

CPU

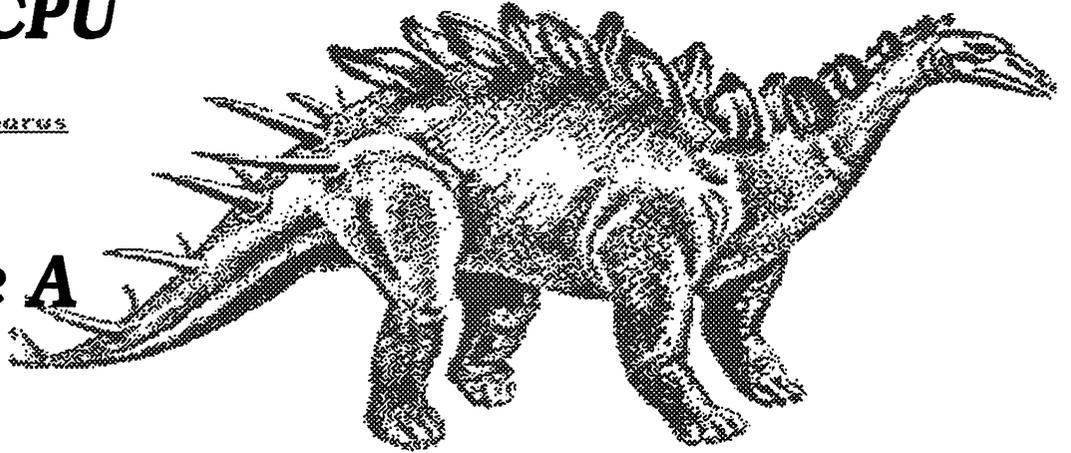
Ushering the Commodore User into the 21st Century

the Commodore
128/64 Power
User newsletter

**Our Super CPU
Issue!**

Kentrosaurus

**Is Your
Commodore A
Dinosaur?**

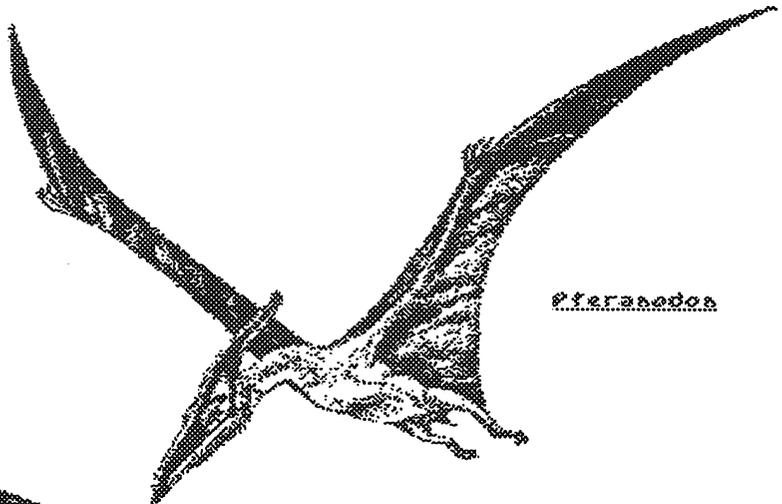


NovaTerm 9.6

**Type In
Programs!**

**Gondwanaland
Tales**

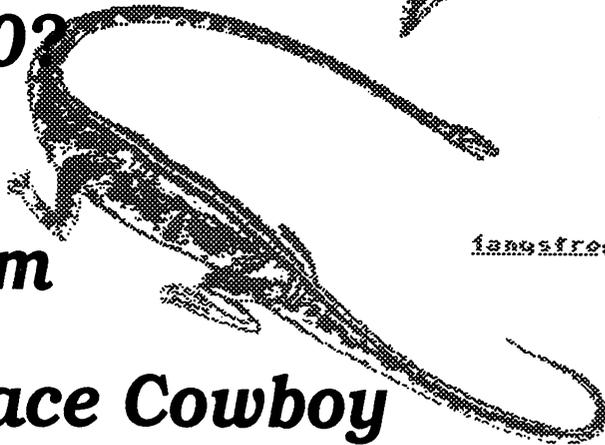
Pteranodon



GEOS 3.0?

**CPU
Checksum**

Ianusfroehus



CyberSpace Cowboy

Issue No: 4 1998

\$3.50

C O N T E N T S

ISSUE 4

VOLUME 1

1998



PUBLISHER

*GosserGamesLtd, Inc.
Publications*



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CPU the Commodore 128/64 Power User newsletter is published quarterly by GosserGamesLtd, Inc. Publications, P.O. Box 1817, Shelton, WA. 98584. 6 issue subscription rate is US \$15 for U.S. addresses, US \$21 for Canada and Mexico addresses, US \$27 for all other International addresses. Back issues available on a continuing basis. All subscription payments must be in U.S. dollars. Mail subscriptions to CPU Subscriptions, P.O. Box 1817, Shelton, WA. 98584.

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From The Back Room....

From time to time there are events and occurrences that take place in our lives that we have no control over. Such as an illness or death in the family. Crimes committed against persons or property and the like. This magazine hasnt been published in well over a year. The reasons are many and diverse. And so as to not sound like I am making excuses for this I am printing here an excerpt of a letter that I recently sent to Maurice Randall.

I would ask that you the subscriber, please accept my personal apologies for the absence of attention that you have been afforded over this past year or so. If you do not want to receive the balance of your subscription, please mail a request for a refund to:

CPU Subscriptions
P. O. Box 1817
Shelton, WA.
98584

Also be aware that the phone numbers published in past issues are no longer valid as our physical location has changed since the events that are described in the following excerpt. Also the BBS is no longer running as it no longer exists. Also at this time CPU has not been accepting or extending subscriptions. Current subscriptions will be filled and once that is done and everything is back on track, a determination will be made to either continue publishing CPU or closing it down.

Please address all written queries to: CPU Editor, P.O. Box 1817, Shelton, WA., 98584. Or I can be reached online at: COMBUG@delphi.com, we currently have no business phone. I hope that you enjoy this issue!

The following is an excerpt from a letter that I sent to Maurice Randall;

"I am looking forward to the 128 SuperCPU and your 128 version of Wheels. I am sorry to hear about the bootlegged copies of geoFAX that you found. I hope that your not too discouraged to ever finish The Wave or Finally!

From The Back Room....

Which brings me to the problems that I have. I havent been able to publish my magazine CPU in over a year until now. I had a home office in a small mobile home parked close to my house. All of my computers, software, records, office and publishing equipment was in that mobile. Back in Sept. 1996 someone decided that they were going to break in and steal my laser printer and \$3000.00 Xerox copier and monitors. They did not touch the computers...128's! But they didn't stop there, they torched the place. I guess to cover up what they took.

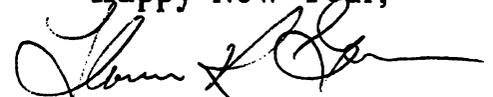
I thought that I had lost everything, luckily the fire station is only about a mile away. There was a rash of these burglaries/arsons around the county, well 3 anyway. So everything that was salvagable was confiscated by the local law enforcement while an extensive investigation was going on. I just got my things back, what there was about 9 weeks ago. To make a long story short they caught and convicted the people that did the crimes. Turned out being my 17 year old nephew and a couple of his friends!

Anyway I lost all of my subscribers addresses and the ability to publish CPU, I had no way of contacting them. I thought that they would write after not receiving an issue for so long but no one has! Well there is some good news, the insurance came through and I was able to buy some more equipment, got another 128 and peripherals and was going through some of the 3.5 disks that made it through the fire and found a backup copy of my original DweeziLabel data disk and guess what? My subscribers addresses!

I am finishing up on a new issue of CPU right now. It will be mailing in about 2 weeks. I am not accepting anymore subscriptions. I am offering refunds to all of my subscribers if they so wish or they may continue with their subscriptions. If after fulfilling my subscription obligations I may continue on a per issue basis, like Loadstar gives the option of doing."

I did actually receive one letter asking for a refund and another a renewal. Until next issue....

Happy New Year,



Thomas R Gosser

NEWSWORTHY

J&F Publishing...In Loadstar 128 Issue #36 Fender Tucker announced that Issue #40 of Loadstar 128 will be the last to be published. *This is sad news for the C-128 community, Loadstar 128 was a class act all the way.*

Arkanix Labs...Announced that they will no longer "actively support" the Commodore 64 platform. This according to Jonathan Mines of Arkanix Labs. Jon also said that he would continue to support the C64 from his Web site.

Creative Micro Designs... The SuperCPU 128 production has begun. The first 100 boards are in process and due to begin shipping shortly. Customers who have confirmed their deposit and method of payment will be the first to receive their units. If you have placed an advanced deposit and have not received confirmation from CMD in the mail, please contact CMD immediately at 408-525-0023. *Ed. note: "The SCPU128 is shipping as of 23 FEB 98"*

Click Here Software Co...Wheels - The all-new operating system upgrade for GEOS 2.0. Designed and created by Maurice Randall, Wheels 64 was known as "Project G" during the last several months of development. This is the first major upgrade to the GEOS operating system since 1988.

Here's a brief rundown of the major highlights of this new system:

Dashboard 64

This is the new replacement for the deskTop. With the Dashboard, you'll navigate around your system like you've never been able to before. Open up as many as 16 windows to any partition or subdirectory you want. Unlike the deskTop, the Dashboard knows your CMO devices.

Toolbox 64

Forget all those Configure files you had to put up with before. The Toolbox will let you boot from any setup you can put together. Nothing is more simple than booting up into the Wheels environment.

MakeSysDisk

Afraid your boot disk will someday get damaged? Wheels comes with this nifty utility that allows you to create your own boot disks or bootable partitions on your CMO devices.

The Wheels Operating System

The heart of this new system lies in the considerable modifications and enhancements that went into the development of the operating system kernel. Included in this are a total of 14 new disk drivers designed to better handle all the popular disk drives and ramdisks.

Software and hardware requirements:

Commodore 64 or 128 (in 64 mode)
1541 or 1571 for initial installation
GEOS 64 V2.0 (Wheels is sold as an upgrade)
Original GEOS boot disk for the installation
Ram expansion (all popular types are supported)

NEWS UPDATE FOR JANUARY 12, 1998...Wheels 64 is now in its final development stages. Documentation is in the proofreading stage. Shipping is expected to begin sometime in February. Work on the 128 version will begin soon. *Ed. note: "As of 5 MAR 98 Wheels has not yet shipped"*

Get ready to rev up your 64! Wheels is coming soon...

Advance orders for Wheels 64 are now being accepted. Price: \$36 plus shipping and handling*
(* add \$4 for North American addresses or \$6 for International)
(Includes Installation Disk and Owner's Manual)

To place an advance order send a check or money order in U.S. funds to:

Maurice Randall
Click Here Software Co.
P.O. Box 606
Charlotte MI 48813
For more information, phone (517) 543-5202

CPU Revu: novaterm 9.6 by Remington Steele

Available from CMO, Loadstar and Nick Rossi. See their Ad's elsewhere in this Issue.

NovaTerm 9.6 is powerful software, but it does have limits and some drawbacks. Also some of the functions wouldn't work properly or not at all for me, but more about that later. NovaTerm 9.6 is the first commercial version of this software. All previous versions were shareware and not as powerful as v9.6. Author Nick Rossi has taken a modular approach to this software. Novaterm utilizes no less than twelve modules to achieve its level of performance. They give the user control over such things as Terminal emulations, memory expansion drivers, modem types, screen drivers, protocols, etc.

When first booted up the program runs you through a configuration process that is saved so the next session boots up directly into the main program. The program boots up into a menu screen. From this menu you are given eight options; Terminal mode, Dial a number, Configuration, Disk operations, Buffer menu, Device settings, Utility modules and Exit terminal.

Terminal mode: Novaterm supports ten terminal emulations, ANSI, ANSI-40, VT102, VT52, Standard-80, Standard-40, Commodore, ANSI-wide, VT102-wide and Standard-80-wide. With a Commodore 64 the emulated 80 column screen is more difficult to read than the 40 column, but not uncomfortable. Also for C-128 user's there is a VDC driver that allows the user to use the 128's high-res 80 column screen in the Terminal mode only.

Dial a number: This option takes you to the Novaterm phone book. From here you enter and edit the phone numbers of the BBS's and online services that you frequent.

Configuration: This menu contains all of Novaterm's configuration options. All settings can be saved upon changing them or not, for temporary changes for the current session only.

Disk operations: This menu provides some functions for working with your disk drive. Functions such as sending disk commands, reading text files and viewing directories.

Buffer menu: This is one area of many that Novaterm really shines in. Novaterm utilizes memory drivers for setting up buffer space. If you have a Ramlink, RamDrive, BBG-GEORam or REU there are device drivers that let you use these for very large capture areas. If you are using Novaterm on C-128 there are also drivers that let you use the VDC ram as a buffer cache. Novaterm configures its buffer area as a disk drive. Each file has a name in the buffers directory and each can be manipulated as on a normal disk.

Device settings: You specify what drives the program resides on, upload and download device, buffer device and even printer device settings from this menu.

Utility modules: Several options present themselves from this menu such as a text editor and configuration which runs you through the initial startup configuration again.

Exit terminal: Sends you back to basic.

Product Summary: Novaterm 9.6 comes on an unprotected 5.25" 1541 formatted disk. As usual make a backup copy of your original and use the backup to work from. Novaterm 9.6 comes with an 80 page laser printed manual that is very professionally written and edited. The manual is very thorough and informative, all aspects of program operation are covered.

Like all modern Terminal software Novaterm supports a script language so that the user may "program" the software to logon to online systems and perform automated functions without active user input. Novaterm provides the user with the newer and more powerful Zmodem file transfer protocol. Use Zmodem once and you'll never want to use another protocol for transferring files! Novaterm supports Internet usage by providing the user with the ability to UUencode and UUdecode files for sending/receiving via Usenet and e-mail.

Novaterm 9.6 supports modems up to 38,400 bps when used with the Swiftlink or Turbo 232 cartridges. Very large buffer areas are possible when using large ram storage devices like Ramlink. Emulated 80 columns for C-64 users and vdc 80 columns for C-128 users from C-64 mode. The SuperCPU is also supported and it's use really enhances the speed of the emulated 80 column screen. At higher modem speeds the emulated 80 column screen can lag way behind. This is noticeable when large amounts of text is steadily coming in. The SuperCPU relieves this problem and allows the screen to keep up with the text. Using hardware flow control will keep you from losing any text characters because the screen cannot keep up, also if you have an REU on your system there is an 80 column driver that implements a fast scroll using the REU's DMA capability. Full device and partition support is also provided.

Bumps, Humps and Problems: As an avid C-128 native mode user for the last twelve years I had never used a C-64 terminal program until Nick Rossi sent me a copy of Novaterm 9.6. I am spoiled by the mouse! Terminal programs are so much more easier to navigate with a mouse and pull down menus than any other way, bar none! As good as Novaterm is, it would be much better if it supported the mouse and pull down menus. All functions should be accessible directly from Terminal mode. They are not, you must exit terminal mode then select the module you want. After you are done you go back and select terminal mode to reenter. This is cumbersome and can be tedious.

I have some problems with Novaterm. Now these could be hardware related and not the program proper. No matter what I tried I could not get Novaterm to recognize the DACC partition that I set up for it. So I could not use my Ramlink for a buffer area. The 80 column vdc driver would function okay until I had to exit to the 40 column screen for file or buffer transfers or for whatever other reason. Then the computer would lock up. So I stay with the emulated 80 column screen. Another problem occurs when I boot up with the SuperCPU speed switch set to Turbo mode. The program boots fine its just that the buffer area will not configure properly when booted in the Turbo mode. For example, I use the vdc+internal driver to set up my buffer area. Normally this would format out to 18.5k of area, but when I boot up in Turbo mode it is only 1.5k! If I mess with installing the driver from the buffer module I can get it to format correctly after about three tries. So I boot in Normal mode and then switch the SuperCPU to Turbo mode after the program is up and running. So in conclusion, I recommend Novaterm 9.6 to any Commodore 64 user with older term software. C-128 users can benefit from the Zmodem protocol and the added features if you can get them to function properly!

Human nature is sometimes comical, at times frustrating and even predictable. It is said that the Commodore software industry died because of rampant piracy and high prices. I say balderdash to both! Software piracy and high prices are much more prevalent in the PC, Macintosh and Amiga realms than it ever was in Commodore's. What killed the Commodore software industry was plain and simple greed. The software houses dropped support in favor of more lucrative markets. The growing PC market for one, high-end game systems for another.

Talk about high prices! Look at the price of some of those game cartridges and CD's. I never saw a Commodore game cost anywhere those prices. Which leads me to believe that a good percentage of Commodore users (maybe former users), are fickle. Our now defunct User group was a prime example of this. 98% of the members complained about the cost of everything. *GEOS is to expensive, that game costs to much. I cant subscribe to that magazine its \$24.00 a year. I cant buy that hard drive it cost more than my computer did! Why does the monthly club disk cost a buck? It should be free!* Sound familiar to you? Most of these same people are now "happy" PC owners buying new software that averages \$50 plus. Or they have one of those high-end game systems. You know the type, Carts that cost upwards of \$70 plus.

Why is this? Why do people, or why did people feel that anything associated with their Commodore computers was just to costly? Users were of the mind that everything should be given to them. Which brings me to Shareware, you know when you get a nice piece of software for nothing and you use it frequently. You're supposed to send in to the fluthor the requested shareware fee. Most people neglected this facet of the shareware process. So for most programmers the shareware concept on the Commodore was a bust. It is ashame too, because some of the most talented programmers have moved on to greener pastures.

So that left most Commodore users asking the question, "Where's the support?". Oh yeah, you hear horror stories from those that have been taken to the cleaners by someone. If you've been around computing for awhile you have probably experienced this first hand. I have but, I am not disappointed enough to abandon my faithful Commodore. Now having said all that, is your Commodore a Dinosaur? Most people who are not in the know would say yes! But we know better dont we? Lets see why our Commodores are not only *not* Dinosaurs but powerful, productive tools holding there own thanks to companies like Creative Micro Designs and Click Here Software! just to name two.

Reason #1: Hardware add ons. CMD makes and sells the greatest peripherals ever conceived for the Commodore computers. Reliable and very compatible Hard drives, Ramlink with up to 16 megabytes of memory (probably the most innovative product ever!), and now the SuperCPU 20 mhz accelerator with or without ram card expandable up to 16 megabytes and 16 bit native mode. The SCPU is also very compatible and user friendly. Other hardware enhancements encludes the Turbo 232 cart which allows high speed modem access, the FD-2000 high capacity disk drive, the jiffyDOS wedge and a myriad of expansion and user bus components. There are also other hardware enhancements from other sources such as the Handyscanner 64, Video Digitizer, SID Symphony stereo cart and computer enhancement carts like Super Snap Shot and Fiction Replay to name a few.

Reason #2: The modern Software; Lets look at whats available for the C-64 mode first. GEOS 2.0, long before windoze and the popularity increase in the PC arena GEOS has been one of the driving forces behind the 64's longevity. And now with the advent of the *Wheels* upgrade to the venerated GEOS operating system the useful life of the C-64 has been extended well into the 21st century.

Fun Graphics Machine, there is not another graphics manipulation program on the planet with the ease of use, versatility and power that FGM has to offer. GoDot; unlike FGM GoDot excels in the importation and manipulation of color graphics from a multitude of other platform formats. These two programs are in a class by themselves, you get more bang for the buck with these as nothing else compares. So I wont even mention anything else. Look in future issues of CPU for reviews of these two programs.

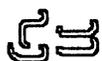
Novaterm 9.6, with its Zmodem transfer protocol and high speed telecommunications ability is *the* best, most powerful term program ever for the Commodore 64 computer. CHIT 94, this full featured archival software package is probably the best documented and thought out archiving utility ever conceived for the C-64. Well its the easiest to use anyway with its menu driven system. It supports file as well as whole disk compression. Support for mass storage devices and partitions/subdirectories is also part of the system.

GeoPublish, although this desktop publishing application runs under GEOS nothing before or since can compete with the power and versatility of this program. Especially when using Jim Collettes Laser Landscape software, magazines such as CPU are possible. GeoFAX, the one and still only FAX software for the Commodore 64. Not only can you send and receive FAX's but you can use your FAX machine as a full page scanner with geoFAX! Another top quality GEOS product from Click Here Software is geoSHELL. With this command line interface [CLI] for GEOS you can navigate your way around your system with up to four drives effortlessly. We have just touched the tip of Commodore 64 iceberg here. Check online or in publications like CPU and Commodore World for the latest info on the powerful software for available for your computer.

Ok, so you C-128 users are asking; What is there for my computers native mode? Good question! Lets see what is available for us 128 users, but first I would recommend to all "flat" C-128 owners that you get your video ram upgraded to 64k. All modern 128 software utilizes this expanded UDC ram that the C-128D came stock with. IPaint for example requires 64k UDC ram just to display an interlaced image. IPort its sister application also requires the upgraded ram to accomplish its graphics conversion routines. Several C-128 and C-64 programs will use this ram as a storage area for files or graphics.

The C-128 has available to it 80 column versions of the GEOS family of software. Very complicated BBS software like Omni 128 puts the C-128 on a level with DOS machines. In fact PC users will logon to an Omni 128 system and cant even tell or believe that they are actually accessing a Commodore. There is more powerful 128 specific software available: SEC Check Register, Superbase 128, Superscript 128, The Right Stuff 128, Dialogue 128, Basic Paint, Master Paint, Spray Paint 128, BASIC 8, Ante Up, MOD Player 128 and others.

Is my Commodore a Dinosaur? Certainly not! Is *your Commodore* a Dinosaur? Depends, it doesnt have to be!



COMMODORE LOG



A TRIAL OF TWO SPEEDS

With the advent of the Super CPU for the Commodore 64 and now the 128 version being shipped people are wondering about software compatibility and performance. Well since we do not have a 128 SCPU at this time, this article was written using the 64 SCPU as its test subject. There is no reason to believe that the 128 SCPU will not give similar results. Now these tests were not extensive nor did they cover a wide range of software. This is just a sampling of what is compatible and how fast some of the software performed. The test software was loaded from a 1541 disk drive unless otherwise noted:

MAVERICK....Super CPU and RamLink installed and enabled. No Boot [jiffyDOS on or off]. CPU disabled: Boot up Ok [jiffyDOS on]. Boots with SCPU in *normal mode* only.

PrintShop....Normal mode to boot up. Switch to Turbo when programs up and running.

PrintMaster+....Turbo mode compatible. Even during boot up.

Music Construction Set....Boot and turbo Ok. Normal mode for accurate input however.

Digimaster....Boots up in turbo mode. Screen tends to trash, sound output is diminished. Recommend using normal mode. Conversions in turbo mode are greatly sped up.

Fun Graphics Machine....Boots up in turbo mode. Disable FGM fast load if jiffyDOS is on. FGM runs super fast! A great performer with the Super CPU.

CRIT94!....1541 to 1541 Ramlink partition. With DACC partion and jiffyDOS on. Compression: 1541 B0A time at 20mhz, 624 blks, verify "off". Limit none, time= *Not Compatible!* Normal mode= 3min. 51.79sec. Compressed to 584 blks. In turbo mode 1541 initialization is incompatible. Turn turbo off at Begin Job Requestor, turn on for accelerated Verify.

HandyScanner 64...The clear memory option upon boot up is not Super CPU compatible. It will lockup the system if activated. Scrolling is very smooth and responsive in turbo mode. Translation after an image has been scanned in is very fast. Turn off turbo mode when you are ready to save the image. Turn turbo back on before scanning.

The following speed trials were conducted under the enhanced Super GEOS kernal, times are approximate:

Geopaint Preview	At 20mhz: 2.05 sec.	At 1mhz: 8.45 sec.
Scrolling Left to Right	At 20mhz: 0.73 sec.	At 1mhz: 7.26 sec.
Open Document	At 20mhz: 2.10 sec.	At 1mhz: 5.30 sec.
Fill Screen	At 20mhz: 1.73 sec.	At 1mhz: 33.53 sec.
geoGIF from AL to AL	At 20mhz: 21.10 sec.	At 1mhz: 8 min. 42.45 sec.
Ramlink to HD	At 20mhz: 59.33sec.	At 1mhz: 9 min. 31.17 sec.

As you can see the Super CPU enhances the performance of GEOS considerably. By the way the parallel cable is not supported by the GEOS operating system. However the Wheels upgrade to GEOS remedies this problem. Which should speedup Hard Drive access under the GEOS system. Geopublish really performs in turbo mode. The page updates so fast that if you blink your eyes you've missed it. Scrolling is very smooth and responsive especially if you are working from the Ramlink. Rippling text takes no time at all, and you can go from Preview to Zoom mode in an instant. In essence the Super CPU and the Super GEOS patch make working with Geopublish a pleasure. This is one little Plymouth Valiant souped up to a Hemi Tuda! The difference is that remarkable.

End

MSYDOS HINTS AND TIPS

For a Selective Directory Listing use: @\$pattern=filetype

Colon not needed.

For Save with Replace use: <--@Filename

CYBERSPACE COWBOY

Not Riding side saddle down the information super highway!

In the beginning there was 300 baud, then man discovered fire with 1200 baud. But soon man became weary waiting for fire. There had to be something better and there was, electricity was discovered with 2400 baud. Man was starting to cook now at an accelerated rate. But this was still too slow, not one to rest upon his laurels man discovered 9600 baud. Ah yes, this was a power to be reckoned with! But soon the information super highway would be opened up. To help relieve the traffic congestion man had to become more efficient. Soon 14.4 and then 28.8 was zipping man around this vast expansive highway at lightning speed. But time is the prison of us all and soon 33.6 came along. Now we have 56k baud and soon even higher speeds will be attainable!

It is hard to imagine that just 10 short years ago most Commodore users were using 1200 baud modems for telecommunications. Some were still using 300 baud and some the newer 2400 baud modems like the Aprotex C24. A few were using 9600 baud modems but these were not very common place in the Commodore community. Today it would seem that the majority of users are telecommuting at around the 14.4 baud speed.

But much to my chagrin, I discovered that a vast number of people on Delphi for example are using 2400 and even 1200 baud modems! I was taken aback, I thought that everybody in this day and age were travelling at least as fast as 14.4k bps. What with the give away prices of the 14.4 and even the 28.8 modems it would seem that most users would be using these *modems*. There is probably a couple of reasons for this. Most of these Commodore users are probably on a very limited budget. In order to use these higher speed modems one needs a Swiftlink or Turbo 232 card and those run 40 bucks. The right software can cost also, up to 30 bucks, not to mention the price of the modem.

Another reason could be the fact that some of these people are new to the world of Commodore computing and are just starting out. Learning to walk first instead running. Whatever the reason is, if you are online at 1200 or even 2400 baud your telecommute can be much more fulfilling if you upgrade to the higher speeds. If all you do is get online to read messages then you probably don't need anything higher than 2400 baud. But if you do any file transfers, be it uploading or downloading you can save a lot of time with a higher speed modem. And if you are accessing and surfing the Web a high speed modem is a must.

As for riding side saddle down the information super highway, I think that I will keep both feet in the stirrups thank you. When you're riding as fast I do on an old horse like the Commodore 64 you don't want to fall off!

Eat My Dust Demers!
-TRQ

Story Time

The Gondwanaland Frontiers

White Dragons Mountain Part 2

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Cyrothroxus slept uneasy. His dreams filled with death and the pilfering of his vast hoard. He never dreamt this way before, all dreams were of great conquests and feasts of Humanoid flesh. He tossed and turned, snorted out bursts of intense cold. Someone was taunting him, a voice in the darkness...." Hey you fat lazy Dragon wake up!" Then he smelled them. How could he smell them? They were in his lair, two of them and he is asleep!

Cyrothroxus awoke with a roar as a bitter blast of numbing cold issued forth from his cavernous lungs. He couldn't see the two intruders as they were concealed beyond the corner of the entrance to the lair. How stupid he thought to be caught off guard like this. But even more stupid for these insignificant Humanoids to wake him when they clearly had the advantage. No matter he thought, soon they will become his breakfast. "What are you doing here?" he demanded of his uninvited guests.

"Why we came to relieve you of that burdensome hoard of yours", replied Fingers. Thor chuckled at the notion, uncommonly for a Dwarf. Cyrothroxus roared in anger at the audacity of these two. "I will rend your frozen bodies into bite size morsels by the time I am finished with you!" "You'll hav'ta catch us first you ugly Dragon", Thor said tauntingly. At that Thor ran out of the cave into the early morning sunlight. The plan devised by Thor and Fingers was an ingenious one.

Thor was to hide in the rocks above the cave opening as Fingers was taunting the Dragon. When the Dragon comes out of the cave entrance Thor is to jump on the back of the beast's neck and subdue it. "Your cowardly friend has deserted you my meal", said the Dragon. "As I am going to do to you my fat Wyrms", retorted Fingers. And with that the thief ran for it. For some reason Dragons hate being called fat Wyrms and Cyrothroxus was no exception. The White Dragon lept from atop his hoard toward the bend in the cavern entrance where just a moment before stood Fingers.

Fingers stopped just a few meters beyond the cave entrance and turned toward his pursuer, dagger drawn. Cyrothroxus bounded out of the cave and stopped abruptly just outside of the entrance. He laughed furiously at Fingers as he said, "You mean to subdue me with that formidable weapon thief?!" Fingers waved the glistening blade in front of his face. "I mean to disembowel you with it fat Dragon", he said sinisterly.

That was Thor's cue as the Dwarf lept head first at the Dragon's neck. Cyrothroxus reared furiously as Thor grabbed hold. The creature struggled with great intent but couldn't dislodge his opponent. Thor's short sword found its mark many times. Blasts of cold shot forth from the Dragon and one of these caught Fingers unaware. The thief was frozen instantly where he stood. Cyrothroxus rolled over several times trying to flatten Thor but to no avail...nothing can break a Dwarven grip.

The Dragon was loosing much blood and couldn't breathe now. It stumbled and fell, unable to move, "how could this be?" he thought to himself. Thor pounced with all his might and his weight and his blade struck true as it pierced the Dragon's heart. Cyrothroxus was dead and so was Fingers. Thor ran to where Fingers was standing frozen. The ice sparkled as the beams of sunlight danced across its irregular surface. Thor wept. Then the hairs stood up on the back of his burly neck. The hoard!, he thought.

The Dwarf quickly lit a torch and ran back into the Dragon's lair. He dropped the torch and rolled around on top of the hoard as his fever burned ever so. He noticed a wand lying in the center of the pile. It had strange runes written all over it. He could feel magic emanating from it. He remembered a tome that Fingers had given him after lifting it off of a Wizard in the market place. He pulled it out of his pouch and opened it up. The pages had strange runes written down one side and words written in the common tongue down the other. He found the runes that were written on the wand. FYRBRAND was the first set and the second FIRE. This was a wand of fire!

Thor hurriedly ran to the place where Fingers stood. He quickly aimed the business end of the wand toward Fingers. He shut his eyes and spoke the word, "FIRE!" Instantly a ball of fire about two meters across shot forth from the end of the wand and travelled straight and true as it engulfed Fingers' frigid body. The fireball exploded into a million iridescent sparks. When the smoke had cleared Thor's jaw dropped to his chest, as in the spot where Fingers once stood there was now only a small mound of ashes. Thor dropped to his knees in anguish. His friend was truly gone. All there was left to do now was raid that treasure hoard!, he thought to himself. So he picked himself up and wiped off his blade then sheathed it. Turning toward the cavern his fever started to rise. It was dark inside, he noticed the stub of a burned out torch lying on the ground. He paid it no mind however as he and his kind have the uncanny ability to see in the dark. It comes from countless generations of mining and living in vast labyrinthian caverns under great mountains. Then there it was, right in front of him. It stood over three meters high at its peak and covered the entire floor of the cavern. Sweat was pouring off of his face, his hands shaking as he reached for a small box wrapped in a purple cloth and bound with gold braid. "What is this", he said outloud.



**Here is the solution to last issues puzzle.
Thanks to Susan Sackett.**

CPU Checksum

Below is the C128 version of the CPU Checksum data entry program. And on the following page is the C64 version and a sample program called TANGENTS. Its purpose is two-fold, firstly to verify that CPU Checksum is functioning properly and as a program that will display to your monitor screen the tangents of the degrees 1 to 89. When entering the TANGENTS program for C64 omit line 10 as this line will only work in the C128 mode.

After loading and running CPU Checksum be sure to type and enter NEW before typing in any data. Also when typing in a program listing due not include the last colon and the following REM statement as the two alpha characters following the REM is the checksum value. You verify this by the checksum value that the program will display in the upper lefthand corner of the screen when a line of data is entered. Future issues of CPU will include type-in programs for your enjoyment!

```
5 PRINTCHR$(147)"CPU MAGAZINE 128 CHECKSUM"
7 PRINT"TYPE";CHR$(15)" NEW ";CHR$(143)"BEFORE PROGRAM ENTRY!"
10 PRINT"COMPUTING...PLEASE ";CHR$(15)"STANDBY";CHR$(143);"!":J=4864
20 FORB=0TO11:READA:IFA<OORA>255THEN40
30 POKEJ+B,A:X=X+A:NEXTB:READA:IFA=XTHEN50
40 PRINT:PRINT"ERROR IN DATA LINE:"PEEK(66)*256+PEEK(65):END
50 X=0:J=J+12:IFJ<5213THEN20
60 POKE770,198:POKE771,77:SYS4864:END
70 DATA32,58,20,169,41,162,19,236,3,3,208,4,955
80 DATA169,198,162,77,141,2,3,142,3,3,224,19,1143
90 DATA208,7,32,125,255,79,78,0,96,32,125,255,1292
100 DATA79,70,70,0,96,162,0,134,251,189,0,2,1053
110 DATA240,19,201,48,144,9,201,58,176,5,133,251,1485
120 DATA232,208,238,134,252,165,251,208,3,76,198,77,2042
130 DATA169,0,166,235,164,236,133,253,133,254,142,47,1932
140 DATA20,140,48,20,24,101,22,69,254,230,254,24,1206
150 DATA101,23,69,254,170,230,254,164,252,185,0,2,1704
160 DATA133,251,201,34,208,6,165,253,73,255,133,253,1965
170 DATA201,32,208,4,165,253,240,8,138,24,101,251,1625
180 DATA69,254,170,44,198,254,230,252,164,251,208,213,2307
190 DATA138,41,240,74,74,74,74,24,105,65,141,88,1138
200 DATA20,138,41,15,24,105,65,141,89,20,32,79,769
210 DATA20,189,85,20,240,6,32,210,255,232,208,245,1742
220 DATA174,47,20,172,48,20,24,32,240,255,173,93,1298
230 DATA20,240,27,165,161,201,212,176,4,165,160,240,1771
240 DATA17,32,65,20,238,32,208,238,1,214,32,225,1322
250 DATA255,208,6,32,49,20,76,198,77,232,208,242,1603
260 DATA200,208,239,32,66,193,173,95,20,162,96,160,1644
270 DATA20,32,189,255,169,0,170,32,104,255,169,0,1395
280 DATA174,94,20,168,32,186,255,169,45,174,16,18,1351
290 DATA172,17,18,32,216,255,162,1,189,96,20,168,1346
300 DATA200,152,201,58,144,2,169,48,157,96,20,201,1448
310 DATA48,208,3,202,16,234,32,49,20,141,0,2,955
320 DATA76,183,77,58,59,32,65,20,206,32,208,206,1222
330 DATA1,214,169,0,170,168,76,219,255,32,79,20,1403
340 DATA169,26,141,0,214,173,0,214,16,251,96,162,1462
350 DATA0,142,0,255,96,19,18,32,32,32,32,146,804
360 DATA0,1,0,0,65,72,79,89,33,0,0,0,339
```

CPU Checksum 64

```
5 PRINTCHR$(147)"CPU MAGAZINE 64 CHECKSUM"
7 PRINT"TYPE";" NEW "; "BEFORE PROGRAM ENTRY!"
10 PRINT"COMPUTING... PLEASE ";CHR$(15)"STANDBY";CHR$(143);"!":J=49152
20 FORB=0TO11:READA:IFA<OORA>255THEN40
30 POKEJ+B,A:X=X+A:NEXTB:READA:IFA=XTHEN50
40 PRINT:PRINT"ERROR IN DATA LINE:"PEEK(64)*256+PEEK(63):END
50 X=0:J=J+12:IFJ<49456THEN20
60 POKE770,131:POKE771,164:SYS49152:END
70 DATA169,79,32,210,255,162,38,160,192,204,3,3,1507
80 DATA208,10,162,131,160,164,169,70,32,210,255,44,1615
90 DATA169,78,32,210,255,142,2,3,140,3,3,76,1113
100 DATA36,193,32,96,165,134,122,132,123,32,115,0,1180
110 DATA170,240,243,162,255,134,58,144,3,76,150,164,1799
120 DATA32,107,169,32,121,165,173,0,2,240,5,169,1215
130 DATA79,141,2,3,76,162,164,169,0,133,2,133,1064
140 DATA251,133,252,133,254,24,101,20,69,254,230,254,1975
150 DATA24,101,21,69,254,170,230,254,164,252,185,0,1724
160 DATA2,133,253,201,34,208,6,165,2,73,255,133,1465
170 DATA2,201,32,208,4,165,2,240,8,138,24,101,1125
180 DATA253,69,254,170,44,198,254,230,252,164,253,208,2349
190 DATA213,138,41,240,74,74,74,74,24,105,129,141,1327
200 DATA44,193,138,41,15,24,105,129,141,45,193,162,1230
210 DATA0,189,43,193,240,12,157,0,4,173,134,2,1147
220 DATA157,0,216,232,208,239,169,38,141,2,3,173,1578
230 DATA48,193,240,23,165,161,201,212,176,4,165,160,1748
240 DATA240,13,238,32,208,160,0,32,225,255,208,8,1617
250 DATA32,33,193,76,38,192,232,208,242,200,208,239,1893
260 DATA32,68,229,169,0,168,174,49,193,32,186,255,1555
270 DATA173,50,193,162,51,160,193,32,189,255,169,43,1670
280 DATA166,45,164,46,32,216,255,162,1,189,51,193,1520
290 DATA168,200,152,201,58,144,2,169,48,157,51,193,1543
300 DATA201,48,208,3,202,16,234,32,33,193,76,116,1362
310 DATA164,206,32,208,169,0,170,168,76,219,255,160,1827
320 DATA1,1,160,0,0,65,72,79,89,33,0,0,500
```

TANGENTS

```
10 CLR: REM KG
20 FORX=1TO89:Z=X: REM IA
30 Y=X/180*π: REM HI
40 PRINT" ";Z="TAN(Y),: REM ML
50 NEXTX: REM AI
```

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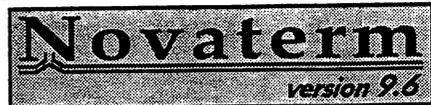
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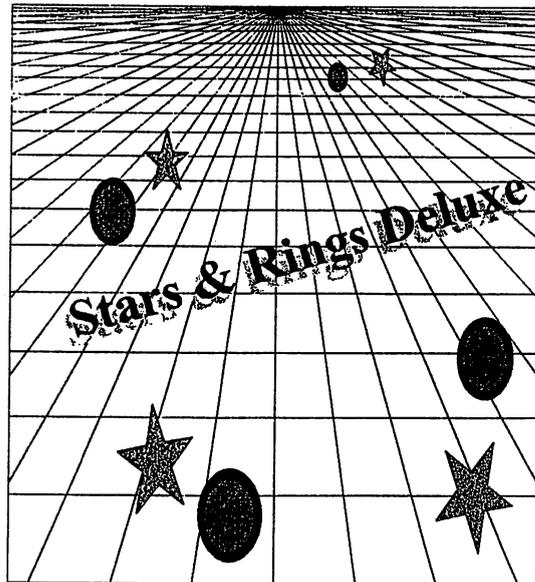
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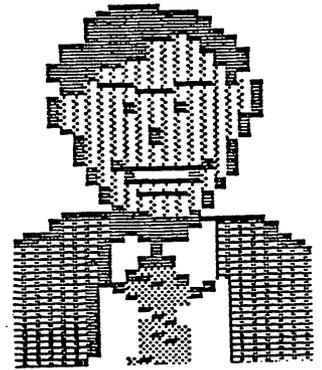
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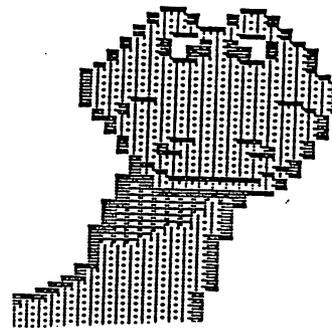
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PRINTER RIBBONS, LASER TONER, INKJET CARTRIDGES, DISKETTES, SPECIALITY PAPERS

Description	Black	Description	Black	Description	Black
ADLER ROYAL 1010 ROYAL 5010 CORR.	3.50	COPAL SC1000/1200	10.00	IBM 5685 BLACK	4.50
Lift Off Tape for Above	0.75	COPAL SC1250/1500/1600 NYLON	8.00	LEGEND 1385 M/S	11.00
ADLER ROYAL SATE. II CORR.	3.50	COPAL WH 6700 NYLON	15.00	NAKAJIMA ALL AX 200 CORR	4.00
Lift Off Tape for Above	0.75	COPAL WH 6800 4-COLOR NYLON	11.00	LIFT OFF TAPE FOR ABOVE	0.75
ADLER ROYAL III/IV/V CORR.	3.50	DATA SOUTH DS 180/220	5.00	NAKAJIMA/ROYAL CORR	3.50
Lift Off Tape for Above	0.75	DEC LA 20/36/40 NYLON	4.00	LIFT OFF TAPE FOR ABOVE	0.75
ADLER ROYAL III/IV/V NYLON	*	DEC LA 34/100 NYLON	5.00	NCR 2140 ANSWER CASSETTE	3.50
ALPS ALLEGRO 24 H.D. NYLON	5.00	DEC LA 120/180 NYLON	6.00	NEC P 8023A NYLON	2.75
ALPS ALLEGRO 500XT	6.50	DEC LA 324/424 NYLON	14.00	NEC PINWRITER P1/P2/P6	6.50
ALPS ALQ 200/300/P2400 NYLON	4.75	DEC LA 324/424 4-COLOR	20.00	NEC PINWRITER P6/P7/PLUS	6.75
ALPS ALQ 200/300/P2400 4-CLR	14.00	DEC LQPS M/S	*	NEC PINWRITER P5/P7 H.D. NYLON	8.00
ALPS P2000/P2100	6.50	EATON M400/440/LRC-MP40	5.50	NEC PINWRITER P2200/XE/ H.D.	6.50
AMSTRAD DMP 2000/3000	5.00	EPSON ACTIONPRINTER 2250 NYLON	6.50	NEC PIN. P5200/P5300/P6200	6.75
AMSTRAD DMP 4000 NYLON	8.75	EPSON ACTIONPRINTER 3000/4000	4.50	NEC PIN. P5200/P5300 4-COLOR ...	18.00
AMSTRAD LQ5000	6.50	EPSON ACTIONPRINTER 3250	6.50	NLQ 180 M/S	6.75
ANADEX 9500/9600/WP6000	6.00	EPSON ACTIONPRINTER 4500	5.50	OKIDATA 80/92/93 NYLON	1.75
APPLE IMAGEWRITER I/II/NYLON	2.75	EPSON ACTIONPRINTER 5000	4.50	OKIDATA 84/94	4.50
APPLE IMAGEWRITER II 4-COLOR	5.50	EPSON AP80 NYLON	4.50	OKIDATA 120/182/192/320/321	4.00
APPLE IMAGEWRITER LQ H.D. NY.	11.50	EPSON APEX 80	3.25	OKIDATA 390/391 HIGH DENSITY NYLON 4.00	4.00
APPLE IMAGEWRITER LQ H.D. 4-CLR	13.00	EPSON DFX 5000 NYLON	18.00	OKIDATA 393 HIGH DENSITY NYLON ..	16.50
APPLE SCRIBE T.T.	8.00	EPSON ERC 03 NYLON PURPLE OR BLACK 2.50	2.50	OKIDATA 2350/2410 (IPACE) NYLON ..	22.00
BROTHER AX 10/15/20 CORR	3.25	EPSON ERC 05 NYLON PURPLE	1.95	OKIDATA 590/591 + NYLON	6.50
LIFT OFF TAPE FOR ABOVE	0.75	EPSON ERC 09 NYLON PURPLE	3.50	OKIDATA 590/591 + 4-COLOR	31.95
BROTHER AX 10/15/10 NYLON	4.00	EPSON ERC 11 NYLON PURPLE OR BLACK 3.75	3.75	OKIMATE 10/20 THERMAL BLACK	8.75
BROTHER EM 200/HR15/M/S	4.25	EPSON ERC 23 NYLON PURPLE OR BLACK 2.50	2.50	OKIMATE 10/20 THERMAL 3-COLOR ...	10.50
BROTHER M1009/1109/1209 NYLON	5.50	EPSON ERC 27 NYLON PURPLE OR BLACK 2.75	2.75	O.T.C. 700/850XL/560DL	*
BROTHER M1409 NYLON	6.50	EPSON ERC 28 NYLON PURPLE OR BLACK 3.35	3.35	O.T.C. 214/216/2162	*
BROTHER M1509/1709 NYLON	8.50	EPSON ERC 30 NYLON PURPLE OR BLACK 3.50	3.50	PACKARD BELL PB 9024	12.50
BROTHER M1724 H.D. NYLON	9.75	EPSON ERC 30 NYLON 2-COLOR RED/BLACK 5.50	5.50	PANASONIC KXP 1124 NYLON	4.25
BROTHER M1800/1900 H.D. NYLON	8.00	EPSON ERC 31 NYLON PURPLE OR BLACK 6.75	6.75	PANASONIC KXP 1524/1624	7.00
BROTHER M1824/1924 H.D. NYLON	8.00	EPSON ERC 32 NYLON PURPLE OR BLACK 7.00	7.00	PANASONIC KXP 2123/2180/2124 ...	6.50
BROTHER M2024 NYLON	7.00	EPSON ERC 35 NYLON PURPLE OR BLACK 6.00	6.00	PANASONIC KXP 2123/2180/ 4-CLR .	12.50
BROTHER M2518 H.D. NY.	20.00	EPSON FX/MX/RX80/85/86/86E	3.25	PANASONIC KXP 2130/2135	7.50
BROTHER M2518 H.D. NYLON 4-CLR	25.00	EPSON FX/MX/RX100/185/186	4.50	PANASONIC KXP 2130/2135 4-COLOR 12.50	12.50
BROTHER M4018 NYL.	22.00	EPSON HX20 PURPLE	3.50	PANASONIC KXP 2624	7.00
BROTHER M4024 NYLON	*	EPSON JX80 NYLON 4-COLOR	12.00	PANASONIC KXP 3100/3200/ BLACK ...	6.00
BROTHER M5007	*	EPSON L1000 HIGH DENSITY NYLON	4.50	PANASONIC KXP 3624	7.00
BROTHER SR302 -PURPLE OR BLACK	5.00	EPSON LQ500/570/800/850 H.D. NYLON ..	4.50	PANASONIC KXP 3626	15.00
BROTHER SR402- PURPLE OR BLACK	5.75	EPSON LX80/90	4.00	PRINTRONIX P300/600/6000 NYLON ...	8.00
CANON AP 100/150 (AP01) CORR.	3.25	FACIT B2100/2400 NYLON	12.50	RADIO SHACK DMP 130/132/133/134 .	4.50
LIFT OFF TAPE FOR ABOVE	0.75	FACIT B2150/2450 NYLON	8.75	RADIO SHACK DMP 136 H.D. NYLON ..	4.00
CANON AP 200/550 (AP11) CORR.	4.00	FUJITSU DL 1100	7.75	RADIO SHACK DMP 136 H.D. 4-COLOR 12.50	12.50
LIFT OFF TAPE FOR ABOVE	0.75	FUJITSU DL1100 NYLON 4-COLOR	16.00	RADIO SHACK DMP 137 H.D. NYLON ..	6.75
CANON AP 200/500 M/S	4.50	FUJITSU DL2400/DPL24 H.D. NYLON	16.50	RADIO SHACK DMP 137/204 4-COLOR 25.00	25.00
CANON AP 200/550 (AP13) NYLON	4.50	FUJITSU DL2400/DPL24 4-COLOR	30.00	RADIO SHACK DMP 202/203/204	6.75
CENTRONIC 159 UNIV/PS24	7.00	FUJITSU DX2100/DL3300/DPMG9	4.00	RADIO SHACK DMP 240/250 H.D. NYLON 4.00	4.00
CENTRONIC 350/351/353 NYLON	12.50	FUJITSU DX2100/DL300 4-COLOR	18.00	RADIO SHACK DMP 240/250 4-COLOR 12.50	12.50
CENTRONIC H80/132 NYLON	5.00	FUJITSU SP320/830 M/X	9.50	RADIO SHACK DMP 300/302 H.D. NYLON 4.00	4.00
CENTRONIC LW400/800/1200	*	GENICOM 4410/4510/4540	24.85	RADIO SHACK DMP 420 NYLON	3.75
C. ITOH C610 NYLON	15.00	GENICOM 4470/4490	*	RADIO SHACK DMP 430 NYLON	11.00
C. ITOH 3500/4000/5000	15.00	HEWLETT PACKARD 2608A NYLON	20.50	RADIO SHACK DMP 440 NYLON	18.50
C. ITOH PROWRITER JR. NYLON	5.00	HEWLETT PACKARD 2610A NYLON	8.00	RADIO SHACK DMP 442 NYLON	4.00
CITIZEN 120D/180D/GSX 140/190	4.00	HEWLETT PACKARD 2631A NYLON	13.00	RADIO SHACK DMP 500 NYLON	20.00
CITIZEN GSX 140 H.D. NYLON 4-CLR	12.50	HEWLETT PACKARD 2932/2933	15.00	RADIO SHACK DMP 2100 H.D. NYLON ...	4.75
CITIZEN DP600 (SERIES) 2-COLOR BLACK/RED 6.00	6.00	H.PACK RUGGEDWRITER 480 NYLON	11.00	RADIO SHACK DMP 2101/2102/2103 ...	4.00
CITIZEN GSX 145 H.D. NYLON	10.50	IBM 2380/2390	6.75	RADIO SHACK DMP 2120 NYLON	16.50
CITIZEN GSX 145 H.D. NYLON 4- CLR	18.00	IBM 3680/683/3684	4.75	RADIO SHACK DMP 2200 H.D. NYLON 15.00	15.00
COMMODORE 1525 NYLON	7.00	IBM 4201/4207/ PRO X24 H.D. NYLON ...	5.25	RADIO SHACK DWP II M/S	4.00
COMMODORE MPS 801 NYLON	6.00	IBM 4202/4208/ PRO XL24 H.D. NYLON ..	7.00	RADIO SHACK DWP II NYLON	6.00
COMMODORE MPS 802/1526 NYLON	6.75	IBM 4224 MODEL 101/102 NYLON	13.50	RADIO SHACK DWP 210 M/S	3.00
COMMODORE MPS 803 NYLON	5.50	IBM 4234 MODEL 1/2	*	RADIO SHACK DWP 220 M/S	7.50
COMMODORE MPS 1000	4.00	IBM 4234 MODEL 11/12/13	*	RADIO SHACK DWP 230 NYLON	5.50
COMMODORE MPS 1200/1250	4.00	IBM 4683/4684 PURPLE OR BLACK	3.00	RADIO SHACK LP III/V NYLON	6.00
COMMODORE MPS 1230 NYLON	8.50	IBM 5201 QUIETWRITER 7 CORR.	16.25	RADIO SHACK LP VI/VIII NYLON	3.75
COMMODORE PET SPOOL	1.75	IBM 5204 QUICKWRITER M/S	16.50	RADIO SHACK LP VII	7.00
COMREX 420	7.00	IBM 5224 BASEBALL BAT	15.50	RICOH RP22000/510/710 M/S	7.50

PRINTER RIBBONS - CONTINUED

Description	Black
RITEMAN 15 NYLON	8.75
RITEMAN C PLUS/F PLUS NYLON	5.00
RITEMAN INFO RUNNER/BLUE PLUS NYLON	8.00
SEIKOSHA MP 1300 AI/SK 3000	15.00
SEIKOSHA MP 5300 AI/SK 3005	18.50
SEIKOSHA SL 80 AI H.D. NYLON	4.50
SEIKOSHA SL 90 H.D. NYLON	6.75
SEIKOSHA SP800/1000/1600 AI	4.50
STAR MICR NB 10/24 - 10 H.D. NYLON	8.00
STAR MICR NB 15/24 - 15 H.D. NYLON	7.00
STAR MICR NL 10/NX 10 NYLON	6.00

Description	Black
STAR MICR NR 15/NX 15 NYLON	7.00
STAR MICR NX 1000 RAINBOW 4-COLOR	8.50
STAR MICR NX 1020 NYLON	6.00
STAR MICR NX 1020 4-COLOR	12.50
STAR MICR NX2400 H.D. NYLON	6.00
STAR MICR NX 2400 H.D. 4-COLOR	12.50
STAR NX 2420/2480 H.D. NYLON	5.00
STAR NX 2420/2480 H.D. 4-COLOR	12.50
STAR NX 2450 H.D. NYLON	7.00
STAR NX 2450/2460 H.D. 4-COLOR	12.50
STAR SJ 144 T.T. BLACK	39.00

Description	Black
STAR SJ 144 T.T. 3-COLOR	55.00
STAR SP300/312/BLK OR PURPLE	3.50
TALLY (MANN) SP 80 M/S	6.75
TOSHIBA P321/P351/P1350 NYLON	4.75
TOSHIBA P3515X H.D. NYLON	4.75
UNIVERSAL CALCULATOR CART.	2.00
UNIVERSAL CALCULATOR EPC SPOOL	2.00
UNIVERSAL CALC. SPOOL RED/BLACK	2.00
XEROX 6010/6015/6020/MS	9.75

LASER TONER PRODUCTS

DESCRIPTION	NEW	RECHARGES	DESCRIPTIONS	NEW	RECHARGES
APPLE LASERWRITER TONER	\$ 119.00	\$ 39.95	H.P. LASERJET 4MV, 4V	\$ 184.79	\$ 119.00
APPLE LASERWRITER II	\$ 79.95	\$ 39.95	H.P. LASERJET 5P	\$ 104.99	49.00
APPLE LASERWRITER PRO 630	\$ 133.00	\$ 79.00	H.P. LASERJET 5L	\$ 82.25	49.00
APPLE LASERWRITER 300/310	\$ 119.00		H.P. LASERJET 5SI	\$ 225.00	
APPLE LASERWRITER 360	\$ 119.00		H.P. LASERJET 5 COLOR PRINTER	CALL FOR PRICE	
APPLE LASERWRITER SC	\$ 85.00	\$ 35.00	IBM 4019 HIGH YIELD	\$ 199.00	
BROTHER HL530/641/645/655/650M/660/665	\$ 39.95		IBM 4019 HIGH YIELD PLUS	\$ 269.00	
CANON LBP - CX	\$ 119.00	\$ 45.00	OKILASER 400/800	\$ 34.85	
CANON LMP - LX	\$ 85.00	\$ 35.00	OKILASER 400E	\$ 32.00	
CANON LBP - SX	\$ 79.95	\$ 39.95	PANASONIC KXP 4410/4430	\$ 45.00	
H.P. LASERJET EP-CX	\$ 119.00	\$ 45.00	PANASONIC KXP 4420	\$ 45.00	
H.P. LASERJET II, HD, II-EPS	\$ 79.95	\$ 39.95	PANASONIC KXP 4450/4455	\$ 31.00	
H.P. LASERJET NP	\$ 85.00	\$ 35.00	QMS 860 - NEWGEN SYSTEMS TURBON PS	\$ 167.99	\$119.00
H.P. LASERJET RSI/TV SI	\$ 149.00	\$ 89.00	SHARP JX 9500	\$ 24.64	
H.P. LASERJET IV, 4 PLUS, 5 \ 5M \ 5H	\$ 129.00	\$ 79.00	TEC LE 1301	\$ 17.50	
H.P. LASERJET 4L, 4P	\$ 85.00	\$ 49.00	TEC LE 1305 (2-PACK)	\$ 36.00	

LASER SUPPLIES ALSO AVAILABLE FOR ALL MODELS LISTED BELOW: Drums, Fusers, Developer Units, etc.

Apple Burroughs Canon Delphax Epson Fujitsu Hewlett Packard IBM Konica Kyocera NEC Okilaser Packard Bell Panasonic QMS Ricoh Toshiba Unisys Xero

INK JET PRINTER SUPPLIES

Description	Black	Refill black	Refill color	Description	Black	Refill Black/Color
APPLE STYLEWRITER INK JET CARTRIDGE	29.00	15.00		STYLUS COLOR II	12.50	
CANON A - 1210	16.25			EPSON STYLUS COLOR	25.00	
CANON A - 1210 3-COLOR	22.00			EPSON STYLUS 3-COLOR	25.00	
CANON BJ 5	29.00			EPSON STYLUS 300	29.95	
CANON BJ 10E	29.00	15.00		EPSON STYLUS 800	13.95	
CANON BJ 20	29.00	15.00		H.P. DESK JET H.CAPACITY	32.00	16.5
CANON BJ 80	13.00			H.P. DESK JET 500C 3-COLOR	33.00	29.0
CANON BJ 130	18.00	19.95		H.P. DESK JET 1200C	32.95	
CANON BJ 200	29.00	15.00	23.95	H.P. PAINT JET	34.95	
CANON BJ 220		19.95		H.P. 850/855C	32.00	25.0
CANON BJ 300/330		15.00		H.P. 860C/600	32.95	16.5
CANON BJ 600				H.P. 860C 3-COLOR	34.95	16.5

CALL FOR PRICE & AVAILABILITY

EFFECTIVE MARCH 1996

INFORMATION

The staff here at CPU wishes to express our apologies for the print quality of this issue. It was done completely on a Commodore 128 system using Perfect Print for GEOS, available from Creative Micro Designs and a nine (9) pin dot matrix printer. A Commodore MPS 1250 to be exact. You will notice that some of the fonts used are what we term " dirty ". It is best to avoid these fonts when possible. This problem may or may not show up on other printers. The best thing to do is print out a test sheet of all of your LQ fonts. There are three (3) Perfect Print fonts used in this issue that are " dirty "; Galadriel LQ, Bodoni LQ and Tower LQ.

ISSUE NO. 5 HIGHLIGHTS

Next issue will be our first time ever all GEOS issue! Every article and feature will be GEOS related except of course the Story Time feature. Some of the highlights issue no. 5 will be: An interview with GEOS programmer extraordanaire Maurice Randall, reviews of geoFAX 2.1, and the new Wheels upgrade!, geoMorph, geoShell, and articles on the Wave, Big Stamp, DweeziLabel and a multitude of other GEOS related software, files and hardware enhancements. If you are into GEOS this is a not to be missed issue. And if you're not into GEOS this issue will show you what your missing!

COMMENTS?

And lastly, please let us know if you like this full format issue of CPU or if you prefer the 75% format size. Please send all comments and suggestions to: CPU Editor, P.O. Box 1817, Shelton, WA. 98584.