

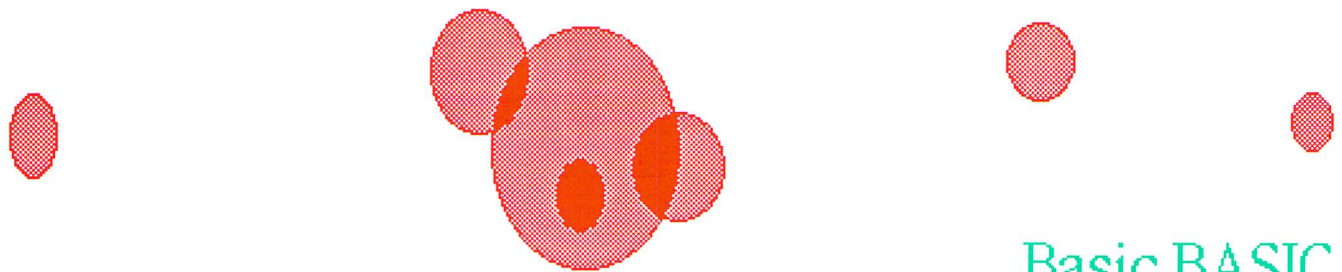
May 1993
Vol. 2 No. 5 Issue 10

U.S.A. \$1.75
Canada \$3.00

dieHard

the Flyer for commodore 8biters

The Adventures of Laser Mag!



Basic BASIC

PRG

Get More From Your 64!

DOS and Don'ts

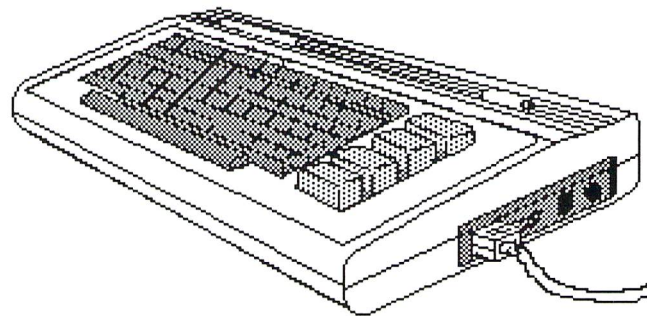
Tips

Reviews

geoTips

Archaic Computer

and more!



© Copyright 1993

LynnCarthy
Industries Inc.

All rights reserved.

Programmers! Writers!

dieHard is constantly looking for programs, articles, and art work. If you have an idea for a column and think that you might just be the person to write it, write us! We are at the beginning of a new frontier, one we think will only grow. Send us your original programs, articles, stories and art work. Get your foot in the door now, and you just may find yourself on the staff of **dieHard the Flyer for commodore \$bitters!!**

dieHard, ATTN submissions, P.O. Box 392, Boise, ID, 83701.

Remember,
it PAY\$ to be published!



Enclosed is \$ ____ (Idaho residents add 5% sales tax) for:

The Flyer \$15.00 one year ten issue subscription (\$25 Canada)
 Single issue price \$1.75 (\$3.00 Canada)

The Spinner \$45.00 one year ten issue subscription (\$65 Canada)
 Single issue price \$5.00 (\$8.00 Canada)

BACK ISSUES!

	U.S.A.	Canada
<input type="checkbox"/> Issue # 1 <u>HardCore</u> May 1992	\$3.50	\$5.00
<input type="checkbox"/> Issue # 2 <u>WPC</u> June 1992	\$3.50	\$5.00
<input type="checkbox"/> Issue # 3 <u>Qoes!</u> July 1992.....	\$4.50	\$6.00
<input type="checkbox"/> Issue # 4 <u>Pumekin</u> October 1992.....	\$3.50	\$5.00
<input type="checkbox"/> Issue # 5 <u>qeoIssue!</u> November/December 1992..	\$3.50	\$5.00
<input type="checkbox"/> Issue # 6 <u>History In 3001</u> January 1993.....	\$2.75	\$4.25
<input type="checkbox"/> Issue # 7 <u>Computer Cipher</u> February 1993.....	\$2.75	\$4.25
<input type="checkbox"/> Issue # 8 <u>Script</u> March 1993.....	\$2.75	\$4.25
<input type="checkbox"/> Issue # 9 <u>The Last Flyer</u> April 1993.....	\$2.75	\$4.25

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Mail to: **dieHard**, P O Box 392, Boise, Idaho, 83701.
 Check or money order only please. Idaho residents please add 5% sales tax.

Within...

View From The Underground.....	1
Incessant Ramblings of a Programmer Gone Mad	
Input:.....	2
We hear from our readers!	
geoTips.....	3
Taking your 64/128 beyond the 90s	
REVIEW!.....	4
We take a jaunt to jolly old England	
Basic BASIC.....	5
Getting Started	
PAPSAW.....	7
Color Circle Exposed!	
Archaic Computer.....	9
The Computer Store of the Past.	
Q & A.....	10
Tip of the Month.....	11
Trader's Corner.....	11
Rarities.....	11
More Support and Supporters	
DOS and Don'ts.....	12
The Wedge	
PRG.....	15
Listings.....	16

Our first bound issue. We really are a magazine -- with a hacker's edge. We want to know what you think!

Long live the lower-case "c" machines!!!!

Just starting? Start with us. For the Basics check out Basic BASIC. Our new, ongoing tutorial to help you get MORE from your COMMODORE!

See page 5...

Need MORE fonts for GEOS?

Of course you do!

See page 11!

dieHard is copyright 1993 by LynnCarthy Ind. Inc. All rights reserved. LynnCarthy Ind. Inc. assumes no responsibility for errors and/or omissions, loss of data or any other form of liability as a result of either direct or indirect use of any information, program or anything in the **Flyer** or the **Spinner** known as **dieHard**. **dieHard** is published 10 times a year by LynnCarthy Ind. Inc.. Single issue price is \$1.75 (USA), \$3.00 (Canada). Subscriptions are \$15 (USA), \$25.00 (Canada) per year. The **Spinner** is published 10 times a year. Single issues are \$5 (USA), \$8.00 (Canada). Subscriptions \$45 (USA), \$65.00 (Canada) per year. LynnCarthy Ind. Inc., P.O. Box 392, Boise, ID, 83701. C=, commodore 64, 16, +4, VIC20, PET & CBM are trademarks of Commodore Business Machines. LynnCarthy Ind. Inc. is in no way affiliated with Commodore Business Machines.

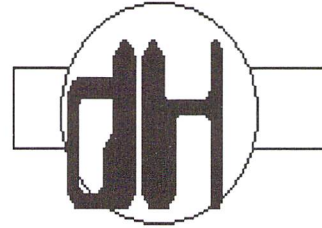
geoTips on page 3

file	Drive A	Drive B
	No Drive <input type="checkbox"/>	1541 <input checked="" type="checkbox"/>
	RAM 1571 <input checked="" type="checkbox"/>	1571 <input type="checkbox"/>
		1581 <input type="checkbox"/>
	Drive C	RAM expansion: 512K
	No Drive <input type="checkbox"/>	RAM Reboot <input checked="" type="checkbox"/>
	1581 <input checked="" type="checkbox"/>	DMA for "MoveData" <input checked="" type="checkbox"/>

View From The Underground

by

Brian L Crosthwaite



Welcome to **dieHard** the **Flyer for commodore 8biters.**

This is our first issue as a magazine. In the past we have been a Flyer, granted, a Flyer with magazine content. We will keep the same name with the word Flyer, since many refer to us as The Flyer.

The format has changed only in the printing and binding. With this new way of printing comes more pages and thus, more room!

If you've just joined us, I'd like to welcome you to the underground. This is the place where you look for what's where and where's what. If you have programs or articles you feel are worth sharing with the rest of commodoredom, send them on in, we pay and that's why we are here.

About the name **dieHard**... Some of our readers have wondered why we have to DIE at all. According to **The American Heritage Dictionary**, a diehard is "One who stubbornly resists change." In **Webster's** it simply says, "stubborn." I kind of like the second one. To elaborate: stubborn, will not move, an anchor, if you will. To parallel **Ahoy!**'s analogy of the Commodore being the commander of a sea faring vessel, our **commodores** are our anchors and all changes happen around and are based on our machines. We plan no death.

You may notice that the word

commodore within the pages of **dieHard** often starts with a lower-case "c" and is in bold. This is done when we refer to a machine or piece of equipment from the 8 bit era of Commodore. This is a term of endearment. The upper-case spelling will probably reflect Commodore in general, like Commodore Business Machines. Both are acceptable to us, so don't feel you have to play our game if you would rather use one over the other.

I'd like to welcome R. Scot Derrer to the pages of **dH**. Expect to see more from him in upcoming issues. Actually, he has been doing lots of stuff for **dieHard** on the sidelines in the past, like pumping up our **GEOS PD** library. Because of his efforts, many of the graphics that have appeared in the past issues have come into our grasp. He'll be doing more in up and coming issues.

We had on heck of a time getting this issue together. Scot (what I call him, although he's been know to respond to, "hey!") had some programs for this month, but things kept popping up and we had a real hectic schedule. I slipped a disc in my back, not to mention the cable in my 128 started slipping disks in the drive. I could not get an 80 column monitor that worked (I'm still looking for a 1902A). And I couldn't get on Q-Link. Speaking of Q-Link, you

can reach me there via E-Mail as dieHard0.

But, we are back on track -- famous last words...

In case some of our new readers have not gathered by now, this is where I let out my insanity. The underground is, at this moment near the A horizon, or rather my eyes are at topsoil level as I type this. Every month the staff here at LynnCarthy Industries Inc. buries me to my eyebrows with paper work, memos, ideas, insults and an occational cup of espresso. There is a 128D at my finger tips and I re-live the early days of Fortran by typing in a file while not being able to see what I'm doing. Later, after I rise with the dead at 3:45am precisely (or so), I am able to print it out and see if I spelled Crosthwaite correctly. Actually, things are not that bad. Just cos my monitor pops off is no cause for my insanity -- I've always been this way!

Actually I have the coolest job in the world. Could you imagine saying to yourself, "Gee, I've got to buy a 512k REU for work." or, "Hmmm, looks like I need to get another game to play for **REVIEW!**" I hope you enjoy reading **dH** as much as we enjoy brimging it to you. Long live the lower-case "c" machines!

READY.



INPUT:

First, excerpts:

"Thanks for your efforts to keep the 64 alive!"
-- Charlie Turner, Erie, PA.

"I know from experience what some of the problems are in publishing a niche magazine, keep your chin up!" -- Ronald Snyder, President, Colorado Commodore Computer Club, Aurora, CO.

"I use two 128Ds, one at home and one at work. Keep up the good work." -- Charlotte Preston Mangum, Williamsburg, VA.

We've gotten lot's of letters with little asides like these, it makes my day -- **Thank you!!**

Dear Mr. Crosthwaite:

I just subscribed to your flyer and must write this note as I read Issue 8 and your review of the 'TOP 20 SOLID GOLD' from COSMI. As all the other reviewers of this product you have missed the fact that 'POTTY PIGEON' ((c)1984 CDI- U.K.) in that package is a demo!!! COSMI failed to recognize the real thing from the demo...

Around 1984-1985, many British products were found in the 'pirated' collections put there intentionally by the original authors to accomplish two things:

1. Potential buyers could get a feel of the game but could not complete the first level
2. Deter piracy by fooling the pirates into believing they 'had' the program.

NOTE: 'GRYPHON' by the famous TONY CROWTHER published in the U.S. by AVALON HILL in 1986 was notorious for that sort of DEMO that fooled everybody.

I am happy to tell you that I fixed the game and that now it works as it originally did- that is I can complete level 0. I also modified the docs as they were incomplete and incorrect. I enclose a copy of my annotated docs.

Please note that once the game is fixed, it is neither a 'boring' game nor a 'game for little kids'. It has 10 levels of jam-packed features and requires both strategy and quick reflexes. It is definitely a five-star in your rating scale.

SINCERELY YOURS, Roger Gouin,
Tucson, AZ. (there's more...) *→

PS : 1. Your flyer is filling a big void: covering the needs of people who like COMPUTING, not merely USING software. Computing is fun -- but not on an IBM machine, designed to keep you away! I am a BASIC/ML programmer with tons of matters to discuss- but your rewards are dismal...

2. You must be able to accept written input on paper -- correspondence the old-fashion way...

Thanks for your letter. The information is very enlightening. I can see why the practice probably stopped, or at least slowed down of putting DEMO versions on the pirate boards. People probably got wind of a game that did little or nothing and anyone seeing it in the store after exposure to the demo would think it was truly a dud. Of course fooling the pirates is another thing, too bad pirates are usually the smart ones who say, "...this thing must be a demo!" And on the other hand the consumer would be the one going "... this stinks..."

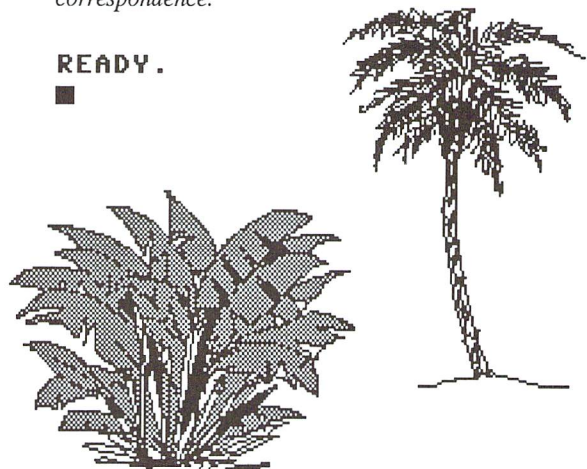
As for infamous DEMOs infiltrating the market as games, I truly think that our country was being brain washed into paranoia. Take the cold war for example.

If the author had put his or her trust into a company not to bootleg the program he or she was submitting for publication, there would have been no mix ups.

I must confess the thought never even entered my mind that the program was a demo after all they were games from a well known software manufacturer with instructions and everything. Sometimes, even I fall into the illusion that big is better, after all they must know what they are doing!

I invite you to contribute, we do pay for programs and articles. I'd love to see some of your work. I love hearing about computer history, especially Commodore computer history. And we do accept written correspondence.

READY.



geoTips

by

Brian L Crosthwaite and R Scot Derrer

geoJuggling geoWrite

If you have a document that needs to have several different paragraphs moved around into a different order here is an idea that might help. Format the entire page(s) where the changes need to occur with the smallest font you can find. University 6 point found on disk 2 side 2 page 3 on the applications disk works nicely. You may have to force a page in order to use a font that small over full sized page -- that's fine, make the break between paragraphs. Now highlight the first paragraph you wish to move with the mouse, cut it with <C=><X>, place the cursor where you want it to go and type <C=><T> and your paragraph is moved. Repeat until you're satisfied with your editing. The smaller font allows you to see you entire paragraph on the screen. It saves time by not having to scroll the screen to finish your highlighting. If you do have to scroll, it will be minimal and you may find the extra time it takes to scroll a line with a tiny font is still quicker than waiting for several lines to scroll to complete a highlighting. Maybe not.

Renumber

Configure and the 1571D

If you have a 128D and you wish to use a drive that is *not* the built in 1571, here's one for you. From the desktop arrange the drives as follows, device #10 as drive "C", the REU as drive "A" and the 1571 as drive "B." Enter configure

and select no drive for "B." When the dialogue box opens up and requests you to turn off and unplug the drive, reset the drive with the drive reset button located on the right side in front of the computer reset button. Be sure not to reset the computer! Next, select drive "B" again as the drive you are turning on, e.g. a 1541 or a 1581. If the drive is hard wired to be device number 9 the drive will be activated. If it is device number 8, it probably will not work and the 1571 will be reactivated.

Proofing geoWrite to geoPublish

If you plan on doing some serious editing on a **geoWrite** document before placing it into a **geoPublish** document, you may want to consider the following. If you type in your text double spaced so you can write comments and corrections between lines, you will have to go back and reformat the text to single line spacing. This may be no big deal, especially if you want to go back and full justify for nice neat columns. However, if you feel you are pressed for time you can enter text, in full justify, with no margin on the left and a 6.5 (or so) margin on the right. This will give you a wide area to place notes and references in. When you go to place the text in columns in **geoPublish**, unless you use a full page width, you will not have to reformat. The text will be less than 4 on the right side for any document with half page wide or less columns and the margin that moves is on the right.

watchYourspace geoWrite/geoPaint

There is a difference in the vertical spacing of text in **geoWrite** and **geoPaint**. The text mode in **geoPaint** seems to vertically space lines of text closer together than the same text and fonts used in **geoWrite**. This came to my attention when I recently began using the **PAINT DRIVERS** printer driver to convert **geoWrite** documents into **geoPaint** format then, when adding more text in **geoPaint**, I noticed the spacing was off between the two different texts. Going into Pixel Edit mode (Zoom) in **geoPaint** confirmed this discovery.

BSWho? geoWrite/geoPaint 128

The BSW font in **geoWrite** is NOT the same as the BSW font in **geoPaint 128** in the 80 column mode. The BSW font in 80 column is actually the BSW-128 font. In 40 column it is BSW.

Help Keep The G Environment OS Clean GEOS

You can recycle your used printer ribbons by using the Quad-print drivers for your printer. These drivers make from 2 to 6 passes per print line. A used ribbon will print almost as dark or darker in multiple passes as a new ribbon in one pass. Of course, a new ribbon used with a Quad-driver makes your final copy really dark.

READY.



REVIEW!

by Brian L. Crosthwaite

Commodore FORMAT Future Publishing

Rating:

***** Fantastic

> **** Great <

*** Good

** Not so good

* Lousy

This month we take a look at one of Great Britain's premier gaming magazines **Commodore FORMAT**. Flipping through the pages of **Commodore FORMAT** one might think at first that it is a comic book. It's colorful and vibrant. And it's loaded.

Commodore FORMAT is for **commodore 64** owners, who may take gaming a little more serious than others. Inside the magazine there are reviews of the latest and greatest games, news from game developers and marketeers, game cheats (yes cheats) and game maps. And the full color ads are a great source for games and equipment for those looking for big name support for their 64s. The European market for the 64 is alive and well.

The mind blowing maps are actual screen images from games that must have been photographed and carefully laid out in full color so you can see the entire game *all at once!* These are truly incredible! They show every detail and often have pointers revealing where unseen things may lurk.

The cheats are little programs you type in before you load a game that will give you infinite lives, extra fuel, and so forth for many well known games (even games familiar to some of us in the USA).

The tips are very informative. You see in the UK they don't take gaming lightly and if you can't get through something, chances are **Commodore FORMAT** will help you.

Game reviews tell you exactly what to expect inside and out. Game play is discussed in detail and information on how many can play, does it save high scores, use joystick and/or keyboard, et cetera.

Each issue has a centerfold to hang in your game room that features one

game, usually what is really hot on the European market at the time, and they are well done.

Techy Tips for programmers is a section where you can write for help with programming. One issue even had a rather advanced level article for datassette use. So, it's not just for gamers.

There is even a mail order section, sort of like the **RUN Special Products** of the old **RUN** magazine.

In Europe the 1541 didn't really make it until a year ago or so. Instead of a disk taped to its cover like its sister magazines **Amiga**, **PC** and **Atari FORMAT**, taped to its cover is a *cassette* called the **Power Pack**. It is loaded with games and demonstrations of games. (Sometimes there are even cheats inside the magazine for the **Power Pack Games!**)

Loading the games is easy. Just dust off that old datassette and pop the cassette in and a pressin' the old <SHIFT><RUN/STOP> combo (then pressing **PLAY** at the prompt) and you're off. The screen will usually turn black and a count down timer will appear at the lower left of the screen to tell how long the wait is going to be. You might want to stand by to stop the tape, sometimes it keeps going after the game or demo has loaded. It kinda makes it hard to load the next program when the cassette has passed its beginning point. Although this is a little annoying I can't justify bringing the product rating down because of it. Some machine code programs take over the cassette buffer -- thus control of the tape is lost.

The games are top notch, I've had the opportunity to see several issues and I must say I am very impressed. The graphics are simply amazing. Some of them look like 16 bit! The detailing is incredible and animation mind boggling. And you don't have to read the documentation, at least nothing too long to get started, because each issue has in the first couple of pages a column called **Quick Start** telling you how to basically jump right in. I get such a kick knowing that some of these games that make 16-bit-Nintendo-Pretendo's green with envy came off a datassette!

There is a little trick that the worldly programmer should learn and that is to read the raster interrupt to time the game to a given machine. Unfortunately many of the programmers, with reason,

presume that the program will be run on a 64 and that they are running at the same speed. In Great Britain the rate at which their AC power waves travel is at 50 cycles per second and in the U.S. it travels at 60 cycles per second, this means that some of the programs' graphics will flicker. Now I'm not knocking the company for not having a U.S. version, I know somewhat of what that would entail. I just want you to understand that some of the programs you receive may not run too well on your computer if you use 60 Hz which is standard in the U.S. -- that's the way it comes from the power company. Plus if you don't have a datassette, you will not be able to run the programs at all, at least not until you've sent your cassette in to get a disk version.

Another downside is that the order of the programs on tape is not always the same as on the cassette label. The actual file names are not always the same and there are no counter numbers.

Commodore FORMAT is loaded and if you want more for your 64 I say go for it. Future Publishing also has other **FORMATs** including **Atari FORMAT**, **Amiga FORMAT**, a Public Domain magazine that I believe is also for the 64, A Nintendo magazine, **Light Disk** for the 64, and several others.

If you would like to subscribe, it will be costly. 12 issues are \$55.95. This is sent air mail. For info, you can write to **Commodore FORMAT**, Freepost, Somerton, Somerset TA11 6TB, Great Britain (make checks payable to Future Publishing Limited).

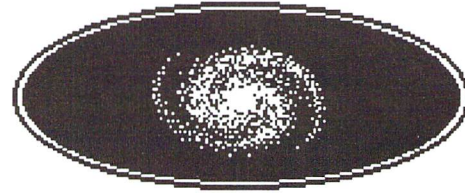
READY.



Tip of the Month

My Star NX1000 Rainbow printer has a paper receiving tray with two positions, flat or up at a 45 degree slant. The paper flow is much more, although not completely, reliable when this tray is flat. Thicker paper, such as 20 lb., travels better through printers. There's nothing quite like a quad-printed document on paper that doesn't advance forward -- R Scot Derrer

INTRODUCTION & THE SCREEN EDITOR



Welcome to **Basic BASIC**. **Basic BASIC** is an on going tutorial to computing on **commodore** computers from the ground up. If this area seems too basic for you, bear with us as we progress to different levels of programming.

To help those who may have gotten a new computer, but do not know where things go, we have some drawings on the back cover that may be of some help.

Once you have things set up, power up your outer-most peripherals first: printer, disk drive, then computer last. When you turn on the monitor, you should see something similar to:

***** CBMBASIC V2 *****

3583 BYTES FREE

READY.



If this is so, then you're in business! If not, did the monitor come on? Check to see that things are set up properly.

There is a little blinking square under the "R" in "READY." This is call the cursor, it's where things that are typed into the computer appear as they are typed from the keyboard. Most of the time if you see it you can type things in. And most of the time when you can't see it, you can't type things in. Some programs break this rule however, but we won't worry about that right now.

It's time to type something in! When you see words in these brackets:

< >

that means there is a key that you need to press, e.g. <RETURN> is the button located on the right end of the key board. Type the following exactly as you see it here, substituting "your name" with your name:

```
PRINT"your name"  
<RETURN>
```

You told the computer to print your name. (More on this PRINT command in a future **Basic BASIC**.)

commodore computers from the VIC on have color built in. Press and hold the <CONTROL> or <CTRL> key and press a number from 1 to 8. Now type something. The characters have changed colors! Press <CTRL><9> then type, the characters are in reverse video! Color computers later than the VIC have even more colors available from the keyboard, <C=> (the **commodore** logo key) and number keys will produce even more colors. If you type <"> then enter a color key combination, a reversed character will appear. This is for programming and we'll get into this more later. If you press <SHIFT> and a letter you can access what are called keyboard graphics -- if your machine is in upper-case mode. There are lots of possibilities here!

You'll notice that unlike a typewriter, when you type, the letters may be in upper-case. If so, press the <C=> and <SHIFT> keys located on the lower left corner of the keyboard at the same time. The characters on the screen will change to lower-case. If your machine does not have the commodore logo key <C=> on the lower left, but instead there is an <OFF/REV> key then type the following carefully (-- a mis-typed POKE statement could lock up the computer. If this happens, turn the computer off and wait a few seconds and turn it back on):

```
poke 59468,12  
<RETURN>
```

This will put your PET/CBM in upper-case mode. To return to lower-case

on the PET/CBM type (carefully!):

```
POKE 59468,10  
<RETURN>
```

For the other machines (with the <C=> key), simply press the <C=><SHIFT> combination and your display will be returned to upper-case.

Let's assume that you have a disk or cassette that you want to load, so let's get started.

The command LOAD will load a program into memory. This is actually a copy of the program as the original will remain on the tape or disk. The cassette is known to the computer as device number 1. The disk drive is known as device number 8, although there can be disk drives numbered 9, 10, 11,.....,19 the default is 8. To load a program from either, use the following format:

```
LOAD"filename",device #,  
secondary address
```

where filename is the name of the program you wish to load, and device number is either 1 for cassette or 8 for disk. The secondary address is usually used to load machine language programs since they sometimes load at different areas in memory, a ",1" will load a program into the same area of memory that it was saved from originally. A secondary address is not usually necessary to load a basic program and is not usually used. On the same token, a ",1" is not always necessary to load some machine language programs. Sometimes you may wish to load a BASIC program to a different location in the computer, we'll do something like that later in the course when we elaborate on this.

Let's start with the cassette. The datassette recorder has five or six controls depending upon which model you own.

Much like an ordinary cassette player, the datassette has RECORD, PLAY, REWIND, F. FWD and either a STOP/EJECT button or two separate buttons (STOP and EJECT) as well as a counter with a reset button. There is also a SAVE light on some.

1. Look at the cassette or program documentation for any load instructions.
2. Press the EJECT button to open the door.
3. Place the cassette in the drive with the side you wish to load facing up.
4. Close the door.
5. Press REWIND to make sure the cassette is at the start of the tape.
6. Press the counter reset button to zero the counter.
7. Type in what the instructions said to type to load the program. If there were no instructions type the following:

LOAD <RETURN>

This will load a basic program. The default will be device 1 and typing ",1" is not necessary, also note that you will get an illegal device number error if you try this on an SX64, since it has no cassette port. If loading using LOAD alone doesn't work, rewind the tape and try:

**LOAD"filename",1,1
<RETURN>**

This will load a machine program. (You may have to reset the computer. There are two ways to do this, depending on your machine. Located on the right side of the 128, 128D, Plus4, and C16 is a reset button. Pressing this will cause the computer to restart, in most cases to the state of just being turned on. The other method that works on all machines is to simply turn off the computer and wait two or three seconds then turn it back on.)

The screen will say:

PRESS PLAY ON TAPE
or words to that effect.

Press the PLAY button on the datassette. You should see, only briefly on some computers depending upon what you have (64, 128, 128D, Plus4 and 16 will blank the screen while loading a program from cassette):

OK

**SEARCHING
FOUND"filename"**

**LOADING
READY.**

Type:

RUN <RETURN>

and you're off!

Loading a program from a disk is a little different but not by much.

1. Look on the disk label or the program documentation for any load instructions.

2. Make sure the drive door is open by either swinging the little arm in the front counter clock wise or pressing the lip that sticks out the slot on the front, depending on what drive you have. Both are spring loaded and will flip right up.

3. With the label side up and the long oval shaped hole that exposes the disk surface facing forward (don't touch this by the way, oils from you hand will eat the disk surface alive!), carefully slide the disk into the drive. On some drives you'll feel it lock into place.

4. Close the drive door by either swinging the arm clock-wise or gently pressing the lip down.

5. Type in what the instructions said to type to load the program. If there were no instructions type the following:

**LOAD " :* ",8
<RETURN>** for a basic
program (" :* " loads first
program on disk).

If this doesn't work try (You may have to reset the computer.):

**LOAD " :* ",8,1
<RETURN>**

for machine code. The screen will say:

**SEARCHING
FOUND" :* "**

**LOADING
READY.**

Type:

RUN <RETURN>

and you're off!

To halt execution of a program you can press the <RUN/STOP> and this will sometimes stop the program. Some programs may need the <RUN/STOP> key held down while pressing the <RESTORE> key. On the VIC and C64 (64C), you need to tap the <RESTORE> key sharply to get it to respond.

If you want to list a BASIC program you have loaded, typing

LIST <RETURN>

will allow you to view the program. It will scroll by rather quickly. Pressing <CONTROL> or <CTRL> will slow the listings on the VIC and 64 (or 128 in 64 mode). Pressing <C=> on the 128, 128D, Plus4, and C16 will slow listings, and <arrow left> on PET/CBM machines.

Type these lines in carefully. Everything after the 10 goes on one line and everything after the 20 goes on one line (don't forget the line numbers!):

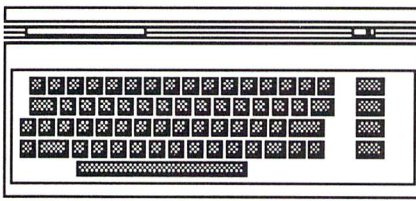
```
10 INPUT"WHAT IS  
YOUR NAME";N$  
<RETURN>  
  
20 PRINT"HELLO, "  
;N$;"!" <RETURN>
```

If you make a mistake, you can press the key on the right top of the keyboard; on the PET/CBM it is right above the return key. Or you may move the cursor around using the <CRSR> keys and typing over the mistake. The cursor keys are on the right side at the bottom, unless you have a PET/CBM then they are nearer to the top. In either case they can be used in conjunction with the <shift> keys to reverse the direction. The 128 also has a set of cursor keys on the top most row of keys above the key. The cursor DOES NOT have to be at the end of the line, just on the line to enter the information.

Type RUN and hit the <RETURN> key and the program will begin execution. Type your name and hit return again. The program will print "HELLO, your name!" to the screen. Play around with the color keys, using the quote and insert keys. Until next time, happy hacking.

READY.

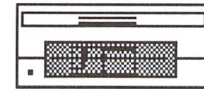
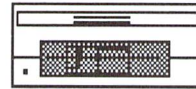




PAPSAW

custom color part i

by
Brian L Crosthwaite



Back in the July 1992 issue we published a program called ColorCircle that demonstrated the multi color high resolution screen on the 64. The last sentence in the introductory paragraph said, "More on this later." Well, it's later. This month we offer an explanation of what each line does so you can enhance the program to do what you want it to do. If you do not have this program and don't want to type it in, it's available on the back issue of the *The Spinner* #1 for \$10 (All back issue *Spinners* are available for \$10 each), send check or money order to dieHard *The Spinner*, P. O. Box 392, Boise, ID, 83701. Idaho residents add 5% sales tax.

5 REM COLOR CIRCLE 64 COPYRIGHT 1993 LYNNCARTHY INDUSTRIES
INC. ALL RIGHTS RESERVED

```
10 PRINT "<CLR>" : XM=159 : YM=199 : XC=XM/2 : YC=YM/2 : XF=1  
: YF=YM/XM
```

↑
Clears the screen, sets XM = xmaximum, XC = xcenter,
YM = ymaximum, YC = ycenter, XF and YF are radius
factors to make circle appear round on screen

```
20 INPUT "COLOR";A,B,C,D
```

input four colors
D = foreground color 3
C = foreground color 2
B = foreground color 1
A = background color

```
100 GOSUB 1000
```

go to setup routine

```
110 FOR R=1 TO 255
```

radius of circle from
1 to 255

```
120 C=C+1 : IF C>3 THEN C=0
```

plot each circle a
different color

```
130 FOR D=1 TO 360
```

degrees from 1 to 360

```
140 : X=INT( XC+R * XF * SIN( D/180 * (shift ↑) ) )
```

```
150 : Y=INT( YC-R * YF * COS( D/180 * (shift ↑) ) )
```

↑
convert degrees into radians
and (x,y) coordinates

```
160 GOSUB 2000
```

go to plot routine

```
170 NEXT
```

get next degree

```
180 NEXT
```

get next radius

```
190 GET E$ : IF E$="" THEN 190
```

check for key press

```
200 GOTO 3000
```

end after key press

```
1000 POKE 53265,PEEK(53265) OR 32
```

enable high resolution graphics

```
1010 POKE 53270,PEEK(53270) OR 16
```

enter multi color mode *→



just a note about the above addresses, they do more than this, they also control horizontal and vertical scrolling on the bit level

1020 POKE 53272,PEEK(53272) OR 8 — place bit map at 8192 (OR 0 places map at 0)

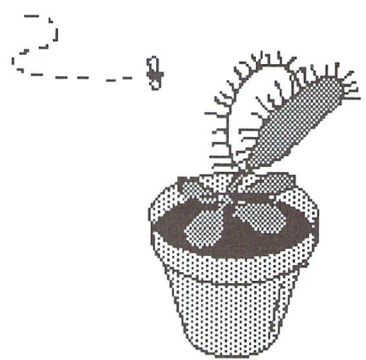
1030 FOR I=1024 TO 2023 : POKE I,B * 16+C : NEXT
 places the foreground colors 1 and 2 into screen memory

1040 FOR I=55296 TO 56295 : POKE I,D : NEXT
 place foreground color into screen memory

1050 FOR I=8192 TO 16191 : POKE I,0 : NEXT
 clear the bit map screen

1060 POKE 53281,A : RETURN
 set background color return to main program

2000 IF X>XM OR X<0 OR Y>YM OR Y<0 THEN RETURN
 if x or y are out of range go back to main program without plotting dot



THIS ROUTINE IS THE UNIVERSAL PRG FOR CONVERTING (X,Y) PLOTS TO AN ADDRESS SPECIFIC POKE

2002 CH=INT(X/4) : RO=INT(Y/8) : LN=Y AND 7
 begin conversions x and y from people orientation to what the computer understands (see reference manual)

2010 BY=8192+RO * 320+8 * CH+LN : BI=6-(2 * X AND 7)

2020 POKE BY,PEEK(BY) OR C * 2↑BI
 once the information is converted the information is placed into the computer's memory

2030 RETURN — ends plot routine

3000 POKE 53265,PEEK(53265) AND 223 — reset to character screen mode

3010 POKE 53272,PEEK(53272) AND 247 — reset screen memory
 3020 POKE 53270,PEEK(53270) AND 239 — Move character set back into memory

3030 END — finito!

READY.
 ■

Archaic Computer

The Computer Store Of The Past

by

Brian L. Crosthwaite



In the summer of '87 I was in Couer d' Alene, Idaho studying wildlife photography. I was using a datassette and writing mathematical graphics programs like **Snailskin** in my spare time. I had often thought of having more spare time -- if I only had a disk drive. At the end of that summer, when I returned to Boise, I was given an FSD-1 disk drive from my father.

I had a lot of catching up to do. There were magazines on disk to subscribe to and read, programs to transfer to disk from cassette, more programs to write and save to the disks. I could put more programs into permanent storage, faster than I had ever done before.

In 1991 I was married and we were pregnant. I lived in the middle of what I call kNOw WHERE. I retired from my business as an independent contractor and became heavily involved in house work and computer programming, particularly the Timex Sinclair, the Atari 800XL and the **commodore 128**. I wanted a 1581 and they were really scarce. One day, it happened, I found the deal of a lifetime. A second hand 1581, with all the good chips, the manual, and the original software -- \$100.

It was like my first experience with the FSD-1 vs the datassette all over again. This drive was faster and had more storage. I am now

convinced that I could not survive with out this drive.

Back in early '87, people had their doubts about the existence of the 1581, after Commodore's introduction of a Laptop that never came about, the P 128, as well as others that were announced, but never came into existence. But it did happen and it is, of course, our topic in Archaic Computer this month.

COMMODORE 1581 disk drive

Commodore Electronics Limited
1987

reviewed by B. L. Crosthwaite

On a scale of 1 to 5 (1 being the worst and 5 being the best), I give the *drive* a 200, but the *manual* a 4.8. I can not give the manual a 5 because there is no index, and we researchers love indexes.

First of all, this 6502A microprocessor controlled drive sports **Commodore DOS v10**, making this drive the fastest, most versatile in the Commodore disk drive family. A one megabyte disk will hold 808,960 bytes of information, you could conceivably place a sequential file 802,640 bytes in size on one disk! Maximum relative file space is approximately 800K bytes with up to 65535 records per file. You can place 296 files total on one disk.

And for such gigantic amounts of storage its dimensions are quite impressive: 63 * 140 * 230mm -- that's smaller than a cigar box! The drive's color and shape match that of the 128D, 128, and 64C, but the drive can be used with any **commodore** computer from the VIC on! And the disks are easy to store as well since it uses 3.5 inch disks.

I have mine set up as device #10. It works great with programs like **Autograph**, and others that support multiple drives beyond device #9. I can load the main program using `LOAD".*",8:<SHIFT><RUN/STOP>` and since **Autograph** is the first file on the disk, it loads right up and runs -- real fast. The drive has 8k of RAM so it knows exactly where the program is on the disk, even on disks jammed full.

The drive also has a burst mode that is fully supported by the 128. And it works really well with **GEOS 2.0**, which is a must for DTP (desktop publishing)! Many commercial games will not load from it because of track and sector differences between the 1581 and the 1541 (due to some copy protection schemes). However, I don't see too much of a problem with this since most of those problems would come from games that you'd have to turn your computer off to exit from anyway. My favorites change anyway, so I'd spend alot of time copying

when I could be booting the game and playing.

On the other hand, it's nice to have this drive when I program. I can save each step of my program to disk. If I mess up while making changes I always have the last version handy. I don't have to scratch files until I can actually take the time to do so.

The standard DOS commands are all you need to use this drive. But, there are a few extra commands that will be new to many users for creating and using partitions (or subdirectories). You can set up partitions to put your word processor files in one, your graphics in another, and your database files in yet another. All of the **commodore** computers can use the commands since they are just additives to the OPEN and PRINT# type of statements.

I know of no commercial serial adapters available from either the past or the here and now that work with the PET/CBM machines, but if you could manage to set up such a port on your PET/CBM, I see no reason why you couldn't use the drive. The only restriction might be the burst mode.

The manual seems rather thorough, although I sometimes have had difficulty finding specific information since there is no index. Information I did find, I found in a more general way via the table of contents and browsing. The table of contents is thorough though, and can almost, but not quite, suffice for an index since you may want all instances of a particular reference. But other than that, it is well written and I have found it very useful. If you are new to the world of computing and disk drive use, it might be a wise idea to read through the whole thing from front to back. About the first half of the

manual is very elemental and informative on CBM-DOS as well as this specific drive's use.

What I think is really cool is that you can place an entire issue of a **LOADSTAR** on one 1581 disk (that's four disk sides)! Just leave off the repetitious files and it should fit.

I recommend this drive to **GEOS 2.0** users, programmers, **LOADSTAR** users, people doing data processing, and anyone one in need of mass storage. Hats off to Commodore -- * * * * *

Available for around \$110 from The Software Hut, Folcroft East Business Park, 313 Henderson Dr., Sharon Hill, PA, 19079, for more info.

READY.



compiled by
Brian L. Crosthwaite

Q: I use "SPEEDSCRIPT," a Star NX-1000 II printer with a MW-302 interface. I'm having trouble with the printer skipping one line every page. It does it whether I use the "n" command for next page or not. After about ten pages, I'm in trouble as it will type onto the next page for a couple of lines then skips to the next page.

I've tried to use the instructions in the Star printer manual relative to changing dip switches 1-5, and 2-1 but with no luck. I've even tried utilizing the command "56" to change the skip over page perforation. Star manufacturers even suggested I had a bad ROM, but I don't believe this is the problem.

Leo B Marx, Richardson, Texas.

A: It sounds like your interface AND printer were both trying to skip the perforation. When you sent the command 56 to disable this feature, the printer turned it off, but the interface didn't. You need to send the command to your interface to turn it off as well. **Speedscript** sends the control codes to perform this task itself. To do this you need to send the commands before you run **Speedscript**. See your interface's manual for the code(s) to do this.

Q: How can I merge a small subroutine with a larger program on my 128? -- Doug Parsons, TV/BUG Librarian, Melba, Idaho.

A: The easiest way I can think of is to list the small program on the 80 column screen near the top, making sure all the lines are visible. With the cursor on the first blank line under the program, type <ESC> then <T>. This will create a window so you don't accidentally scroll any of the program off the screen. Now load the larger program in memory. Press <HOME><HOME>, yes, that's two cursor homes. This will break the window and place the cursor at the top of the window. Now place the cursor on the first line number of the small program and press <RETURN> this will add the line into the larger program already in memory. Repeat pressing <RETURN> until all the lines are entered.

This technique only works IF the line numbers are DIFFERENT in each of the programs and the lines are less than 80 characters long. If some of the lines are longer than 80 characters don't make a window and be careful that you don't accidentally scroll the

Trader's Corner

lines off the screen. The reason lines longer than 80 characters long won't work with the window technique is that what you press the double <HOME> combination it resets the screen and the lines will all return to their base length of 80 characters in length. The screen is like this when you type in a line in BASIC, but when you reach the end the screen editor extends the line another 80 columns.

This can be done on the 40 column screen too, but keep in mind that your lines will have to be 40 characters or less if you want to use the windowing technique, which is only used as a precautionary step and may, of course, be skipped altogether.

Q: Why does the clock not work on my 128D in GEOS any more? -- Scot Derrer, Boise, Idaho.

A: This has been baffling me for some time now. I have an auto exec. file that loads the preference manager before anything else. This forces me to remember to set the time and date when I boot GEOS.

Recently my SID chip blew out and I had it replaced. After that the clock seemed to keep time when the preference manager pops up, but after I exit, the clock holds the time and the date that was last displayed. My SID seems to work just fine, although I suspect a bad cable that my be grounding things out. Now and then my system has trouble booting correctly in 128 mode. Any input readers?

READY.



Got something to trade? Need something? Try here. Maybe one of our readers has just what you're looking for. Or perhaps they want what you have. Trader's Corner is free to anyone looking to trade or buy. (If you want to sell something you'll have to take out a classified, they are \$5.) All TCs will be listed for three months. Write to **dieHard**, Trader's Corner, P. O. Box 392, Boise, ID, 83701.

Wanted: Books, magazines (no Gazette, I have complete run) for VIC 20, C64/128. Ram expansion for VIC 20. Books, magazines, programs for the Timex/Sinclair 1000. Have cash or Commodore magazines (Gazette, Run, Ahoy) to trade. Doug Wagoner, c/o **dieHard**, Trader's Corner, P. O. Box 392, Boise, ID, 83701.

Wanted: Books on any computer, old, new, never released, etc. BLC, c/o **dieHard**, Trader's Corner, P. O. Box 392, Boise, Idaho, 83701.

Wanted: **Shadow of the Beast** cartridge for the 64/128, **Echelon** for C128, and **Qix** for C128. Barry Hom, c.o./**dieHard**, Trader's Corner, P. O. Box 392, Boise, ID, 83701.

Rarities

by R Scot Derrer & Brian L Crosthwaite

We fear no competitor. In fact we seek an alliance of all facets of this reality. If you publish a magazine, newsletter, program(s) or own a store or shop, mail order house, run a User Group, and/or support the **commodore** 8 bit world, drop us a line, we'd like to share your info with our readers.

This month we look into our gazing glass and see a user group that is one of the oldest, and possibly one of the world's largest --TPUG. Formed originally by four members as a support group for the PET, Pet Toronto User Group, it has grown to over 15,000 members world-wide. TPUG Inc. now supports ALL commodore computers, including the Amiga, as well as OS/9, CP/M, and MS-DOS based machines.

TPUG provides full support for members with a library of over 10,000 public domain programs, TPUG bulletin board, and an annual conference with two days of seminars.

For more info write: TPUG 5334 Yonge St., Box #116, Willowdale, Ontario, Canada, M2N 6M2. Phone (416) 253-9637. Membership is: Canada \$25, USA \$25, International \$30 -- those last two are US funds.

In the process of organizing the oncoming slew of GEOS fonts for himself, Dick Estel inadvertently created the Font Resource Directory for GEOS. Remember,

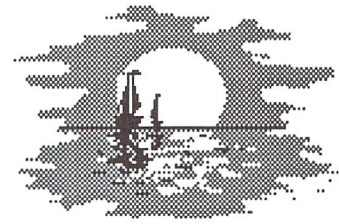
only 6 fonts came with GEOS and now there are well over 1200 commercial and public domain fonts. Originally about 100 pages with expected supplements, it is now at 462 pages after 13 supplements. This useful reference book has history, source information, alpha and numeric ID indexes, and is mostly pages of what the fonts look like in their point sizes. As I printed the last supplement update from disk, I think I realized the amount of work and time Dick has put into this thing. Dick also puts out an occasional issue of his newsletter, **FONTASTIC**.

Font Resource Directory is \$35.00 + \$5 shipping Other stuff available includes fonts, graphics, scans and other disks. Write to Dick Estel, 3487 E. Terrace Fresno, CA 93703 for more information.

PARSEC also offers a PD GEOS font collection that is a useful companion to the FRD. It is nowhere near as elaborate or as organized as the FRD, but contains mostly GEOS fonts not in the FRD. PARSEC is the company that took over **Twin Cities 128**. They are still publishing **TC128** and have a catalog of disks for the Commodore. Write to PARSEC Inc, P. O. Box 111, Salem, MA, 01970-0111 for more info.

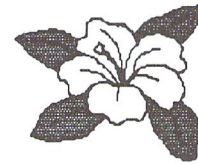
Tell 'em you read about them in **dieHard**.

READY.



DOS and Don'ts

by
Joel Ellis Rea



DOS and Don'ts reprinted with permission from LOADSTAR. **The Complete DOS and Don'ts** is available on 1541 disk for the 64 for \$9.95, plus \$4.50 Shipping for 2nd day delivery from Softdisk, P.O. Box 30008, Shreveport, LA, 71130. The **DOS Manager** for the 64 is available for \$3.00 (\$5.00 Canadian) from LynnCarthy Industries Inc., P.O. Box 392, Boise, ID, 83701 and is in the public domain.

More Wild Cards ====

Now that you know what wild cards are, how do you use them? The following paragraphs will show how various commands work with wild cards: LOAD, VERIFY, and OPEN in any of their forms will select the first file that matches their filename. EXCEPTION: If the filename is '*', these commands will use the LAST FILE THAT THE DISK ACCESSED! If none was previously accessed (like if you just turned the disk drive or the 64 on), then the first file on the disk is used like you would normally expect. If you want to be SURE and get the first file, use ':*' instead of '*'!

The Directory command can take a filename following the '\$' and a ':'. The listing will include ONLY the matching files. For example:

```
C$:FILE ?
0 "MY OWN DISK      " MD 2A
3  "FILE 1"          SEQ
6  "FILE 2"          SEQ
5  "FILE 5"          SEQ
601 BLOCKS FREE.
```

The Directory command also takes a special wildcard: '=' followed by a 'P', 'S', 'U' or 'R' will cause only PRG, SEQ, USR or REL files respectively to be listed. For example:

```
C$:F*=P
0 "MY OWN DISK      " MD 2A
45 "FILE MAKER"     PRG
9  "FIRE 1"         PRG
12 "FILLER"         PRG
601 BLOCKS FREE.
```

The SCRATCH command scratches (deletes, or removes) ALL matching files. That means that the DOS Wedge command '@S:*' will erase ALL files from the disk! If that is what you want to do, it is MUCH faster to use the NEW command without an ID to erase all files. For example: '@N:MY OWN

DISK'. After using the SCRATCH command, the Disk Status command will return an Error Type 01, message 'FILES SCRATCHED'. The Track number (the third part of the Status message) will be the number of files scratched. For example:

```
C$:FILE ?
0
01, FILES SCRATCHED,03,00
```

The RENAME command does NOT use the wild card characters.

The COPY command can accept wild cards on both sides of the '='. The filename on the left (the destination) MUST be '*' if wild cards are used in the filename on the right. This is useful only with dual-drive units like the CBM 4040 (with an IEEE interface) or an MSD SuperDrive 2. It causes all the files that match the source filename to be copied with their names intact. For example:

```
C1:*=0:??????
```

with a dual-drive unit would cause all the files except 'FILE MAKER' on our sample disk to be copied to the disk in drive 1, keeping their names on the new disk.

Using the '*' quirk of the LOAD command can be handy. If you have a program in memory that you just LOADED from disk, and you SCRATCH it from the disk and NEW it from memory, then decide you want it back, you can IMMEDIATELY type 'LOAD "*" ,8' ('/*' with the Wedge), and the file will LOAD back in, even though it was SCRATCHED! You can then SAVE it as usual!

Wedge Overview =====

This month we will discuss the commands which make up the DOS Wedge. We all know how useful the wedge's shortcuts are, so here is a list of the most

useful commands with a brief explanation of each. The equivalent statement without the wedge is also given. The DOS Wedge can be found on your VIC-1541 TEST/DEMO disk. It was written by Bob Fairbairn. Thanks, Bob!

Let's start with installing the Wedge, itself. To get it operational, put your TEST/DEMO disk in your 1541 and type:

```
LOAD "DOS 5.1",8,1
NEW
SYS 52224
```

After that, all Wedge commands are operational.

To begin with, wherever the '@' sign is used, the '>' symbol can be used.

```
-----
Wedgecommand:  @
```

BASIC equivalent:

```
10 OPEN15,8,15
20 INPUT#15,ER,ER$,TR,SE
30 CLOSE15
40 PRINT ER,"ER$","TR","SE
```

When the red light blinks on your 1541 disk, you had an error. Use @ to check the error status. Without the wedge, you would need a small program like this to read error status.

```
-----
Wedgecommand:  @ $ or @$A*
```

BASIC equivalents:

```
LOAD"$",8
LIST
or
LOAD"$A*",>8 <wildcard>
LIST
```

View the directory to see what files are on a disk. With this command, you can use pattern matching and wildcards. You can pause this directory by pressing <space> and interrupt by pressing RUN/STOP.

```
-----
Wedgecommand:  @N0:NAME, ID
```

BASIC equivalent:

```
OPEN15,8,15,"N0:NAME, ID":CLOSE
15
```

Format a disk using the name and ID which is given. Be sure that you do not want any

information which is on the disk. Formatting destroys all previous data. You need to format a new disk before you can store files on it. Try to use a different ID for each disk you format.

```
-----
Wedgecommand:  @S0:NAME
```

BASIC equivalent:

```
OPEN15,8,15,"S0:NAME":CLOSE15
```

Scratch a file from the disk. Be sure that you no longer want this file. Scratched files are removed from the directory.

```
-----
Wedgecommand:  @R0:NEW=OLD
```

BASIC equivalent:

```
OPEN15,8,15,"R0:NEW=OLD"
:CLOSE15
```

Rename the file called 'OLD'. The name of 'OLD' will become 'NEW'.

```
-----
Wedgecommand:  @V0
```

BASIC equivalent:

```
OPEN15,8,15,"V0":CLOSE15
```

Validate the disk in drive 0. Validation removes all files that appear with a "*" in the directory.

```
-----
Wedgecommand:  @D0=1
```

BASIC equivalent:

```
OPEN15,8,15"D0=1":CLOSE15
```

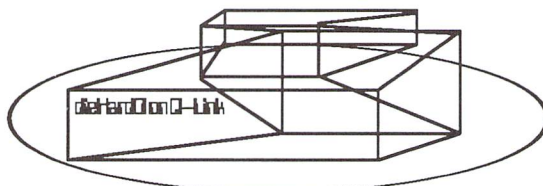
If you have dual disk drives, the disk in drive 1 will be totally copied onto the disk in drive 0. Be sure that it is OK to destroy all previous data on the disk in drive 0. @D1=0 would copy drive 0 to drive 1.

```
-----
Wedgecommand:  @I0
```

BASIC equivalent:

```
OPEN15,8,15,"I0":CLOSE15
```

Initialize drive 0. It is a good idea to initialize every time you put another disk in your 1541.



Wedgecommand:

CC0:NAME1=0:NAME2

BASIC equivalent:

**OPEN15,8,15,"C0:NAME1=0
:NAME2":CLOSE15**

Copy NAME2 to NAME1. NAME2 is not changed. If dual drives are present, the syntax can be: @C0:NAME1=1:NAME2. This will copy the file NAME2 on drive 1 to NAME1 on drive 0.

Wedgecommand: **CH9**

No BASIC equivalent.

Any wedge commands which follow will access unit 9. Any valid unit number may be assigned. This is useful if you have two 1541 disk drives.

Wedgecommand: **EQ**

No BASIC equivalent.

Exits the DOS wedge. You can restart it with SYS52224.

=====

Now for the LOADING and SAVING of files:

The '**↑**' is used to LOAD and RUN a program which loads into the normal BASIC area.

Wedgecommand: **↑NAME**

BASIC equivalent:

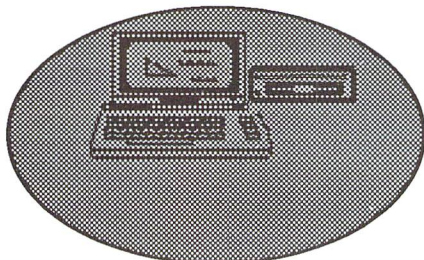
**LOAD"NAME",8:<shift
run/stop>**

The '/' is used to merely LOAD a program, but not run it.

Wedgecommand: **/NAME**

BASIC equivalent:

LOAD"NAME",8



The '%' is used to LOAD a file starting at its original load address. (Used for binary, machine language, sprites, etc.)

Wedgecommand: **%NAME**

BASIC equivalent:

LOAD"NAME",8,1

The '<arrow back>' is used to SAVE a BASIC file to disk.

Wedgecommand: **<arrow back>NAME**

BASIC equivalent:

SAVE"NAME",8

READY.



The Spinner

Each month the PRG programs are available on disk for those who do not wish to type them in. The Spinner has not only the PRG programs but others as well. diehard the Spinner for commodore 8bitters costs \$5.00 (US), \$8.00 (Canadian) per issue, or \$45.00 (US), \$65.00 (Canadian) per year. Idaho residents MUST add 5% sales tax. dieHard, Subscriptions, P.O.Box 392, Boise, ID, 83701.

The Flyer

The Flyer brings you REVIEWS!, PRG, PAPSAW, Rarities, and more. diehard the Flyer for commodore 8bitters costs \$1.75 (US), \$3.00 (Canadian) per issue, or \$15.00 (US), \$25.00 (Canadian) per year. Idaho residents MUST add 5% sales tax. dieHard, Subscriptions, P.O.Box 392, Boise, ID, 83701.

The Support

dh, is constantly looking for more support. In the forms of articles, programs and advertising. For more information on any of the above subjects, write to LynnCarthy Ind. Inc, P.O.Box 392, Boise, ID, 83701.

PRG

by
Brian L. Crosthwaite

Well, the submissions are pouring in! Keep them coming! This summer's end will bring PRG to the public domain. I love DEMO programs, and there are many great PD DEMOs out there. Rewind! Ok, here is the scoop. PRG is going to feature the best of the best of the public domain programs (public domain {PD} programs are programs that are free to anyone to use, copy, share). If you know of, or have, a program from the public domain that you feel is outstanding, send me a copy or call me at (208) 383-0300 and let me know where I can get it!

Now, since it's a PD program you needn't have written it yourself. I do have many programs in mind for the 64, but there are other computers that need your help. Some of these programs may be run on more than one computer type, but many will only run on a specific computer. So what are we looking for? Any and all programs you think are great enough to share with fellow dieHard readers. We need programs for the PET, CBM, VIC20, C16, Plus4, C128. There are no limitations here. If the program runs on all machines -- cool!

Ok, are we back to the present? Well, it's a little late for April fools, but what the hey, here is a program for the 64 that called GO128. What? Well if you don't have a 128 you probably don't know how 128ers access the 64 part of their computer. One way is to type "GO64" and the computer responds with "ARE YOU SURE?", press "Y" then return and the computer goes into 64 mode. It is a one way trip, or is it. Run this little ditty on a 64 and blow some minds! Listing 1 runs on a 128 also, in both 64 and 128 mode, but the timing may be a little slow in 128 mode. Since it is in BASIC it only appears to go into 128 mode, only your screen will change. The input is, by the way, not goof proof. Enjoy. Listing 1.

F-KEY OVERLAY by R. J. Smulkowski of Olympia, Washington., found in listing 2, is for the 16, VIC and 64. It will print out an overlay for your F-keys that you can write whatever you need the definitions to be. This can be

handy to have especially if you have several different programs that utilize the function keys, it makes remembering easier. You can pile them up on top of each other and just sort through to find the one you need, place them in an old check box, or scatter them around the house. They make great pets, I wonder if they'd make very good CBMs?

If you want to run it on a 16, you'll need to change the following lines. In line 17, change the 2 to a 4. In line 20 change the 3 to a 2. Line 22, change the 4 to a 5. In line 25, change the F5 to an F3. Line 30's F7 needs to be HELP, and delete the first two characters after the 7. And last, change the 8 in line 32 to a 7. There is a C16 version on the Spinner, so those of you who get it will not have to alter the program. The POKE 19,65 in line 8 does the same thing as on the VIC and the 64. With a little hacking the program could be made to do an overlay for the plus/4 or 128.

R. J. Smulkowski is the Editor of of the disk based magazine **Mojo Mag** (see April issue). He specializes in telecommunications and has been operating a BBS for the past 3 years (listed in April's **Rarities**). **F-KEY OVERLAY** listing 2.

The next two listings, for the 64, come to us from Klondike, Texas from James T. Jones. The first is a program merger and the second, a program resurrector. He wrote some very clear directions so take it away Mr. Jones --

Program Merger C64

You may find the following program more user friendly than some of you have seen for merging two BASIC programs: a primary program and a secondary program. The line numbers of the secondary program should first be renumbered, if necessary, so that they are greater than those of the primary program.

The screen will be blank while the programs are being merged. When the merging is complete, you can LIST, SAVE or RUN the resulting program. {I suggest you save it first.}

Resurrect C64

Type the following program and SAVE it. When the program is RUN, the file, RESURRECT.O, will be created on the disk. If you inadvertently NEW a BASIC program, in the direct mode on a blank screen line type LOAD"RESURRECT.O",8,1 (press

RETURN), then on another blank screen line type NEW (press RETURN). Finally, on yet another blank screen line type SYSS2992 (press RETURN). The BASIC program will then be resurrected, provided no program lines have been entered following the inadvertent NEW command.

James is currently working on a check-sum program for dieHard, we hope to see it soon. James is a retired engineer. He has had programs published in both **LOADSTAR** and **RUN**. **Program Merger C64** Listing 3, **Resurrect C64** Listing 4.

Well, that's what's in the **Flyer**, but what about the **Spinner**? Like I mentioned there is a C16 version of R. J.'s overlay PRG as well as the programs listed here.

Our feature program is one I was going to publish last month, but I have still not completed it. It is a garden organizer for the 128.

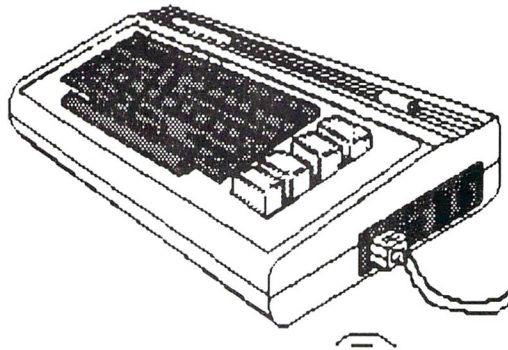
Right now it is set up to run on a 128 with two monitors. The spreadsheet is on the 80 column and the layout is on the 40. It doesn't alphabetize the entries yet and it will not say "Go to 80 columns" on the 40, or "go to 40 columns" on the 80, so if you don't have two monitors it might throw you off once in a while. This can be remedied by using the 80 monitor (or monochrome version of such for the 80 column output and sent the 40 column to a tv. Or you can break into the code (easy enough, it's all BASIC 7.0) and place the proper requester in the right location.

Alter the program by all means. Hackers may be blown away by the massive three dimensional array used to store the data. I now look at it and wonder why the heck I did that. There is a massive DIMENSION statement that takes well into a minute to carry out, but things run faster later, because you don't have to wait for variables to restack. I personally don't think the next version will be like this as the time wasted to save time is -- well, a waste.

Found on the **The Spinner** is a subroutine to add to your programs, if you'd like to write programs for all Commodore 8 bit computers. It is the latest version of **Computer Cipher**, call simply **Cipher**. The main body of the program is contained from lines 100 to 170, this is the actual deciphering portion of the program. The routines

from 60000 on are the set ups for the various computers.

Got a program that you want to share? Send it on in. diehard, ATTN: PRG, P O Box 392, Boise, Idaho, 83701. Remember, we pay money for programs upon publication!



Listing 1
G0128 64/128

```

1 REM A$="G0128.64" : SAVE A$,8
  : VERIFY A$,8
900 OS(0)=" " : OS(1)="trvs on]
  [space]trvs off]" : GOTO2000
910 REM XXXX 128 SCREEN XXXX
999 PRINT "ICLR]" : POKE 53280,253 :
POKE 53281,251 : FL=1 : GOSUB 6000
1000 PRINT "IC= 6]"
1010 PRINT " COMMODORE BASIC V7.0
122865 BYTES FREE"
1020 PRINT "[3 space]C)1986
  COMMODORE ELECTRONICS, LTD."
1030 PRINT "[9 space]C)1977
  MICROSOFT CORP."
1040 PRINT "[11 space]ALL RIGHTS
  RESERVED"
1050 PRINT "[crsr down]READY."
1060 SS="": GOSUB 5000
2000 REM XXXX 64 SCREEN XXXX
2002 PRINT "ICLR]" : POKE 53280,254 :
  POKE 53281,246 : FL=0 :
  GOSUB 6000
2010 PRINT "IC= 7]"
2020 PRINT "[4 space]XXXX
  COMMODORE 64 BASIC V2 XXXX"
2030 PRINT
2040 PRINT " 64K RAM SYSTEM 38911
  BASIC BYTES FREE"
2050 PRINT "[crsr down]READY."
2060 SS="": GOSUB 5000
3000 SS="": PRINT : PRINT "ARE YOU
  SURE?";
3020 RETURN
4000 PRINT OS(F)"[crsr left]";
  : FOR D=0 TO 199 : NEXT
4010 RETURN
5000 FOR F=0 TO 1
5004 IS="": GET IS : IF IS="ICRSR UP]"
  OR IS="ICRSR DOWN]" THEN 5004
5020 IF IS=CHR$(13) THEN PRINT
  OS(0) : IF SS="G064" OR
  SS="G0128" THEN GOSUB 3000 :
  GOTO 5080
5030 IF IS=CHR$(13) THEN PRINT
  OS(0) : IF SS="Y" AND FL=1 THEN
  GOSUB 2000 : GOTO 5080

```

```

5040 IF IS=CHR$(13) THEN PRINTOS(0);
  : IF SS="Y" AND FL=0 THEN GOSUB
  999 : GOTO 5080
5076 PRINTIS;
5077 SS=SS+IS
5080 GOSUB 4000
5090 NEXT
5100 GOTO 5000
6000 FOR W=0 TO 999 : NEXT

```

Listing 2
F-KEY OVERLAY 64

```

1 REM OPEN 1,8,15, "S0
  :F-KEY OUX" : CLOSE 1 : SAVE "F-KEY
  OVERLAY",8 : VERIFY "F-KEY OUX",8
5 PRINT "[CLR]C crsr down]PLEASE
  ENSURE THAT PRINTER IS ON-LINE"
6 PRINT "AND THAT PAPER IS ALIGNED
  TO PRINTHEAD."
7 PRINT "[4 crsr down]PRESS RETURN
  TO PRINT OVERLAY..."
8 POKE 19,65 : INPUT A$ : GET A$
  : IF A$="" THEN 10
10 OPEN 1,4
11 PRINT#1, "[shift UI]26 -I]shift I]"
12 PRINT#1, "[shift -] C64, C64-C
  F-KEY OVERLAY [shift -]"
13 PRINT#1, "[shift -]I26 space]
  [shift -]"
15 PRINT#1, "[shift -]I3 space]I]shift U]
  -----I]shift I] F]I6 C= Y]
  [shift P]I]shift -]"
16 PRINT#1, "[shift -]I3 space]I]shift -]
  [2 space]OUT OUT]2 space]
  [shift -] [shift LI]7 C= P]I]shift @]
  [shift -]"
17 PRINT#1, "[shift -]I3 space]I]shift -]
  [10 space] [shift -] F]2]6 C= Y]
  [shift P]I]shift -]"
18 PRINT#1, "[shift -]I3 space]I]shift -]
  SLIP OVER [shift -] [shift LI]7 C= P]
  [shift @]I]shift -]"
19 PRINT#1, "[shift -]I3 space]
  [shift -]I]11 space]I]shift -]
  [10 space]I]shift -]"
20 PRINT#1, "[shift -]I3 space]
  [shift -]I3 space]F-KEYS
  [2 space]I]shift -] F]3]6 C= Y]
  [shift P]I]shift -]"
21 PRINT#1, "[shift -]I3 space]I]shift -]
  [4 space]---[4 space]I]shift -]
  [space]I]shift LI]7 C= P]I]shift @]
  [shift -]"
22 PRINT#1, "[shift -]I3 space]
  [shift -]I]2 space]OUT OUT
  [2 space]I]shift -] F]4]6 C= Y]
  [shift P]I]shift -]"
23 PRINT#1, "[shift -]I3 space]
  [shift -]I]11 space]I]shift -]
  [shift -]I]shift LI]7 C= P]I]shift @]
  [shift -]"
24 PRINT#1, "[shift -]I3 space]
  [shift -] SLIP OVER [shift -]
  [10 space]I]shift -]"
25 PRINT#1, "[shift -]I3 space]
  [shift -]I]11 space]I]shift -] F]5
  [6 C= Y]I]shift P]I]shift -]"
26 PRINT#1, "[shift -]I3 space]
  [shift -]I3 space]F-KEYS
  [2 space]I]shift -] [shift L]
  [7 C= P]I]shift @]I]shift -]"
27 PRINT#1, "[shift -]I3 space]
  [shift -]I]4 space]---[4 space]
  [shift -] F]6]6 C= Y]I]shift P]
  [shift -]"
28 PRINT#1, "[shift -]I3 space]
  [shift -]I]2 space]OUT OUT
  [2 space]

```

```

[shift -] [shift LI]7 C= P]I]shift @]
[shift -]"
29 PRINT#1, "[shift -]I3 space]
[shift -]I]11 space]I]shift -]
[10 space]I]shift -]"
30 PRINT#1, "[shift -]I3 space]
[shift -] SLIP OVER [shift -] F]7
[6 C= Y]I]shift P]I]shift -]"
31 PRINT#1, "[shift -]I3 space]
[shift -]I]11 space]I]shift -]I]space]
[shift LI]7 C= P]I]shift @]I]shift -]"
32 PRINT#1, "[shift -]I3 space]
[shift -]I3 space]F-KEYS]2 space]
[shift -] F]8]6 C= Y]I]shift P]
[shift -]"
33 PRINT#1, "[shift -]I3 space]
[shift -]I]-----I]shift K]
[space]I]shift LI]7 C= P]I]shift @]
[shift -]"
35 PRINT#1, "[shift -]I5 space]
DIEHARD THE FLYER]5 space]
[shift -]"
36 PRINT#1, "[shift -]BY BOB
SMULKOWSKI MAY 1993]I]shift -]"
37 PRINT#1, "[shift -]J]I]26 -I]shift K]"
40 PRINT#1, "OUT THIS PUPPY OUT
ON THE"
41 PRINT#1, "DOTTED LINES.
[2 space]PRINT UP A"
42 PRINT#1, "MESS OF THEM.
[2 space]WHEN YOU"
44 PRINT#1, "PROGRAM YOUR
F-KEYS, MAKE"
45 PRINT#1, "NOTE OF THE ASSIGNED"
46 PRINT#1, "FUNCTIONS IN
THE BLOCKS"
47 PRINT#1, "PROVIDED."
50 CLOSE 1

```

Listing 3
Merger 64

```

0 REM PROGRAM MERGER 64 - JAMES T.
JONES
10 POKE 53280,6 : POKE 53281,6 : PRINT
  CHR$(147) CHR$(5) CHR$(142)
  CHR$(8)
20 QS=CHR$(17) : HS=CHR$(19)
30 PRINT "THE FILE NAME OF THE
  PRIMARY" : PRINT
40 INPUT "PROGRAM IS";PP$ : PRINT
50 PRINT "THE FILE NAME OF THE
  SECONDARY" : PRINT
60 INPUT "PROGRAM IS";SP$ : PRINT
70 PRINT CHR$(147) : AU$="
  WORKING...PLEASE STAND BY..."
80 POKE 214,24 : POKE 211,5
  : SYS 58640 : PRINTA US$
90 POKE 646,6
100 PRINT HS;QS;QS;QS;"LOAD";
  CHR$(34);PP$;CHR$(34)"",8"
110 PRINT QS;QS;QS;QS;"POKE43,(PEEK
  (45)+256*PEEK(46)-2)/255"
120 PRINTQS$QS$;"POKE44,(PEEK
  (45)+256*PEEK(46)-2)/255"
130 PRINTQS$QS$;"NEW"
140 PRINTQS$QS$;"LOAD"CHR$(34)
  SP$CHR$(34)"",8"
150 PRINTQS$QS$QS$;"POKE43,1
  :POKE44,8:POKE646,1"
160 FOR I=1 TO 6 : POKE 630+I,13
  : NEXT : POKE 198,6 : PRINT HS
170 END

```

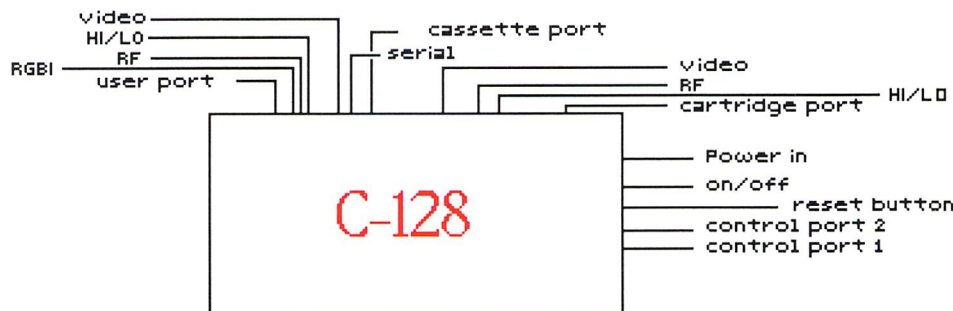
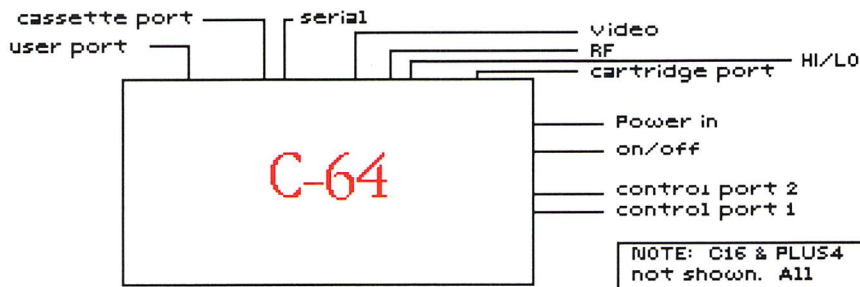
Listing 4
Resurrect 64

```

0 REM RESURRECT 64 - JAMES T. JONES
10 FOR I=52992 TO 53095
20 READ X : POKE I,X : S=S+X : NEXT
30 DATA 165, 43,133,139,165, 44
,133,140,169,4,24,101,139,133
,139,144
40 DATA 2,230,140,160,0,177,139,8
,230,139,208,2,230,140,40,208
50 DATA 244,165,139,145, 43,200
,165,140,145,43,136,177,139
,133,141,200
60 DATA 177,139,133,142,165,141,5,142
,240,21,165,141,197,139,165,142
70 DATA 229,140,144, 33,165,141
,133,139,165,142,133,140,76,42
,207,169
80 DATA 2,24,101,139,133,139
,144,2,230,140,165,139,133
,45,165,140
90 DATA 133,46,76,42,165,108,0,160
100 IF S<>13246 THEN PRINT
"ERROR IN DATA!": END
110 REM CREATE RESURRECT.0 ON DISK
120 SA=52992 : EA=53095+1
: REM ENDING ADDRESS PLUS 1
130 H1=INT( SA/256 ) : L1=SA-256 * H1
: H2=INT( EA/256 ) : L2=EA-256 * H2
140 SYS 57812"RESURRECT.0",8
: POKE193,L1 : POKE194,H1
: POKE174,L2 : POKE 175,H2
150 SYS 62954
160 PRINT CHR$(147)"RESURRECT 64 IS
NOW ACTIVE.": NEW : SYS52992

```

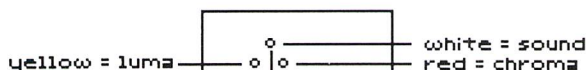
READY.



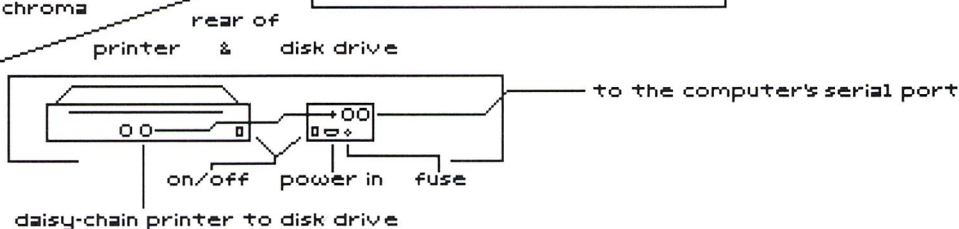
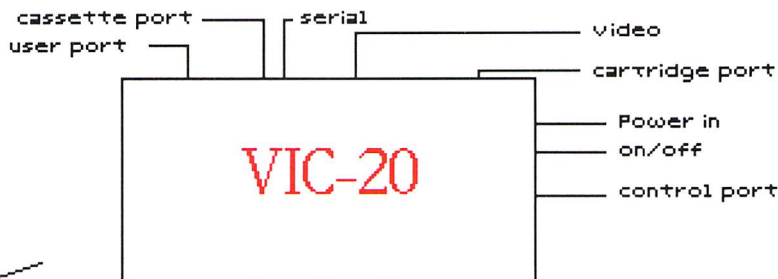
cassette port, as seen from back, is a part of the pc board that has metal strips and a notch. SX-64 has no cassette port. Some CBMs have this port on the right side



rear of monitor



to monitor in on computer



dieHard
P.O. Box 392
Boise ID 83701

BULK RATE
U.S. POSTAGE
PAID
BOISE, ID
PERMIT NO. 492