A.C.E.S.

Bi-monthly Newsletter of the Active Commodore Enthusiast Society

January Meeting;   by Don Gilstrap

Tom Hollinger, SID music editor and composer, started off the meeting playing music on his SX-64 with a SID cartridge installed and connect to dual amplified speakers. On the 5 inch screen is a picture of two piano keyboards,top and bottom. While the music is playing,the notes are printed on the right side of the screen,B#,C,A etc.,with the matching keys highlighted one at a time. It was a very impressive display of melody ranking high in quality in the computer music reproduction world.

The subject of RAM Expansion Units or REUs came up because some programs takes full advantage of the extra RAM. One such program is Novaterm 9.6. Using the REU as a download buffer saves time on the telephone line. I loaded the Novaterm's TEXT EDITOR program explaining the difficulty of editing large text files. Loading the REU with a 534 block text file did help me, if all I want to do is read the text, but when it came to editing it, only the computer memory was used. In some Newsletters they mention using 'THE WRITE STUFF'. It was suggested by John Misiaszek to divide the files into 100 block segments by using a program called'File Spliter',but with me having a C-128, I could use 'ZED-128' a PD text editor writtern by Craig Bruce. ZED-128 version 0.77 works with big text files and used with a 512K RAM expander, a user can edit files up to 630K and it's fast using the Burst commands in the 1571 and 1581DD.

February Meeting;   by Don Gilstrap

Again,Tom Hollinger amused us with his MIDI-SID music, but this time he was using the brown box model,C64. The reason being, the C64 allow him room to add a extra SID chip, expanding it from playing (3) voices ,like a regular stock C64,to a C64 playing (6) voices in stereo, the same as having a SID Symphony Stereo Cartridge from CMD installed. But there was one problem,Tom wasn't getting stereo,he was getting mono. Had he done something wrong? John M said, lets look at the program. The program is wrote to play 6 voices in stereo,but John notices the programs address is $D0FF and changes it to $D0EE , how we have stereo coming from the one speaker in the 1702. I'm hoping to have more details on how this was done in the next Newsletter.

A.C.E.S. member Jeff Dayton, is leaving us for about three years. He has signed a contact with Uncle Sam for a career in the military. E-mail and Home addresses were given to Jeff. The possibly of a Library nearby with Internet access was just one good idea on how to keep in touch with us. I can say that I,just like the rest of the members have enjoyed talking to Jeff in the past about various topics as local politics and the history of trains ,one of Jeff's other hobbies. Next month, How do convert Loadstar's THE COMPLEAT PS COLLECTION over to PrintMaster + .

1541 SPEEDUP

The 1541 actually has two different speeds, one for the 64 and one for the old VIC-20. It works faster in the VIC-20 mode. This short routine blacks the screen and puts the drive in VIC-20 mode to speed up drive input/output, then resets the drive to 64 mode and turns on the screen.

```
10 POKE 53265,PEEK(53265)and 239
20 OPEN 15,8,25,"UI-":CLOSE15
30 LOAD"programname",8
100 POKE 53265,PEEK(53265)OR 16
110 OPEN 15,8,15,"UI+":CLOSE15
```

From LCCUG Feb. 97

PRETZEL DEMO. 128-40 COLUMN
by William D. Wolfe,Pittsburg,PA.

This one liner program takes the 128 graphics to its limits using basic trigonometry. Try changing COLOR2 and COLOR3, increments of "P". Or "stack" drawings by changing "GRAPHIC3,1 to GRAPHIC3,0" and other aspects after your first run. The possibilities are truly endless.

```
10 WIDTH2:COLOR0,1:COLOR4,1:GRAPHIC3,1:DO:
   P=P+.01:X=60*COS(P*3)+68:Y=60*COS(P4+105:
   DRAW3,X+22,YTOX,Y-9:DRAW2TOX,Y-9:DRAW2TO
   X,Y:LOOP
```

LISTING A PROGRAM?

If you ever try to list a program and the listing terminates suddenly with an empty REM statement followed by a syntax error, the cause is a shifted L followed by the REM. You can clear up the list disablement by moving the cursor to the colon, then using the space bar to delete the colon and the REM.
Your program should then list perfectly, unless the program protection was especially sneaky, it should run perfectly, as well.
by Larry J. Bailey of Lucky C.C.,Louisville,KY.

MONITOR NOISE

If at power-up or after pressing the restore key or reset button you get a background hum from the monitor speaker,try typing CHR$(7), or press CTRL-G. A short tone sounds,followed by silence. No more humming!

LOADSTAR 128 Quarterly ISSUEs

LOADSTAR announces that issue #40 will be it for the LS 128 issues due to low subscriptions. The most often comment was, Why was the disk in 1541 format why not 1571 format? Good question,ha. My self,a disk every month would have been nice. I guess we should be thankful. LOADSTAR 128 R.I.P.

6/7/97 - NOVATERM 9.6 PATCH "C"

Patch C fixes some problems, including:
*The modem initialization string no longer outputs too fast when using the SuperCPU.
*Honestly, I can't remember what else I did! I waited too long to update this page and now I've forgotten. Let's just say that if you have patch A or B, it's a good idea to upgrade to patch C. To obtain a patch of Novaterm 9.6: Patches to Novaterm become available from time to time to fix problems that arise. To get the latest patch,send your original disk,along with a self-addressed stamped disk mailer, to the author's address below. Be sure to make a copy of your original for personal use, and remove any personal files from the original disk - it will be re-formatted!

NICK ROSSI
10002 AURORA AVE N #3353
SEATTLE, WA. 98133

MAKING DIRECTORY PRINTOUTS

To print a directory put the desired disk in drive 8 then enter these lines:
```
LOAD"$",8
OPEN 4,4:CMD4:LIST
```
Wait for the printer to finish, then:
```
PRINT#4: CLOSE4
```
Remember,the only legal abbreviation for PRINT# is P Shift-R.

DOUBLE-SPACE DIRECTORY PRINTOUTS

By using a file number greater then 127, you can make your printer put a blank line between each item in the directory. The syntex is:
```
LOAD"$",8
OPEN 128,4:CMD 128:LIST
```
When the printer has stopped, execute:
```
PRINT#128: CLOSE 128
```

by Lucy S. Terrier, Alton, Illinois

C-128 FUNCTION KEY DEFINITIONS

So you miss placed the 128 manual or it's out of arms reach and you want to know which F-key does what. Well,here's a easy way to find out. Just type in the command: KEY on start up, 128-40 or 80, JiffyDos or Stock it doesn't matter.


SQUARE ROOT OF 64

SQR stands for square root in a program,without this command the programmer would need to use a series of division,multiplication, subtraction, addition and integer funtions. example:

```
10 INPUT "ENTER A NUMBER ";A
20 S = SQR(A)
30 PRINT S
```

CD-ROM On a Commodore?

Imagine playing an adventure game on your Commodore in IFLI with digital sound. Currently possible, yes, but the storage requirements are so large for IFLI pictures and good quality digital sound and music that you'd need upwards of 10 floppies for a game of even moderate length. Now imagine being able to get such a game on a CD specially made for your Commodore. This media now makes available virtually unlimited storage capacity to the Commodore programmer so that he/she can use the highest end graphic and sound formats and not worry about having to fit it all on a reasonable amount of disks. (A standard CD holds 650 MegaBytes of data, the equivalent of 74 minutes of CD-quality music, or a whopping 1,927 double-sided 1541 disks!) Imagine what demos could do! Programs could even make use of audio tracks on the CD for full CD-quality sound and music!
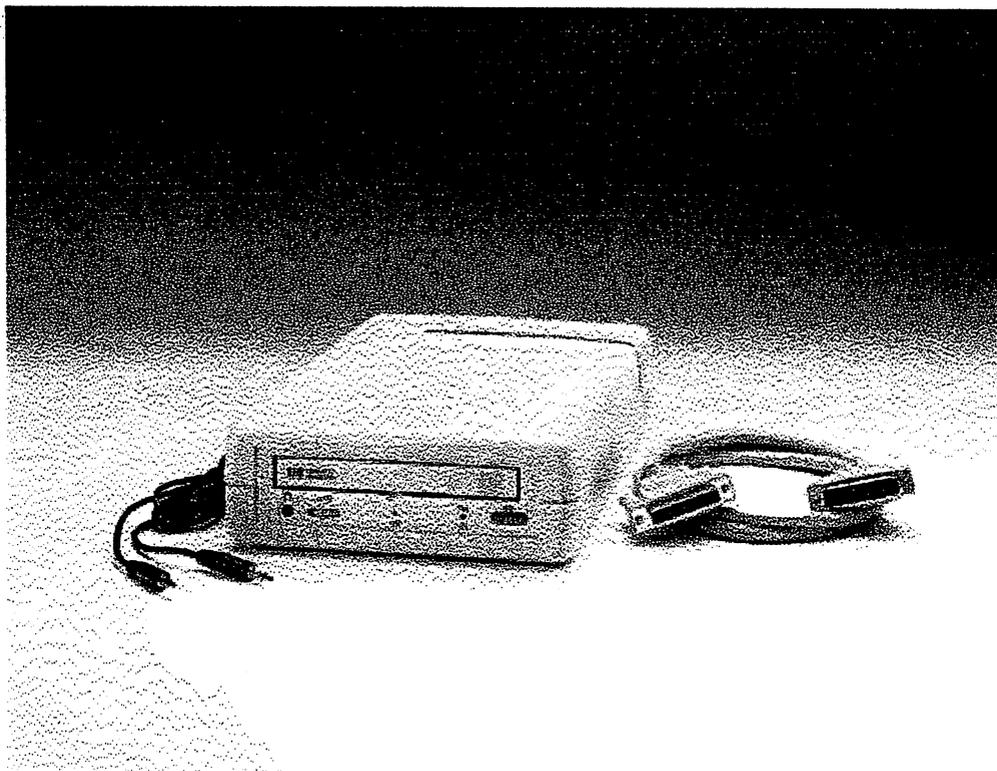
The HP SureStore 7110e. This one happens to be a CD-RW unit, but I'll be concentrating on CD-R.

With the help of the Hewlett Packard Company and Creative Micro Designs, Inc. I will be programming software that allows those with HP's SureStore Series of drives (and anything compatible) to write their own CDs. When DVD-R is finalized and released, I will update the software to support HP's line of DVD-R drives (if they wish to continue to work with me.) I will of course write software compatible with most if not all SCSI CD-ROM (and DVD-ROM) drives to run the program(s) on the written discs so that all that a user has to do is insert the CD, then LOAD and RUN the program which will transfer control to the boot program on the CD. (An audio disc player feature will also be implemented.)

I may also look into a custom IDE interface for the Commodore to do this with, as HPs newer drives (like the one pictured above) are IDE. (Plus it wouldn't involve purchasing a CMD controller.)

ADDING A RESET SWITCH TO A 1541 / 1571 / 1581·

There is a -drive- reset switch in the SX-64 and one in the C128D. It is sometimes advantageous to be able to reset the drive alone, and not the rest of the system. This article explains how to add a switch to your disk drive so that you can do a drive reset without turning off the computer or drive. When a 1541 is first turned on (with or without the computer connected), an internal circuit called a "one-shot" holds the reset line low for a half second until all voltages stabilize. The drive then goes through an internal start-up sequence. That's what's happening when the red LED comes on and goes out as the drive is powered up. The best way to add a reset switch to a stock disk drive is to use that one-shot as the trigger. Implimenting it is a little tricky because there are so many different models of 1541. I've done a bit of "homework" to make it easier. The most common 1541 type, which is to say the most plentiful, uses the PCB #251830 (number stamped on the PC board). It is a medium sized board, housed in the standard brown case, and usually has the Newtronics drive. Fortunately, the older drive with the ALPS mechanism is similar. It uses a different PCB (#1540050), but the parts layout is about the same, at least as far as this modification is concerned. The mod involves wiring in a push-button switch and mounting it somewhere on the drive. The added wires can be soldered to the bottom of the PC board (requiring removal of the board), or to the top by soldering to component wires. Locate capacitor C46. It is a 100uF 16 volt electrolytic mounted near the front of the board, about in the middle. It is near IC UD3 and diode CR7. The added drive reset switch will be wired across the capacitor C46. That cap is usually mounted with enough of it's leads sticking up that you can solder your two wires underneith it. If you can't get to those solder connections, as an alternative you can use the anode of CR7 as one lead of your switch, and the negative end (which is grounded) of the very large filter capacitor C17 (left rear of PC board) as the negative end. By the way, don't use the metal chassis as a ground... it's isolated and will not work. To identify the anode of CR7, examine the diode. Notice a small black band at one end... that is the -cathode- lead. The anode is the other end... it's closer to the front of the drive. When you wire in the momentary-contact pushbutton switch, add a 100 ohm 1/4 or 1/2 watt resistor in series (not across, but in-line with one leg). This is to prevent the discharging of the

capacitor into your switch, which may eventually damage the contacts. It also serves to protect the drive electronics in case you connect the switch to the wrong place... it will not work, but it should do no harm. If you have the very old type of 1541 (white case, long board), the capacitor will be C56, and the diode C17. They are located near the front left side of the PCB. I don't have a layout for the newest type of drive, the 1541C, so I can't advise you how to connect the switch. They may use different part ID numbers since the board is completely different (short board) from earlier drives. In the 1541-II, the capacitor is C3. It is mounted so close to the board, you may not be able to solder to it. Instead, wire one lead of the added switch to the end of resistor R2 nearest capacitor C3. The other switch wire goes to ground, which is the large copper trace at the edge of the PC board. Obviously, you must remove the drive from the chassis to get to the PC board. It is held down with four screws. Mark the plugs in some manner to make sure you put them back correctly.... don't get them backwards! When you reassemble the drive, make sure the added switch wires do not interfere with the spindle flywheel, and are not pinched when you re-install the drive. Mount the push-button in the upper left corner of the drive face. The capacitor in the 1571 drive is C28, a 47uF 16V electrolytic. It is located at the rear of the drive PC board near the serial ports. To get to the board, you must remove the power supply cage... four screws. Lift the cage up and over... and set it on top of the drive assy. The wires are long enough that you will not need to remove any plugs. Mark them if you do remove them to make sure they go back on the same way. Mount the push-button under the power or drive LED on the front panel. The capacitor in the 1581 drive is C20, a 47uF 10 volt. It is located about 2" from the serial ports. You must remove the drive (four screws) to get to the PC board. Install the push-button switch on the front panel, just to the right of the C= logo. Use a sub-miniature type... the spacing is very tight inside that case. Make sure the wires don't short to any metal part of the drive, and make sure no wires are pinched when you re-install the drive in the case.
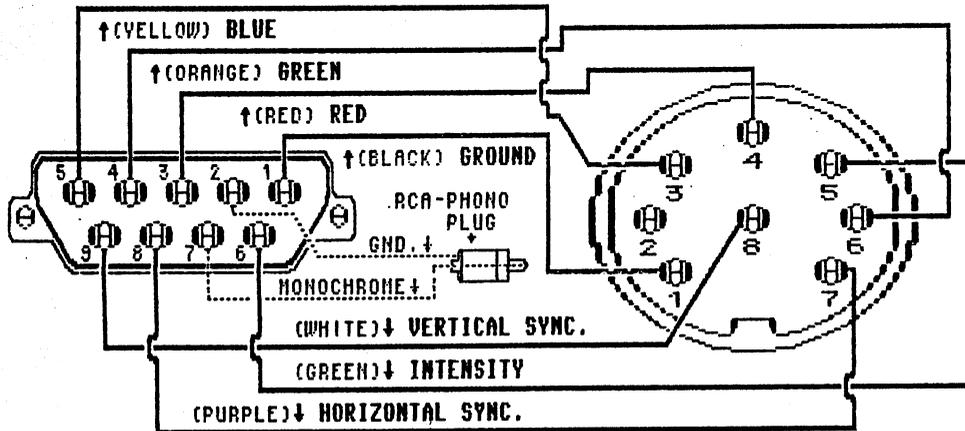
Ray Carlsen CARLSEN ELECTRONICS... A leader in trailing-edge technology.
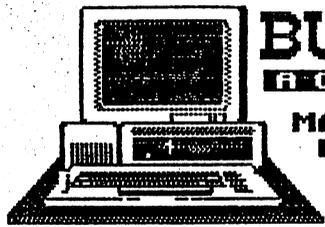
BUILD YOUR OWN MONITOR CABLES
## A CUPID ELECTRONIC PROJECT by J.BLEWITT REL #8611

MANY MONITORS CAN BE FOUND IN GARAGE SALES. MOST DO NOT COME WITH CABLES! WHY NOT MAKE YOUR OWN CABLE?

PURCHASE A PRE-MOLDED 6 OR 8 FOOT, MALE TO MALE 9-PIN "D" CABLE AND CUT THE CORD IN HALF. SOLDER AN 8-PIN "DIN" SOCKET TO EACH HALF AND YOU HAVE AN 80-COLUMN CABLE, AND A SPARE!

↑(YELLOW) BLUE
↑(ORANGE) GREEN
↑(RED) RED
↑(BLACK) GROUND
.RCA-PHONO PLUG
GND.↓
MONOCHROME↓
(WHITE)↓ VERTICAL SYNC.
(GREEN)↓ INTENSITY
(PURPLE)↓ HORIZONTAL SYNC.

9-PIN "D" SOCKET TO 8-PIN DIN SOCKET
(80-COLUMN CORD FROM BACK OF C-128 TO THE MONITOR'S DIGITAL RGBI INPUT)

THIS CORD IS MANDATORY FOR 80-COLUMN OPERATION OF YOUR MONITOR. THE "CVBS /RGBI" SWITCH ON THE FRONT OF YOUR MONITOR MUST ALSO BE IN THE "RGBI" POSITION IN ORDER TO RECEIVE 80-COL. OUTPUT. FOR THOSE WITH MONOCHROME ONLY MONITORS, TWO WIRES FROM THE 128'S "D" PLUG IS ALL THAT IS REQ'D. THE (BROWN) WIRE FROM PIN #2 TO THE GROUND OF THE RCA PLUG, & THE (BLUE) WIRE FROM PIN #7 TO THE CENTER POST OF THE RCA JACK. ALL WIRE (COLORS) SHOWN IN THIS SKETCH DEPICT THE STD. COLOR CODES FOUND IN THE MOLDED WIRE HARNESS FOR PREPARED CABLES. ALL PIN NUMBERS ARE FOR "SOCKETS" AND/OR THE SOLDER PINS OF THE ASSOCIATED PLUGS. PLUGS VIEWED FROM THE PIN END WILL HAVE THE NUMBERS REVERSED!

USE THIS CABLE FOR A SUPERIOR 40-COL. PRESENTATIONS ON SOME MONITORS. THIS 6-PIN DIN SOCKETS CAN BE FOUND ON MANY COMMODORE MONITORS SUPPORTING 40-COL. OPERATIONS, BUT IS NOT AVAILABLE ON SOME MAGNAVOX MONITORS. IN THIS CASE, THE OPENING IS NOT PUNCHED OUT AND YOU MUST USE THE (CVBS) COMPOSIT VIDEO AND AUDIO RCA JACKS FOR 40-COL. OPERATION. YOU MUST ALSO USE THE COMPOSIT VIDEO JACKS IF YOUR C-64 COMPUTER HAS ONLY A 5-PIN SOCKET INSTEAD OF THE STANDARD 8-PIN SOCKET. NOTE THAT WHEN USING THE 6-PIN (LCA) SOCKET, THE COMB FILTER DEFEAT SWITCH SHOULD BE "IN", AND "OUT" WHEN USING COMPOSIT VIDEO PLUGS. THE TWO CAN NOT BE USED SIMULTANEOUSLY.

↑ GROUND
↓ AUDIO
↓ LUMA/SYNC.
↓ CHROMA
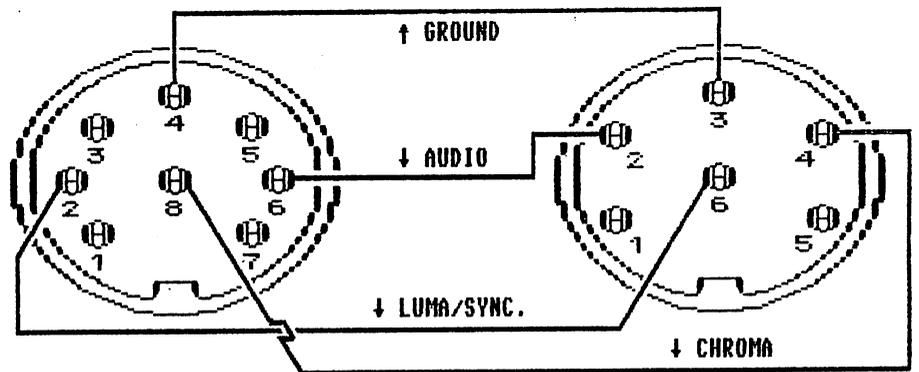
8-PIN DIN SCOCKET TO 6-PIN DIN SOCKET
(SEPARATED CABLE FROM C-64/C-128 TO THE (LCA) PLUG OF SOME MONITORS)

↑VIDEO
↑GROUND
(YEL) VIDEO
AUDIO↓
(RED) AUDIO
(WHT) (N/A)
(AUD/IN)↑
(BLK) (N/A)
(LUMA/SYNC. NOT USED)
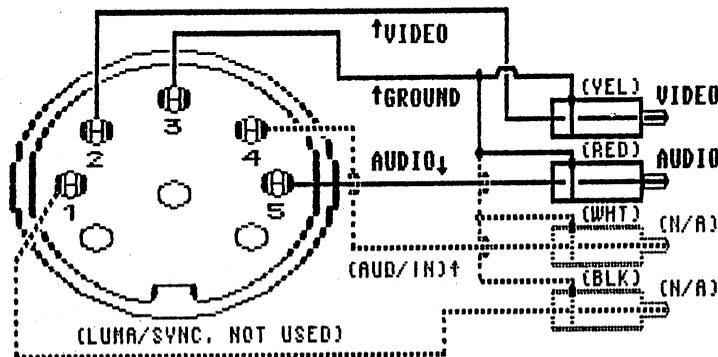
5-PIN DIN PLUG TO PHONO PLUGS
(40-COLUMN COMPOSIT VIDEO AND AUDIO INPUTS)

THIS IS THE MOST COMMON TYPE OF CONNECTOR TO THE 40-COLUMN MONITORS AND TO THE AUDIO/VIDEO CONNECTIONS OF YOUR VIDEO RECORDER. YOU MAY NOTE THAT THE 5-PIN DIN CONNECTOR WILL FIT IN BOTH THE 5-PIN DIN SOCKET & INTO THE 8-PIN DIN SOCKET OF THE C-128 AND SOME OF THE OLDER C-64 MACHINES. THE KEY POSITION OF THE PLUG WILL KEEP THE PINS IN THE PROPER SLOTS. ONLY THREE OF THE PINS ARE ACTIVATED AS THE GROUND WIRE IS COMMON TO BOTH THE AUDIO AND VIDEO RCA PHONE PLUGS. CHROMA & LUMA/SYNC. CONNECTIONS ARE NOT USED. IF RF FREQUENCY INTERFERENCE IS NOT A PROBLEM IN YOUR AREA, YOU CAN USE AN OLD DIN AUDIO PATCH CORD FOR EMERGENCIES. THEY WILL HAVE FOUR COLOR CODED RCA PLUGS. NORMALLY, THE (YELLOW) PLUG WILL CARRY THE VIDEO INFORMATION AND THE (RED) PLUG THE AUDIO INFORMATION. TAPE THE OTHER OTHER TWO (SHADOWED) PLUGS AS THEY ARE NOT USED.

```
***********************************************
*
*              DID  YOU  KNOW  ?
*
***********************************************
```

STOLEN STUFF

The 1571 disk drive is a double-sided drive, and is capable of formatting disks with 1328 blocks free. This compares favorably with the 1541 drive, of course, which can put only 664 blocks on one side of the disk.

The 1571 often defaults to a single-sided mode, giving only 664 blocks on a newly formatted disk. Worse yet, this mode only recognizes 664 blocks, even if the disk has been formatted with 1328 blocks.

Here's the story on controlling the single or double sided mode of your 1571.
If you use 128 mode to format a disk, it will be formatted on both sides, with 1328 blocks free.

Also, 128 mode will read any 1541/1571 disk, regardless of how it is formatted. If you use a 128 in 64 mode, the 1571's status depends on how you entered 64 mode.

If you entered it with GO64, the 1571 will behave exactly as it does in 128 mode - it will treat the disk as double-sided, and will also read single-sided disks.

But if you entered 64 mode by holding down the Commodore key as you power up or reset, the 1571 will behave as though it were a single-sided drive like the 1541.

Disks will be formatted with 664 blocks free, and the drive will recognize only the first 664 blocks on any 1328 block disk you may use in it.

The same 664 block limitation exists if you use the 1571 with a 64 or other serial-bus-compatible computer such as Vic or Plus/4. But take heart! One simple command will put your 1571 into double-sided mode.

When you power up in anything other than 128 mode, just execute the following line:
    OPEN 15,8,15"UOM1":CLOSE 15
Your disk drive will now behave in all respects as a double-sided drive.

To ensure that this will always be the case with your 128, turn the command into an autobooting program and put it on all your disks. You would accomplish this, of course, by using the 'Autoboot Maker' program on the 1571 test disk.

Now if you reset the computer in 64 mode, the 1571 disk drive automatically sets itself to single-sided mode. If you want to work in 64 mode and retain the double-sided capacity of the 1571, you can do this.

T-SHIRT SLOGANS

1. Cannot find REALITY.SYS. Universe halted.
2. COFFEE.EXE Missing - Insert Cup and Press Any Key
3. Buy a Pentium 586/90 so you can reboot faster.
4. 2 + 2 = 5 for extremely large values of 2.
5. Computers make very fast, very accurate mistakes.
6. Computers are not intelligent. They only think they are.
7. My software never has bugs. It just develops random features.
8. C:\WINDOWS C:\WINDOWS\GO C:\PC\CRAWL
9. C:\DOS C:\DOS\RUN RUN\DOS\RUN
10. <-------- The information went data way--------
11. Best file compression around: "DEL ." =100% compression
12. The Definition of an Upgrade: Take old bugs out, put new ones in.
13. BREAKFAST.COM Halted...Cereal Port Not Responding
14. The name is Baud......, James Baud.
15. BUFFERS=20 FILES=15 2nd down, 4th quarter,5 yards to go!
16. Access denied--nah nah na nah nah!
17. C:\> Bad command or file name! Go stand in the corner.
18. Bad command. Bad, bad command! Sit! Stay! Staaay..
19. Why doesn't DOS ever say "EXCELLENT command or filename!"
20. As a computer, I find your faith in technology amusing.
21. Southern DOS: Y'all reckon? (Yep/Nope)
22. Backups? We don' NEED no steenking backups.
23. E Pluribus Modem
24. ... File not found. Should I fake it? (Y/N)
25. Ethernet (n): something used to catch the etherbunny
26. A mainframe: The biggest PC peripheral available.
27. An error? Impossible! My modem is error correcting.
28. CONGRESS.SYS Corrupted: Re-boot Washington D.C (Y/n)?
29. Does fuzzy logic tickle?
30. A computer's attention span is as long as it's power cord.
31. 11th commandment - Covet not thy neighbor's Pentium.
32. Go ahead, make my data!
33. Disinformation is not as good as datinformation.
34. Windows: Just another pane in the glass.
35. SENILE.COM found ... Out Of Memory ...
36. Who's General Failure & why's he reading my disk?
37. Ultimate office automation: networked coffee.
38. RAM disk is not an installation procedure.
39. Shell to DOS...Come in DOS, do you copy? Shell to DOS...
40. All computers wait at the same speed.
41. DEFINITION: Computer - A device designed to speed and automate errors.
42. Press <CTRL>-<ALT>-<DEL> to continue ...
43. Smash forehead on keyboard to continue...
44. Enter any 11-digit prime number to continue...
45. ASCII stupid question, get a stupid ANSI!
46. E-mail returned to sender -- insufficient voltage.
47. Help! I'm modeming... and I can't hang up!!!
48. All wiyht. Rho sritched mg kegtops awound?
49. Error: Keyboard not attached. Press F1 to continue.
50. "640K ought to be enough for anybody." -Bill Gates,1981
51. DOS Tip #17: Add DEVICE=FNGRCROS.SYS to CONFIG.SYS
52. Hidden DOS secret: add BUGS=OFF to your CONFIG.SYS
53. Press any key... no, no, no, NOT THAT ONE!
54. Press any key to continue or any other key to quit...

K-12 RESOURCES

WORLD WIDE WEB

American Memory
http://lcweb2.loc.gov/

Armadillo's K-12 WWW Resources
http://chico.rice.edu/armadillo/Rice/
K12resources.html

B.E.S.T. - Best Education Sites Today
http://eyecatchers.com/eyecat/BEST/

Children's Literature Web Guide
http://www.ucalgary.ca/~dkbrown/

CurriculumWeb
http://www.curriculumweb.com/
curriculumweb/

CyberSchool Magazine
http://www.infoshare.ca/csm/

Education (K-12) Resources
http://www.cs.fsu.edu/~durga/
resources.html

Family Education Network
http://www.families.com

The GLOBE program
http://www.globe.gov

HotList of K-12 Internet School Sites - USA
http://www.sendit.nodak.edu/k12/

Janice's K-12 Outpost
http://k12.cnidr.org/janice_k12/
k12menu.html

K-12 History on the Internet Resource Guide
http://www.xs4all.nl/~swanson/
history/

K-12+ Servers
http://www.tenet.edu/education/
main.html

K-12 Subject Guides
http://www.reedbooks.com.au/
heinemann/subject/

Maggie's Guide to the Internet for the K-12 Community
http://www.mindspring.com/
~mconti/maggie.html

MEGA Mathematics
http://www.c3.lanl.gov/mega-math/

MicroWorlds
http://www.lbl.gov/MicroWorlds/
MicroWorlds.html

North Dakota ICICLE Project
http://calvin.cc.ndsu.nodak.edu/
wayne/icicle.html

Quest
http://quest.arc.nasa.gov

Sites for Parents and Educators
http://www.vividus.com/ucis.
html#Parents

Schoolhouse
http://www.nwrel.org/school_house/

Kathy Schrock's Guide for Educators
http://www.capecod.net/Wixon/
wixon.htm

TEAMS Distance Learning
http://teams.lacoe.edu

Web Resources . . . Helpful to Middle School Teachers
http://www.westnet.com/~rickd/
Teachers.html

The Teacher Resource Page
http://grove.ufl.edu/~klesyk/

The Virtual Tourist
http://www.vtourist.com/vt1/

**The Why Files**
http://whyfiles.news.wisc.edu

BOOKS

The Student's Guide to Doing Research on the Internet
by Dave and Mary Campbell
Addison-Wesley Publishing Co.
(800) 822-6339 or (617) 944-3700
$14.95, 1995

VIDEO

How to Use the Internet in the Classroom
Educational Activities
(800) 645-3739 or (516) 223-4666
30-minutes video tape, VHS-75 $79
Viewers meet Joan Berger, a fifth grade teacher in Roslyn, N.Y., who uses Internet tools such as FTP, Keypals (e-mail), and other resources to bring the Internet into her classroom on a daily basis.

WWW.HEAVEN.COM
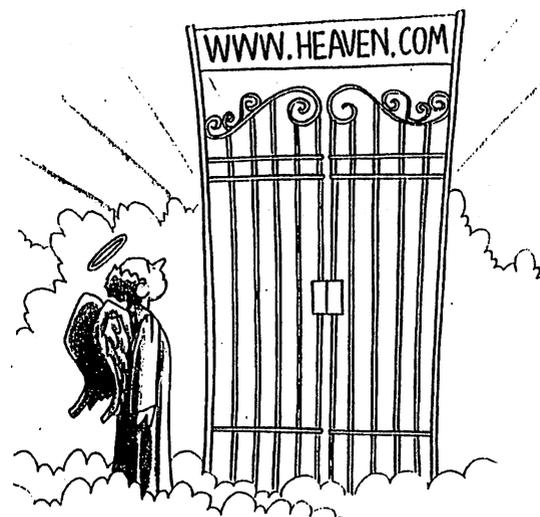
Announcing...

The all-new operating system upgrade for GEOS

Known as "Project G" during the last several months of its development, the new *Wheels* graphical operating system has evolved from the highly popular GEOS operating system that has been available for the Commodore 64 for quite some time.

Here's just a sampling of the new features:

Dashboard 64 - This is the all-new desktop designed to get you in and around your system with ease. You'll have more flexible control over your system in this multi-window environment.

Toolbox 64 - Remember the old Configure and how many different versions there were? Those days are over as everything you need to configure your system is contained in this one powerful application. All the popular disk drives are supported as well as the various types of ram expansion devices.

MakeSysDisk - Once you've installed your new system you can use this new utility to create your own custom boot disks or boot partitions.

The heart of *Wheels* is made up of a completely redesigned operating system kernal along with many new functions and routines added to assist programmers in developing new and more powerful applications for future use. The new system is filled with power for new applications, yet still retains compatibility for your old GEOS 2.0 applications.

Native mode CMD partitions are fully supported not only by the new applications, but by the operating system itself. You can freely switch between 1581 and native partitions with ease. Copying files between the different partitions and subdirectories has never been easier. Even old applications can make better use of partitions and subdirectories with some innovative routines built into the new system.

LOOK

Wheels has a few simple requirements:

- *64 or 128 (in 64 mode)*
- *1541/1571 drive for initial installation*
- *GEOS 64 V2.0 system boot disk for initial installation*

Once installed, the Wheels system requires ram exansion. Any of the following may be used:

- *1700, 1764, or 1750*
- *CMD 1750XL or any 1750 compatible*
- *Expanded 17xx series*
- *geoRAM*
- *BBGRam of any size*
- *RamLink/RamDrive DACC partition*
- *SuperCPU w/SuperRAM of any size*


NOW ACCEPTING ORDERS
(shipping sometime in February)

only $36 plus shipping*

* add $4 for North American addresses or $6 International

Wheels 64 includes a system disk and a nicely bound owner's manual. To get your own set of Wheels, send a check or money order for $40 ($42 for overseas addresses) in US funds to:

Maurice Randall
%Click Here Software Co.
P.O. Box 606
Charlotte MI 48813

PH: (517) 543-5202 for more info
(128 version available soon)
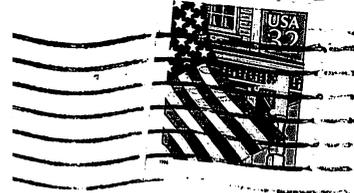
A.C.E.S.
P.O. BOX 165
Albany, IN. 47320-0165