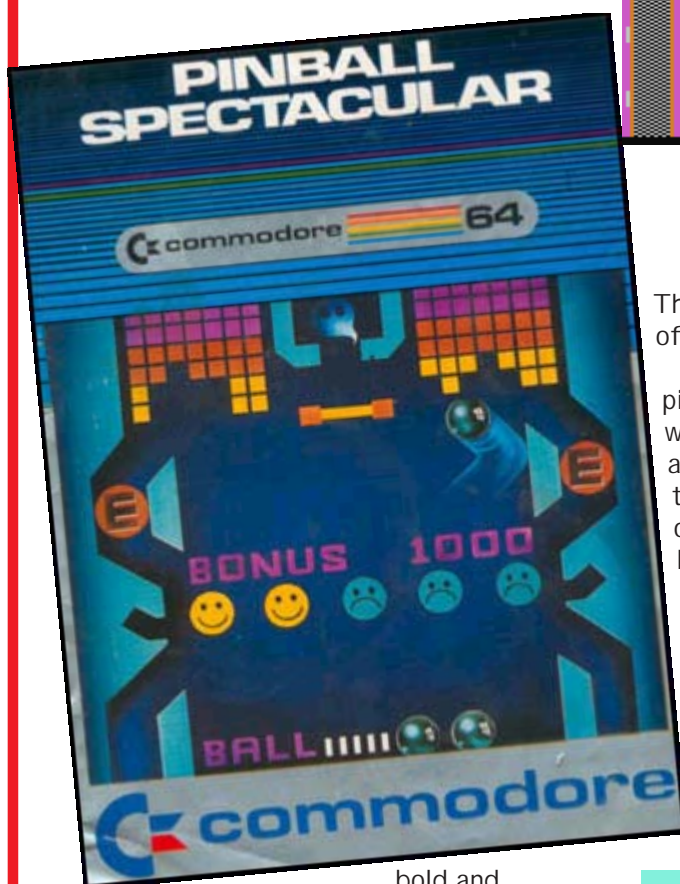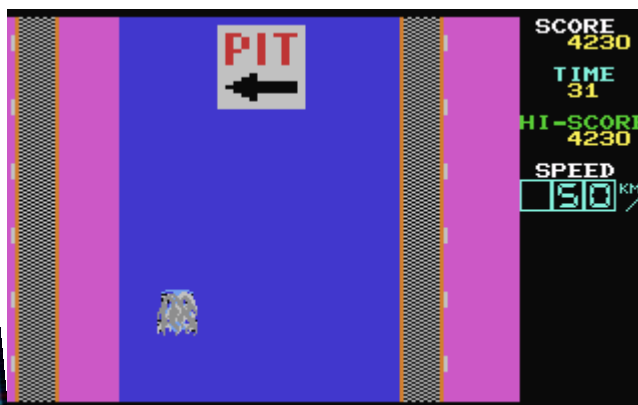
## PINBALL SPECTACULAR

There's not many Pinball games for the 64 - This is the only one on cartridge that I'm aware of, unless anyone knows differently...

This is an odd little game, it's not a pure pinball simulation. The best way to describe it would be to say it's a cross between PINBALL and BREAKOUT (an early ARKANOID !). There's the usual Pinball features like bumpers and objects you have to hit, to light up and gain bonuses. Instead of flippers the player controls two bats simultaneously. One bat is at the bottom of the screen the other is at the centre. Having two bats gives the player more control over the action - as the game continues the ball begins to speed up and you don't always get to hit it with your top bat. You also get to knock out all the bricks at the top of the screen. The graphics are big and chunky, bold and colourful. There is no music just very minimal sound effects, But sound is put to good use, the sound of the ball bouncing against the bat sounds exactly like the sound effect used in the game PONG ! This is another paddles only game, the paddle controls the pair of bats left and right. A big mention must go to REMEMBER's version of this which is excellent - *release number 181*. They've expertly cracked the game from cartridge and added several features. Not only have they put in a joystick (as well as the paddles option !) they've also included a save high score feature that saves to disk - cool ! You need to press the Restore key to get the game working again after it saves out the hi-scores though... Now there's no excuse for everyone to play this classic piece of Commodore History !

Maybe if you ask nicely Allan will put the game on the coverdisk... And that wraps up my Cartridge/Paddles games reviews, If anyone has any other Paddles games then please send them in to Allan and I'll gladly review them for you...

**The REMEMBER version is on this issues coverdisk – ED**

**NEXT TIME** : *3 More Classic COMMODORE CARTIDGES - See You There !*