GEONEWS

Merry Christmas To You All

EDITORS COMMENTS

Well it's that time of year when old acquaintances are rekindled, past arguments forgotten and friendships made stronger ; by far one of my favourite times of the year despite the cold northern hemisphere weather. It's also a time to remember the ones who have helped us through the year and for me this is no exception. During the past 12 months the running of geoClub like a well oiled machine runs like clockwork thanks to a few dedicated people.

Terry Watts dedicated librarian for 5 ½ years

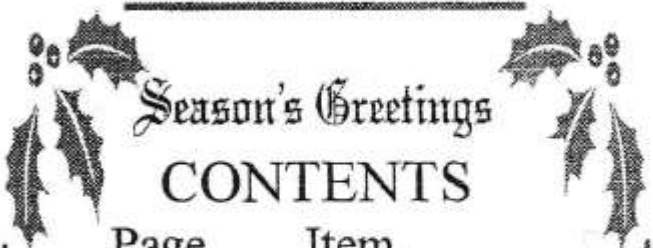**Sharon Chambers** his able assistant

Peter Hunt who continues to keep the Australian side of things running and with out who, there would be no geOzClub.

The contributors both graphic and text who make geoNews what it is. If it were not for this small band of dedicated C64/C128 Geos users there would be no newsletter and hence no geoClub. To you all my heartfelt thanks and...

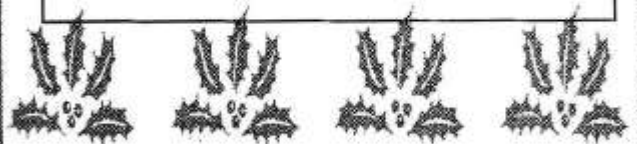## A Very Merry Christmas

Thanks for your continued support..............

FRANK

Season's Greetings

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The December Disk Review

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Hi everybody, and Welcome to our December Disk Review. Our thanks go first to Robert Lord, who through Peter Hunt, has donated the Religious disks. Secondly our thanks to Doreen Horne for yet some more PCX Conversions. A very special mention to Danny Tod and his friend Paul Boulter for the 'Music Mix' disk. So the Mistletoe & Holly season is with us once again, I don't know if it's just me, but last Christmas doesn't seem to have been all that long ago does it!!

geoCLUB BASIC 63 - Music Mix - LOAD"*",8,1
I can't praise this disk highly enough, even more so when it's all been done by a couple of young men who are only 15 years old. Over the years that I've been reviewing disks for the library, as well as some good stuff, I've had to wade through one hell of a lot of rubbish. But please believe me when I say that it was pure pleasure to review this disk. Also included on the disk is a 'Read me' file about some of the other things that Danny and Paul have got lined up - Thanks guys.

geoCLUB BASIC 64 - LOAD"*",8,1
There's a host of basic utilities on this disk, and it's 'menu driven'. With such files as; KWIK-LOAD, ENVELOPE MAKER, DISK COVER 2, SCREEN DUMP, LABELS, PHONE NUMBERS, the list goes on and on.

geoCLUB DISKS 471 to 478
These disk are titled **RELIGION** and they're all from Robert Lord. I guess that you could call it a Pictorial Bible. There's well over 75 different geoPaint pics, all very seasonal, and all very usable at this time of the year - Thanks Robert.

geoCLUB DISK 479
Some more of Doreen's PCX conversions>> GEOVIEW plus an excellent collection of humorous pcx converted pics. The pointer is a couple of Kiwi's done by Peter McGuinn

geoCLUB DISK 480
As above, but 19 more different pics, all of which really are excellent. The pointer on this one is a Rabbit, again drawn by Peter McGuinn.

So, that's it for this month. As usual, the price for the disks is £1.30 which still includes the postage and the packing. Both Sharon and myself are always on the look out for new programmes and pics to add to the library, so if you've got anything please send it to us.

All that remains is for us both to wish you all -

A Very merry Christmas and a Happy New Year

We'll both be back in January, so 'till then, Take Care - Sharon & Terry

HOW TO EXPAND YOUR 1764 TO 512K

by Scott 30B

The 1764 RAM EXPANSION UNIT (REU) consists of a plug in cartridge and a deluxe power supply. The power supply is required, since the original C-64 power supply was not designed to meet the power requirements of the great many chips in the REU. The power supply is rated for 2.5 amps on the 5 volt DC side, and 1 amp on the 9 volt AC side, although apparently, it is only the DC current that supplies the REU.

The 1764 REU itself consists of a printed circuit (PC) board inside a metal and plastic housing, which plugs into the expansion port of the C-64 or 64-C computers. The PC board is the same board that is used in the 1700 (128K) and 1750 (512K) Expansions, with some changes:

1) The 1764 has one bank of eight 256K Dynamic RAM memory chips. Each chip holds 256K bits of information, therefore 8 chips are required to obtain 256K bytes.

2) There is an empty bank of 8 positions labelled BANK II on the PC board.

3) There is a resistor in the 1700 and 1750 REU's that isomitted in the 1764, apparently due to a smalldifference in the expansion port between the C-128and the C-64. In spite of this difference, there aremany C-64 users that have installed 1750 REU's without problems, by obtaining power supplies rated at 3 ampsfor the DC circuit to supply the additional requiredpower.

Commodore likely decided to ship the 1764 with 256K so as to keep the price of the unit down, and make it attractive to as many C-64 owners as possible. Only by selling a significant quanity of REU's would it be possible to entice software writers to support the unit. The RAMDISK software included with the 1764 is a nice option, but it is not compatible with many software packages, since if only supports the 4 file types (PRG, USR, SEQ, and REL), but not direct track-sector access, which many programs use for loading and other functions. GEOS, however, treats the expansion as an autonomous unit (the RAM 1541) if desired, and

it is used exactly as another disk drive. There are other modes available, namely a shadow drive. This mode causes GEOS to read all files into the REU, so that further accesses occur from RAM, speeding up the system operation. All writes are to the physical drive, which eliminates the disadvantage of a RAM disk, that the file has to be saved to a real drive before your computer is turned off, or the data will be lost.

The 256K REU does not have the memory needed to shadow 2 physical 1541 drives, and that is why many people wanted the 1764 to be delivered with 512K. It is not too difficult for someone with a knowledge of soldering to install the additional chips in BANK II on the PC board. I recommend soldering 16-pin DIP sockets to the board, which prevents heat damage to the memory chips. The chips are simply pushed carefully into the sockets. The sockets (276-1998) and the chips (276-1252) are available at Radio Shack, and from mail order houses.

The steps required to install the chips should only be undertaken by someone skilled in handling PC boards, and some mechanical skill is needed to remove and install the PC board in its housing.

Step 1:
The housing of the 1764 must be opened. There are 4 pins, one in each corner, holding the plastic case together. Starting at the opening which connects the unit to the computer, gently but firmly pull the top and bottom apart. The plastic case will begin to separate. Continue around the perimeter of the case until the top can be removed from the bottom.

Step 2:
Remove the metal shield from the plastic casing by pulling it out at each corner. The PC board is inside the metal shield. Open the shield, also starting at the connector. You may need a small screwdriver to bend the metal slightly where it is held together. When the shield opens, spread it only as much as needed to remove the PC board.

Step 3:
Examine the PC board. BANK I is the row of 8 chips along the top of the board. The RAM

Dear Frank,

For reasons of space, amongst other things I need to clear out my copies of geoNews which date almost from day 1 to present.

I read some one was looking for back issues. If that is still the case I would be happy to send what copies they require for the cost of the postage.

Yours Bob Jefferies
6, Denbigh Close
Cheam
Surrey
SM1 2HS

PS.

You omitted to say how much the subscription is for 1997 so I have sent a blank cheque. It's a good job I trust you.

Dear Bob,

My excuse for not saying how much the subs are for next year is simply that.... When I did the renewal certificate I did two. One I put £10 for the subscription the other I left blank, this was to go to Australia to Peter for him to use if is wished and insert the appropriate rate for down-under. Unfortunately I had the wrong one photocopied and I never noticed this until the first of the many telephoned to tell me of my blunder !.

Funny thing is, I filled your blank cheque out for £1,000,000 and it has been returned stating " Insufficient Funds ".

Regards
Frank

Dear Frank,

Enclosed my subscription for 1997, you didn't say how much it would be so I have assumed £10, cheap at half the price. If you are the geoClub

President can I be Vice President in charge of the Vice .

All the best
Dave Elliott

Dear Dave,

NO! , you can't , you want all the best jobs but this one is not for you. If anyone at all gets it , it has to be Ian Swain but I cannot put in print why this should be the case. I nor geoClub can afford the litigation.

Frank

Dear Frank,

If there is any space in the next geoNews I would like to say thank you to a few members who helped me with my Sound Expander disk. They are, Bob Bagnall, Mike Jones and would you believe it, a reply from Down Under from none other than Doreen Horne, which for me says it all about geoClub. So, Many thanks to the members mentioned not forgetting Dave 'the rave' Elliott for his tips on Jiffy Dos. Thanks Dave.

Best wishes
Sam Brown
Welyn Garden City

What a nice man !.

Sam, you've said it all, that's what geoClub is suppose to be about, helping each other and in this instance it worked.

Season's Greetings
may we all have
Peace in the
comming year

Looking at GEOS

(This series of articles specifically meant for new comers to Geos was sent to us byLawrence Burses, Hernando ,Missouri , USA via Peter Hunt Australia small portions not applicable to Europe have been edited out .[Original articles by Mark McInnis])

I'll try to put an end to Geopaint as gracefully as possible. We will start with moving or copying an image to another disk. Select the edit box tool, select edit from the command menu. Select either cut or copy, then select quit from the file menu. You should be at the desktop at this point. Copy the photo scrap to the disk containing the destination document. If you copied Geopaint text into a text scrap, copy the scrap to the destination disk. Open the destination disk and then the destination document. If the document is a Geopaint document, use the edit box to open an editing region. If it is a non-Geopaint document, select an insertion point. Finally select paste from the edit menu and the image will be copied in place. Note: paste (pictures) for images and paste text for text.

Once you place an image into a Geowrite document, you cannot copy or move it by using the edit commands. You can, however, delete it and, if the scrap still contains the image, paste it in another location. Make sure that you have a back-up copy of your image before you delete it.

So much for the technical stuff. Let's do something a little more interesting. Special features. Cursor keys. Everyone should have some idea of how these work by now. Press the cursor key that points in the direction that you want go or press the shifted cursor key to go in the opposite direction. The ruler tool can be used with line, rectangle and ellipse tools. Area can be measured in pixels or inches in X and Y coordinates. The pixel is the actual dot on the screen while inches are measured in printed inches, not screen inches. There are 80 dots (pixels) to the printed inch. If you have the time and the patience you can edit an image pixel by pixel. The pencil tool is best for detail work although the manual indicates that the airbrush, paint brush, faucet, hollow and filled rectangles and eraser tools can be used in the pixel mode. When you need to move to another area of

your paint document use the scrolling arrows tool in the tool box (top left corner of the tool box, four way arrow icon).

Next in the fun and games department is bitmap scaling. Bitmap scaling enables you to stretch an image out to almost any proportion, smooth out its edges, superimpose the image onto another image, and superimpose a pattern onto the image. In brief, you need to copy the image into a photo scrap and open an editing region. When you select paste from the edit menu, the bitmap scaling dialogue box will appear and you can begin to make changes to the image's appearance. Bitmap scaling may be used for all photo scraps, including text that has been placed into a photo scrap. Use the edit box, cut or copy from the edit menu, define a region and finally use paste from the edit menu. At this point the bitmap scaling dialogue box will appear.

Your options will be: centered in region, scaled to fit, stretched and scaled to fit, pattern, smoothed and transparent. Due to space constraints I'll dispense with the descriptions and offer the old try it, you'll like it advice. Experiment.

If you have ever held a hand mirror up to an image what you see is about what you will get with the mirror command. The mirrored image can be flipped on the X or Y axis. The invert command has the same effect as "reverse video" on an image. The rotate command is self explanatory. Last but not least from the options menu is the grid command. Put simply, it draws a grid on the screen.

A word of warning is in order here, use the grid for planning a low detail image and avoid canceling the grid when grid function is inactive.

This column will start Geowrite 2.1 and as usual we will try to hit just the highlights. If you have ever used a typewriter you are familiar with liquid paper, reams of paper and retyping a paper due to a mistake. I wish that I could say that the days of reams of paper and retyping are over but I wouldn't buy any stock in the liquid paper company. These days I buy cases of continuous feed computer paper and since we are still human, then typing mistakes will be made.

With a word processor such as Geowrite the typos are not quite the headache that they once were and with a spell checker you can almost throw your dictionary away.

Geowrite is only one of many word processors available for the Commodore. Whether or not it is the best word processor is strictly a matter of opinion and what you want to use it for. When it comes to graphics, fonts (type face), simplicity, versatility and plain good looks there are few applications that come close. If you want to communicate with some of the Commodores cousin's (IBM, MAC'S, etc.) via a text file (ASCII) then you need to look elsewhere.

Put on your hip boots and let's wade in. The first thing you must do is to make sure that you have installed Geowrite to your system. From this point on, make sure that you make work disks for every day use and only use the system disks to boot your system. Suggested files for your work disks and their location: Geowrite, desktop, photo mgr. and non LW fonts from the applications disk. Configure from the system disk. Geolaser, text grabber and LW fonts from the write utilities disk. Printer driver from the applications and system disk. The bare necessities are the desktop, Geowrite and a printer driver. These files will probably fit on your work disk but there will not be room for much else. A multi-drive setup or a REU (ram expansion unit) will make your life with Geos much more enjoyable. Now a word about one those demons that lurk inside Geos waiting to devour the unsuspecting. If you try to open a Geowrite document on a disk in a 1581 disk drive, an error message saying "geowrite and data file must be on the same disk in a one drive system" will appear if you do not have a RAM expansion unit, even though you are using a two-drive system or you have geowrite and its documents on the same disk.

To open the document, click OK in the error message dialogue box. The Create /Open/ Quit dialogue box will appear, enabling you to gain access to your document. Use the "Open" option to view your document. Remember that only the first fifteen documents on the disk will be displayed. If the document that you need is not visible then you will need to rearrange the file icons so that the one you need is among the first fifteen.

(Arranging icons has been covered in a previous column).

Geowrite can be entered from the desktop by double clicking on the Geowrite icon, or highlighting the Geowrite icon and selecting open from the file menu or by pressing the commodore key and the letter "Z". The ensuing dialogue box will offer the choices of create, open or quit. In this exercise we will be creating a document so you will need to select the create option.

A second dialogue box will open prompting you to enter a new filename. Choose a name that adequately describes your file and press return. At this point you should be at the Geowrite screen ready to word process. Go ahead and try it out. Don't be afraid to click on the various items that you find on the screen. There is not much that can be messed up on this screen. When you get ready to quit select close or quit from the file menu and save what you have done. We will continue next month with a tour of the geoWrite screen.

Net Newbies

by Mark P. Boyle

What is a Net Newbie. If you are confused by the terms FTP, IRC or InterNic, you are probably a Net Newbie. This is someone who knows little [or nothing] about the Internet. Don't worry if you are because there are plenty of Newbies around.

What is the Internet?

The Internet consistes of millions of computers around the woorld, linked together in a form of inter network. Because of the common protocal TCP/IP all these computers can send or receive information to each other. This information can be in different forms, i.e sound, text, video or a mixture of all these. Typically the internet is split into two types of computers: servers and stations. Servers hold information in their memory and stations can receive this information from the servers. To make it simpler take this example. You dial up an Internet server and you request a multimedia page from a WEB server. This is sent to your computer and you use special softeware ,called a browser, to decode it. With Electrronic mail your computer can be a server (send mail to others) or a station (receiving mail from others).

What do I need to get on?

In theory any computer with the right software can log onto the internet. Most computers have software available, even the Amiga. To the extent of my knowledge there is currently no software availavble for the 64 or 128, however this may change. (*See THE WAVE article last month - Frank*)

You also need a modem. There are many different modem speeds available. V.22bis (2400 baud) is ok for e-mail but web servers are so slow that it is useless to try to use such a modem. V.32 (9600 bps) is more useful but still old-tech now. V.32bis (14400bps) are the most popular now and are adequate for all tasks. The newer and increasingly V34 (28800bps) are amazingly fast and are very good for use with internet software. It is important to know that however fast your modem is, the internet is still overused and VERY, VERY slow. The WEB servers are possible the worst. E-mail is unaffected because you send it to your server and log off.

Possibly the most important thing you need it a connection to the internet. This is provided in variours ways. You could rent a ISDN or 64kbs line to some backbone server or you could rent a connection to a public server. The first option is very fast but unaffordable for all but businesses or educational users. The second is only 15 - 25 pounds per month. You dial into their server and are connected to the internet. In built up areas there may be a server near you and you will be able to use a local call. If you live in the north of Scotland or central Ireland you may need a long-distance call which WILL WORK OUT VERY EXPENSIVE!!

Some service providers offer a propietry service and offer more than just the internet. An example of this is CompuServe which offers information on companies, files (i.e upgrades for apps) ánd much more. These typically cost more per month but offer their own software which is easier to use than internet software.

In the U.K. most Internet access is through a server like Compuserve or American On Line. These charge around £7:00 per month with 5 hours or so per month free access, after the 5 hours have been used up it then costs around £1:90 per hour. These charges are in addittion to you telephone costs. Some charge a larger monthly fee but do not operatre an hourly rate. The majority of servers these days operate from a local call number eg 0345 which at off peak times costs 1p per minute. This allows E-mail (Electronic Mail) facitlities which means you simply type your letter on your computer and then send it direct to the recipient, no need for paper, envelopes or stamps. For E-Mail any suimple terminal software like geoTerm will allow you to do this. For the 128 I found Desterm (Australian I believe) excellent for sending text messages.

World Wide Web is another world all together in itself and much beyond this article. I have to admit I have no idea whether a C64 can get onto the WWW though I would be surprised if it couldn't. If anyone can throw some light on this subject in regard to C64's I would be very pleased to hear from them.

2 New Sources of C64 Software and Support

Commodore Fever is the quarterly magazine from Everlasting Style. According to their press release they are the only company in the world that produces software, licenses software and produces a magazine. Three recent releases are, Misfortune, Mortal Dogfight and Twin Terrors, they also have a further 3 games in the making. Commodore Fever provides an insight into the latest releases from not only Everlasting Style but from other companies throughout the world. They produce their magazine for the love of the C64 and make no profit from it's sale. Each issues is said to have at least 20 pages.

Subscription rates are, Australia A$18:00 per year : UK £8:99 per year, Germany DM25:00.

Addresses
Australia
Brad Wightman, PO Box 507, Engadine, NSW, 2233.

U.K.
 Barry Joynes, 34 Florence Road, Wingerworth, Chesterfield, Derbyshire
(Postacode given as 542 6SW obviously incorrect).

Germany
David Ruiz, Markstr. 27, 36037, Fulda.
OR Bwernado Ugodos, Am Langenhein 26, 52223 Styolberg..

Crystal Software and Electronics Nederland is another supporter for the C64 with software of it's own. Their current 'seller' is McRat and The Zinj Complex compilation which retails for £6:00 and is also available rorm Computer Scene. They can be contacted at.........

Alex de Vries, Leemveld 158, 9407 GE Assen, Holland.

Roy Cross, 76, Castle Drive, Neath, West Glamorgan, SA11 3YE.

Chris Davis, 9, Hendre Close, Broad Lane, Coventry, CU5 7AG.

Expansion Controller (REC) is the square chip in the middle of the board. BANK II can be seen just below BANK I.
　Step 4:
Solder 8 sockets into the traces in BANK II. This is the difficult step, because it is hard to solder 16 pins at once. I recommend that a small needle or probe be used to open the 16 holes on the PC board for each socket position. Using a soldering iron, heat the hole position until the needle can be inserted. By rotating the needle, it will not bond tightly to the solder, and it can be removed, leaving a hole. After doing this for all 16 holes, the DIP socket can be inserted into the holes, and then each pin soldered individually.   Do this carefully, as each connection must be made securely on both sides of the PC board.
　Step 5:
Now insert the chips carefully into the sockets, being sure to maintain the correct orientation. The notch in the chip faces the top of the PC board.
　Step 6:
Before putting the REU together again, plug the PC board into the computer (make sure the power switch is off), turn the computer on, and boot GEOS V1.3 (upgrade from the disk with the 1764 REU, or 1351 MOUSE, but be sure to keep a V1.2 backup in case things go awry).
Open the CONFIGURE program and the RAM EXPANSION box sholud show 512K installed. If all is well, reassemble the REU. If only 256K is reported, either a trace was not soldered properly, or a pin on the chip may not be making good contact.   Recheck all connections and run CONFIGURE again.
　Step 7:
If you got to this point, CONGRATULATIONS! GEOS automatically uses the extra memory. The RAMDISK software also uses the full amount of expansion memory available.   However, the RAMTEST program only checks 256K. Hopefully, somebody will revise it to test all 512K.
　Sidenotes:
There are some bugs in the RAMDISK software:
　1) The NEW command does not seem to work. However, the SCRATCH command using the '*' (wildcard) does the same job.
　2) With the 256K REU, the BLOCKS FREE message shows about twice the correct number, over 2000.

INSATALLING Geos

by NATHAN WILLIAMS

What is installing???
When you first boot up GEOS the kernel makes up a ramdom serial number and places it on itself. This serial number is used for copy protection. When you buy an Add-on product like Writter's Workshop or GEODEX etc. you must install it. When you install it, the kernel's serial number is read by the add-on program and placed on it's self. From then on the program will work only with your boot disk, no other. Thus you can freely copy it to any of your disks but only you can use it.

Using both GEOS 64 and GEOS 128

When you first buy GEOS 128 it will ask you if you have ever installed a GEOS program before. If you have you MUST say YES!!! This is the only time it will ask it!!! If you do not you will have two boot disks with different serial numbers. The program will ask you to insert a master disk from any add-on product. If you do it will read the serial number on it and match itself to it. That way GEOS 128 will run these programs!!! If you do not do this GEOS 128 will pick a new serial number for itself at ramdom, thus locking out your add-on products.

Matching GEOS 64 and GEOS 128 wihtout an ADD-ON

If you do not own an ADD-ON product life gets only a littler harder here. When you buy GEOS 128 don't run it! Take Disk#2 Side B and open the disk from GEOS 64 then validate it. Now run GEOS 128. When you are propted about installing ADD-ON products use the Applications disk you just used from GEOS 128 as your master disk. (This disk is whats called a master disk, when opened from GEOS the first time the serial number is placed on it. ALL ADD-ONS are master disks.) If you have not done this and are allready using GEOS 128 you will have two boot disks both with two seperate serial numbers. You will have to change the serial numbers by hand or request new boot disks from BSW.

Adding a 64 version ADD-ON to a GEOS 128 system.

This can be done only if you own GEOS 64 and if you have properly matched both boot disks from each system. (I.E. you have properly installed one to the other and thus they both have the same serial number.) Simply install the program to the 64 version of GEOS. If both are properly matched they will run on both. GEOS 64 and GEOS 128 keep their serial numbers in differant spots on their memory maps. They have to! The computers maps are vastly different. When a 64 version the program is installed it looks at the memory location for the 64 mode only. That is all it knows how to do! When Writter's Workshop, GEODEX and the others where being wriiten GEOS 128 either did not exsist or was in its very early "infant" stage. Too early to know where the serial number would be kept! That is why any atempt to install a 64 version ADD-ON will always fail. If you do not own GEOS 64 you will have to send the disk to BSW and have them install it for you. Or you could try to install the program on a friends copy of GEOS 64 and attempt to change the serial number. Again since every program stores the serial number differently this technique is beyond the scope of this article. Contact Mystic Jim, he has, or soon will have, programs to aid with this.

Mystic Jim who is he?
Mystic Jim runs a shareware program service. He has many program for GEOS. Many will let you make bootable backups and other neat things. Contact him on Q-Link via E-Mail to "Mystic Jim" Or call his BBS at 1-303-321-8954. Or write to:
Mystic Jim Shareware
2388 Grape
Denver, CO 80207

I hope this will help you understand your possible troubles with installing. If you have any questions just E-Mail me here on Q-Link. My user ID is "Cpt Nathan"

Nathan Williams, Secretary
Computer Users of TEXAS
3811-32nd St.
Lubbock, TX 79410

POWER SUPPLY BLUES

by Jim Kaminski ---

One design flaw that has become VERY apparent to me is the inadequate power supply that Commodore provides with its computers. I first noticed it with the early VIC-20 computers; the transformer could fit in the palm of my hand. My VIC often would overheat and utimiately burned up. A replacement VIC. was found to be a later model with a much larger supply; it now works well for my family.

The next instance of poor power supply design revealed itself on my C-64. computing one day I noticed a startup message which was rainbow colored insteadof blue on blue. Then, as I watched the screen, a multi-colored 'waterfall' appeared on the screen all by itself. Key pressing had no effect and a few seconds later the screen went dark. Although the power LED was still on, the C-64 had died. As I was to find out later, the cause was a bad power supply which fried the 64K of RAM in my machine. Soon after replacing the first set of RAM chips, the power supply destroyed another set. This time the power supply was also replaced; a Maxtron power supply was used. The new power supply lasted until I started adding accessories to the C-64. Evidently the extra loads also taxed the new power supply, for after a while it became warm and also failed. Fortunately only the non-repairable Maxtron supply went, the C-64 was okay. Since by now I was wary of power supplies, I opted to purchase a heavy duty unit from Jameco Electronics, a mailorder firm. Although I had to wait through a backorder, it was worth it. This new CPS-10 power supply has easily handled my C64

But what are the system requirements?

This question has bugged me for some time and I saw at least a portion of the details in recent issues of COMAL TODAY .

I might also add that it is reported that the C-128 also has poor power supplies. In fact CBM is said to be giving a beefed up power supply with each expansion RAM that it now sells for the C-128. Unfortunately, though, the power connector is an unusual square shape, which is another attempt by CBM to keep 3rd party supplies to a minimum.

Supply ratings:

CBM	DC	5 volts @ 1.5 amps
	AC	9 volts @ 1.0 amps
Maxtron	DC	5 volts @ 1.7 amps
	AC	9 volts @ 1.7 amps
CPS-10	DC	5 volts @ 3.0 amps
	AC	10 volts @ .25 amps
	(at 9 volts ==> adequate)	

One can find the power needs of their systems by adding the DC and AC loads as follows:

Item	DC Amps	AC Amps
C-64 computer	0.80	0.60
Westridge modem	---	0.05
(power supply was used.)		
BusCard II	0.55	---
Cardco Card/?	0.10	---
Turboprint GT	0.20	---
Paperclip dongle	0.05	---
Fastload cartridge	0.12	---
Typical cartridge	0.10	---
COMAL cartridge	0.20	---

The goal is to have reserve margin (1/3 +) in the power supply so that it does not get hot and thus reduce its usable lifetime (consumer goods do not usually undergo environmental testing for 40 years of life). Some hints for extending power supply life are:

* Cool off with a small fam
* Keep off a rug and out of enclosed areas
* Unplug or switch off when computer is off
* Keep out of sunlight and away from heat
* Use a power line surge/spike protector

Commodore Trivia #2,

Q. 1.
What was the code name of the Amiga while under development?.

Q. 2
What is Lord British's real name(the creator of the Ultima series)?.

Q 3.
What is the POKE location that will FRY an earlymodel PET?.

Q 4
On the PLUS/4-C16,the VIC chip was replaced by the TED.What does TED stand for?.

Q 5
Commodore produced a daisey wheel letter quality printer in north america(possibly elsewhere) for the serial bus.Name it?.

Q 6
What is the version of DOS in the 1541?.

Q 7.
What is the version of BASIC in the PLUS/4-C16?.

Q 8
What is the nicknames of the three custom chipsin the Amiga?.

Q 9
Commodore produced a 64 in a PET case.What is its name and model number?.

Q 10 .
Commodore sold a 1meg disk drive in a 1541 case. Give the model number.

Q 11.
What does GCR stand for?.

Q 12.
Commodore produced a drive for the PLUS/4 with its introduction.Give the model number?.

Q 13.
What does SID stand for?.

Q 14.
What does the acronym KERNAL stand for?.

Q 15.
What version of DOS does the 1571 have?.

Q 16.
What other two disk drives share the same DOS version as the 1571?.

Q 17.
How many files will a 1571 hold?.

Q 18.
How many files will a 1541 hold?

Q 19.
What did commodore put right before entering the computer market?.

Q 20.
Commodore intoduced an ill fated 4 colour plotter. Give the model number?.

Q 21.
Some formats of CP/M write disks using the MFM format.What does MFM stand for?.

Q 22.
On the 128 the user manual left three commands undocumented.One works and the other gives a non implemented error:Name the commands and what each one does or does not?.

Trivia #2 Answers.

1.Lorraine. Amiga was the company name.When commodore bought the company they scrapped the model name and used the old company name.

2. Richard Garriott. Scott Stanton has met him and says that he is the son of astronaut Owen Garriott.

3. 59458. It is the 6522 versatile interface adapter. No, I won't tell you what to poke into it,but I will tell you that it is not the only way to fry a PET.Here's a description from none other than Jim Butterfield: The poke shown above is correct.Its intention was to speed up early model PETs by masking the RETRACE line(by switching it to output)...however commodore subsequently REDESIGNED the interface in such a way that making the VIA pin an ouput caused(now)two outputs to fight each other....result VIA and/or video circuitry burnt out.LATER(days of FAT 40 and 80 column PETs) the new CRT controller chip could be fiddled with POKES so that it generated scan rates completely out of the capacity of the CRT deflection circuits.Result...burnt out deflection circuitry...and that was no YOKE.Richard Bradley says that 59595 is the second poke that Jim is referring to. I also have it on word from Etham Dicks that 59409 is another infamous poke,but i wouldn't try any of these!!.

4. Text Editing Device.It did not have as many capabilities as the VIC-II.

5. The commodore DPS 1101.The CBM 6400 was another earlier attempt at a daisy-wheel printer,but it had an IEEE-488 interface.

6. 2.6

7. 3.5

8. Daphne/Denise. Agnes/Agnus. Paula/Portia or Huey,Duey and Louie.Denise,Agnes and Paula were the americannames,but others crept in from somewhere.The ducks were always a joke but caught on as alternative names.

9. The EDUCATER 64.It was model number CBM 4064 and it was also called the PET64.Note that this version of the 64 was the second attempt.Commodore first tried to sell the EDUCATER64 to schools in the regular 64 case but administrators and teachers disliked the HOMELY look.Thus it was squeezed into a PET case and sold better,although I don't think it was ever a killer seller.

10. The commodore SFD 1001.It was actually half of aCBM 8250 LP with a slightly revised ROM.

11. Group Code Recording.

12. The CBM 1551 was the new high performance drive that was designed specifically for the PLUS/4 and C16.The 1542 was actually just a repackaged 1541 in a grey case that was made available for people who didn't want to spend the extra money for the 1551.The extra cost resulted from the 1551 sporting a new parallel transfer method that increased transfer rates by 400%.

13. Sound Intrface Device.

14. Keyboard Entry read,Network And Link.This is most likely another 'words after the letters'acronym,along the lines of the PET acronym.

15. 3.0

16. I got more than I bargained on this question,since there are four drives that have the same DOS version thatI feel are adequate responses to this question.
1) The CBM D9060 and D9090 although I doubt the code isthe same.The D series were hard drives.
2) The 8280 Dual 8" floppy drive.
3) The 1570,which was a single sided version of the 1571 in a 1541 case painted to match the 128.The ROM is slightly different,enough to make it unreconisable as either a 1541 ot a 1571 in some cases.
4) The 1571II and the 1571D which is the drive in

the C128D,also have this DOS revision but that stands to reason since they both belong to the same line.

17. 144 in both modes.I am surprised that commodore didn't add a track or put another directory on the back.

18. 144.

19. Calculators.They also made office equipment,watches adding machines and thermostats,hence the name Commodore Business Machines

20. The commodore 1520.It used 4" wide paper and could use four colours.

21. Modified Frequency Modulation.

22. RREG reads the internalregisters after a SYS command OFF gives an unimplemented command error.QUIT does to.

Well how did we do last month,some real bone crushers in that lot.

Scoring
over 20--Genius Mark1(the ultimate select group)
  15-20--Normal Genius(better than nothing)
  10-15--Average
  5--10--Semi-Average
  1--05--Very Dismal(another 1000 lines)

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