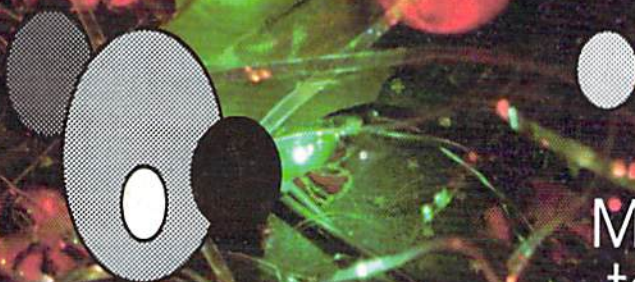


# dieHard

the Flyer for Commodore 8biters.

Merry Christmas!!



Merry Christmas  
to All and to All  
a Great PRG!

Kindling the Christmas  
Spirit on your  
commodore!



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get into Cyberspace!

Risers and Sliders  
Island of the Dragons  
Sky Travel

REVIEW! looks what goes under the tree.



# dieHard

the Flyer for commodore 8biters

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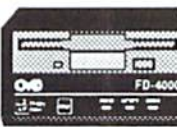
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# View From The Underground

by  
Brian L Crosthwaite

The Holidays are upon us in full swing. Need ideas for Christmas gifts? Check out this month's **REVIEW!** **Archaic Computer** as some of oldies, but goodies -- **Space Taxi**, **Print Shop** and one of my favorites -- **Newroom!**

**PRG** introduces our new checksum program for the C64, **TipeRite!** We have a wonderful picture for the C128, plus/4, and C16. Drawn totally using BASIC 3.5 (7.0)'s DRAW and PAINT commands. This is a must see! We even have a couple of PRGs for your programming work box.

R. J. Smulkowski has a special message to all dieHards everywhere.

Oh yes, Roger Gouin is back, only this time he's not so furry. However, he still carries his momentous fury.

Scot's MIDI takes five, but don't panic he will be back next year!

Next year's January/February issue is to be our next geolssue. We have some spectacular things planned! Stay tuned! Story at 11, picture at 12!

Speaking of next year, **dieHard's** price is going up in January 1994. The single issue price will be \$2.95. Subscriptions will be \$16.97. The **Spinner** will be \$5.97 with subscriptions at \$67.97. Now is the time to resubscribe, or extend your present subscription. Back issue prices

for both the **Flyer** and the **Spinner** are also going up.

On the **Spinner** we have **Santa's Helper**, a database for the C64 that helps you with your Christmas list compiling. Also on the **Spinner**, **Dr. C=**. This game will keep you up late piling just the right pills to kill viruses and save lives!

Well, last month we grew again in size, both in number of pages and number of subscribers. We now have a full color cover! Who knows what's in store next year? There are infinite realms yet to be discovered within the chips of these fine machines.

**dH** not coming to your house in a timely manner? We currently ship Bulk Rate which takes *forever*. We will soon be going second class. Instead of taking weeks to get to your house it will only take a few days!

Until next year, may you always have a fresh pile of formatted blank disks at your side and plenty of paper! Merry Christmas and have one heck of a new year!

READY.



Merry Christmas

dieHard, the Flyer for commodore 8biters

Editor-in-Chief  
Brian L Crosthwaite

Managing Editor  
Mia C. Crosthwaite

Associate Editor  
R. Scot Derrer

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PRG 26

TipeRite V1.0  
*the dH checksum program for the C64 you've all been waiting for!*  
Lazy  
*covert bases 3 - 9 to decimal and back!*  
Scrolling Border 64  
*an MLPRG to scroll text around the C64's screen*  
Christmas Deers  
*our feature program*

Basic BASIC 34

More Data Storage  
integers, floating-points & strings

Cyberspace  
Cowboy 10

'Twas A Computerist's  
Christmas  
Bob flexes his poetic prowess

Telecommunications --  
Your Commodore, And  
You 11

Getting into getting online  
Michael Eglestone gets you  
started

REVIEW! 13

Escape Route

Challenge your your luck  
as Eric Hawthorne, P.I.

Island of the Dragons

And you thought Godzilla  
was just a King  
Kong-spin-off!

Test Pilot

Ground missions, road trips,  
altitude, fuel levels -- we  
test pilot **Test Pilot!**

Risers and Sliders

Watch out for that moth !

Sky Travel

The world's premier  
astronomy program!

of pink novels,  
software turntables  
and forgotten  
logitheques 32

Another guest editorial  
Roger Gouin speaks his mind

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dieHard

the **Flyer** for **commodore 8biters** is written and compiled on **commodore 8bit** equipment. It is then typeset on a **C128D** computer using **geoPublish**. The system consists of a **commodore 128D** personal computer with an internal 1571 disk drive, external **FSD-1** and **1581** disk drives, a **commodore MPS 1270** inkjet printer with a **CARD?+G** parallel interface, a **commodore MPS 803** dot matrix printer, an **HP LaserJet 4ML** with **CMD's geoCable** compatible cable, a **commodore 1670** modem, an **Aprospan 64** cartridge port expansion unit, a **commodore 1764** RAM Expansion Unit expanded to 512k, **Simons' Basic** cartridge, **HEARSAY 1000** voice cartridge, **Super Expander 64** cartridge, a **commodore Datassette**, **M-3** mouse, **TAC 2** joystick controller, **AMIGA 1080 80/40** column **RGBI/composite** monitor and a **commodore model 1701** 40 column monitor. Our masters are printed in-house on the **HP LaserJet 4ML** with **GEOPUBLASER1.8**. And the magazine you hold now is printed by **Northwest Printing, Inc.** here in **Boise Idaho**. Thanks to **Douglas Bober** and **Doug Cotton**, for their technical help and to **Jim Collette** who wrote the driver modes.



# INPUT; READERS

I'm 81 and have found what I believe is the BEST disk I own. I have hundreds. It's the **Fun Graphics Machine**. If you want to see what your C64 can do, put in the demo side and just sit back and enjoy what you see. It's the Best Buy I've made in almost 20 years. No, I'm not part of the company and get no kick back. Just trying to spread to the rest of us C64 users some

real fun. Walter Schroeder of Rochester, New York.

*This is truly an excellent program. Stay tuned for an up and coming **REVIEW!** featuring **FGM**.*

Congratulation on the improvements to the magazine over the last few months. How about a checksum program to

go with your type-in programs. Some of us have a difficult time typing the program in without mistakes. Joseph Skompinski of Buffalo, New York

This month's **PRG** introduces John Green's **TipeRite V1.0**. **TipeRite** is a checksum program for the C64. A universal version is on the way that will work on all machines. **READY.**

## Oops!

*Issue: October, 1993 Program: A Card To Our Readers (All)*

Some lines may have up to 88 characters in them. This is an old programming habit I need to break. I neglected to state in the instructions for typing in this program (also referred to as RIP) that in order to type the line in on the C64, PET or CBM and make them fit you will have to use the keyword abbreviations rather than spelling the keywords out. (See pages 130-131 Appendix D of **Commodore 64 User's Guide**, pages 133-134 Appendix D of **Personal Computing on the VIC20**, pages 379-382 Appendix K of **Commodore 128 Personal Computer System Guide**, or pages 169-171 Section 2 of **Commodore plus/4 User's Manual**.) If you don't have any of these, experimentation may be in order. An abbreviation is made by typing the first (in most cases) letter of the keyword and shifting the second letter. Sometimes, the first two letters are typed and the third letter is shifted and sometimes there is no abbreviation.

Some of lines got messed up in the typesetting process. The lines should read:

```
50150 PRINTSP$ "[10 space][RVS ON][2 space][RVS OFF][5 space]R I P[5 space][RVS ON][2 space][RVS OFF]
50160 PRINTSP$ "[10 space][RVS ON][2 space][RVS OFF][15 space][RVS ON][2 space][RVS OFF]
60160 PRINTSP$ "[10 space][RVS ON][19 space][RVS OFF]
```

*Issue: September, 1993 Program: READ ADDRESS (C64)*

Line 110 of listing 2 should read:

```
110 YW$=CHR$(158):N$=YW$+"WORKING..." +WH$
```

*Issue: October, 1993 Program: PHONE DIRECTORY DATABASE (40 col)*

Line 5 needs to left out entirely. It looks as though it was left over from something the author used to send the program listing to printer.

```
130 PRINT"[CLR]":PRINTTAB(11)"[RVS ON]*** DIRECTORY ***[RVS OFF]":PRINT:X$=""
```

We hate typos, especially in PRG!!! We apologize for any frustration these may have caused you. Hopefully with the advent of **TipeRite V1.0** these will be curbed!

**READY.**

# Rarities

U  
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G  
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Here is the complete listing of User Groups that have sent **dieHard** their newsletters over the past year.

64 Barstow Users Group  
1733 Sunset St.  
Barstow, California 92311

A.B.A.C.U.S.  
P.O.Box 40334  
Bakersfield, California 93384

Busy-Bee User Group  
Theodore E. Seitz, Editor  
3 Paseo Cuacha de Toro  
Arivaca, AZ 85601-0003

Bloomington-Normal Computer Users Group  
P.O.Box 1058  
Bloomington, Illinois 61702-1058

Carson City Computer User Network  
712 Hot Springs Road  
Carson City, Nevada 89706

Catalina Commodore Computer Club  
P.O.Box 32548  
Tucson, Arizona 85751-2548

Central Coast Commodore Users Group (CCCUG)  
c/o R. Trissel  
3643 Lakeview Ct.  
Santa Maria, California 93455

Champaign-Urbana Commodore Users Group  
P.O.Box 716  
Champaign, Illinois 61824-0716

C=HUG  
P.O.Box 404  
Fremont, CA 94537

Civic 64/128  
P.O.Box 2442  
Oxnard, California 93034-2442

u  
p  
d  
n  
s

Commodore Club of Rockford  
P.O.Box 10022  
Rockford, Illinois 61131-0024

Commodore Users Association  
P.O.Box 84  
Medford, Oregon 97501

Commodore Users of Bartlesville  
Fred Mayes  
2524 S.W. Mountain Road  
Bartlesville, Oklahoma 74003

We recently received a neat catalog from **Master Software**. It was nice to be reminded that they are still in business. Their product line includes the following software and hardware: Tax Master, Help Master, Reset Master, Video Master 128, Y-Not? (1 Male 2 Female) and Y-Yes! (3 Male) junction cables for printers, Chip Saver Kit, 6 foot serial cables (male-male and male- female), and 40 column monitor cables. When you request a catalog be sure to tell them you read about it in **dieHard**.

*Master Software, 6 Hillery Court, Randallstown, MD 21133*

Need that document Laser printed? Well, unfortunately the days of LaserDirect on Q-Link are gone. But there is one who can do it for you! RENTaLASER on Q-Link printed the first three laser printed issues of **dieHard**. \$3 for the first page, \$0.75 for each additional page (graphics intensive pages are \$1 for each additional page). For more information you can contact Douglas Bober, aka -- RENTaLASER on Q-Link or write to:

*RENTaLASER, 905 Tidal Terrace Drive, Allison Park, PA 15101*

s  
u  
p  
p  
o  
r  
t

Commodore Users Group of Lawton (CUGL)  
P.O.Box 3392  
Lawton, OK 73502

Coos Computer Club  
2175 Everett  
North Bend, Oregon 97459-2336

CSUN  
3894 Jupiter Ave.  
Lompoc, California 93436-1904

Dayton Area Commodore Users Group  
Elwood Dornbusch  
2040 Turnbull Road  
Dayton, Ohio 45431

FC C3 Newsletter  
1713 Valley Forge Ave.  
Fort Collins, Colorado 80526

First State Commodore Club  
P.O.Box 1313  
Dover, DE 19903-1313

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# JUSTIPS

Fontmaster 128 Users -- If you have made two custom printer setup files, usually setup #1 is loaded during the initial program boot. You can switch to setup #2 by holding down <ALT> and pressing <2>. But if you want to switch back to setup #1, <ALT> + <1> will not work. To get back to setup #1, press <CTRL> <B> to get to the bottom of the text (this prevents overwriting text). Hold down <1> and hit <ALT> until your disk drive loads setup #1. The bottom left line on the help screen indicates which setup is loaded. A series of 1's will be printed to the screen, so just delete them. By the way, in selecting a printer setup or getting the disk directories, the number keys above the QWERTY keyboard must be used, *not* the number keypad. Larry Pankey of Fallbrook, California.



At two thrift stores I bought boxes of roll-type thermal paper -- enough for at least two lifetimes. Fax or similar machines may also use such paper. Advantage? In experimenting, you don't waste a full sheet every time you use the printer. For proofing a lengthy program or text, you don't have the fanfold floppiness. It can easily be rolled and stuffed into a mailing tube to carry about without risk of being crumpled. It needs but a simple roll holder, akin to paper towel holders. Important: if the paper, which has no tractor perforated edges, won't track, a light feeler spring to provide tension at the middle of the roll will solve the problem. I recently made an eight foot banner for a birthday and the tracking was perfect. Further ecological advantage, the lack of the throw away inch of tractor perforated paper saves one tree in every ten!! Walter Erbach of Lincoln, Nebraska.

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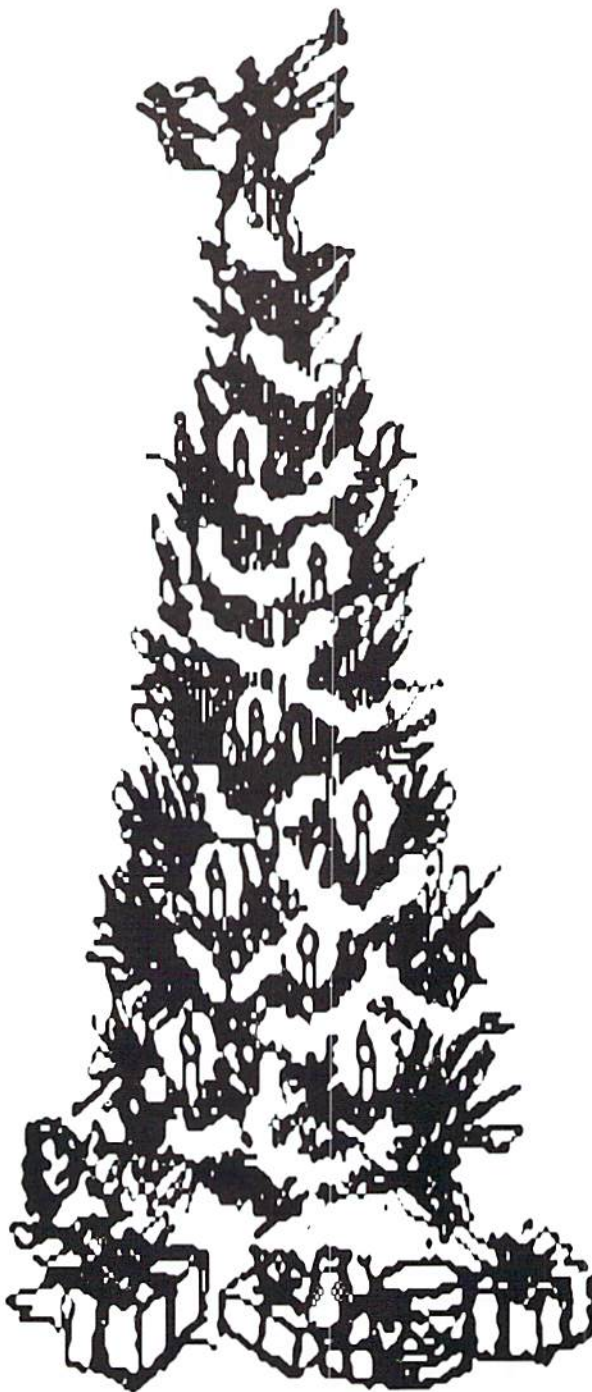
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# Cyberspace Cowboy

Big news this month. I have been appointed Assistant Sysop in the Commodore SIG on Delphi. I couldn't be happier about this, unless maybe we were to see a few new names showing up at our Friday night conferences there. A good time is always had by all attending, and if you're not careful you might learn something too! If you're not sure about subscribing to Delphi, you might be interested to know that they are offering a five hour free trial of the service. There are over 600 local access numbers nationwide for your convenience, but the initial log-on has to

happen first and during that session you can find a number that is local to you. The log-on call is free too -- dial by modem 1-800-365-4636. Smack a couple of <RETURN>s. At the Username prompt, enter *JOINDELPHI*. At Password, enter *CPT311*. Further details of rate structures are available during the registration call. Or, call 1-800-695-4005 and talk to a friendly customer service representative.

On the BBS front, it looks like Color 64 BBS will be supporting 9600 bps (bits per second) very soon. My understanding is that right now the soon-to-be-released upgrade

package supports 9600 very nicely, and the author is awaiting input from Sysops as to whether it should be released as-is or wait until the last few bugs are worked out of the 14.4 kbps (kilo-bits per second) routines. My personal feelings are "Bring it on, big boy!" and release the 14.4 patch once it is ready. Gee, remember when it was common knowledge that 1200 bps was the absolute limit for **commodore** telecommunications?

And since the Holiday Season is upon us, the ol' Cowboy gives you this:

## *A Computerist's Christmas*

T'was a computerist's Christmas,  
and all through the house  
not a peripheral was in use,  
not even the mouse.

The diskettes were filed  
in their cabinet with care,  
with hope that no virus  
would ever be there.

And Mamma in her pocket protector,  
and I in my specs  
had just settled in  
to de-bug some hexa-dec.

When from the default drive  
there arose such a clatter,  
that I sprang from the desk  
to see what was the matter.

The cathode ray tube  
with its bright glowing glare  
cast the luster of mid-day  
on my old office chair.



When what to my wondering  
eyes should appear,  
but an HST modem --  
fine tele-comm gear.

And a quick little programmer  
with a warm cheerful glow,  
I had a strong feeling  
He was Dr. Baudot.

I could see right away  
that his code was not lame,  
he had mastered some languages,  
and he called them by name;

Now, FORTRAN! Now, FORTH!  
Now Machine Code and PASCAL!  
On, BASIC! On, C!  
And DOS, you old rascal!

Run Assembler, Compiler, GW too!  
Now run! (don't crash)  
Run! (don't crash)  
Run! All of you.

He spoke not a word  
as he hacked through the night,  
validating my disks --  
making splat files all right.

He cleaned up my menus,  
drank coffee by the pot,  
and before he could nod out --  
to the phone line he shot.

He cleaned the connections  
for a good data link,  
then he made for the door  
with a sly little wink.

And I heard him exclaim,  
as he slipped out of sight,  
"Have a BBS Christmas!"  
"Call a few boards tonight!"

# Telecommunications -- Your Commodore And You

Or Modems R' Us

by

Michael Eglestone

I remember the day my first modem (MODulator/DE-Mod-ulator) arrived from Q-Link. It was a 300 baud Commodore 1660. It came for FREE with one of those promotions that Q-Link was always running back in 1986. I should have written down that exact date, because that's the day my trusty C128 and I embarked on a High Adventure that is still going on today. The world of Telecommunications opened its arms and we both rushed in like children dashing to a swimming hole on a hot summer day.

Q-Link made it easy to get started. Not much was required in the setup program, nice little overlay card to put around the f-keys for the command inputs and a program disk that did 90% of the work for you. Kind of like having an automatic transmission in the computer. Load the program, and suddenly my monitor became a window on the world. It wasn't a program talking to me anymore, but Real People in Real Places all over the country. Words flowing across the screen that became alive and meaningful. The only way to describe that first contact with another person on my computer would be to say that it was akin to a religious experience. I can still see it, feel it and re-live it just by closing my eyes and letting my memory take over.

Little did I realize that this simplistic approach to reaching out over the long distance phone lines would result in thousands of new friends, the establishment of my own Bulletin Board Service (BBS) and the gradual acquisition of most every high tech attachment that was offered for the C128.

My wife still tells me that I had

more money than good sense back in those days; more than likely a very true statement.

The transition from the Q-Link software to running general purpose terminal software was a bit painful. However, the first month's bill for using the service convinced me to take a stab at it. My good sense and pocket book became close friends in short order. I am still a member of Q-Link, but I watch my use of "plus" time (extra cost) very closely.

The basics for getting started in telecommunications on your C64 or C128 are fairly simple. You need a modem, and you need a software terminal program. Terminal programs come in most every size, configuration and format. The terminal program you choose will be a matter of personal taste, and most importantly -- your actual needs. A mouthful at best.

Beginning modem users often become overwhelmed by the new terminology they must learn. Words like duplex, echo, stop bits, parity, ANSI, ASCII, CG Graphics and a host of other strange terms suddenly become very important, and equally frustrating. Not to worry! We shall ease you into this new world very gradually, as painlessly as possible.

Before you even realize what has happened you will be saying "Transfer Rate" and understand what it means!

The following short list of terms should help you through the next few paragraphs. Don't memorize them, just become familiar with them.

**Bit:** A single binary number (0 or 1).

**Byte:** Eight bits, which when combined represent one key stroke, or

one character on the keyboard. Example: 01000011 = the letter "c" on your keyboard.

Your computer speaks the language of binary numbers, it translates these numbers into letters for your screen display. Each time you press a key, you generate one Byte of eight Bit code.

**Protocol:** A formal system of sending and receiving information between modems.

Let's start out by talking about modems. Over the last five or six years Commodore users have discovered ways to hook up most any type of modem to their systems. The piece of equipment that does this job is called an interface. Don't let the term throw you! It's just a unit that creates a compatible path between two devices that might not be able to communicate directly. An interpreter, if you like. The interface might be nothing more than a cable with a plug for the computer on one end and a plug for the modem on the other. It also may be an electronic box with a program that codes and de-codes information from both devices. In any case, with the interface unit you can choose from many, many different modem types and rest assured that it will (in most cases) allow your computer and modem to speak the same language. After all, communication is what we're after here.

When choosing a modem, the first consideration should be Baud Rate. It used to be price. However, the price of a very good modem, with a respectable baud rate of 2400, has dropped to under \$70 over the last few years. You can pay much, much more, but the only thing you will end up with is extra features. Some may be useful, others useless, it depends upon the ability of

your software to take advantage of the frills.

The term used to describe the transfer rate is Bits Per Second (BPS).

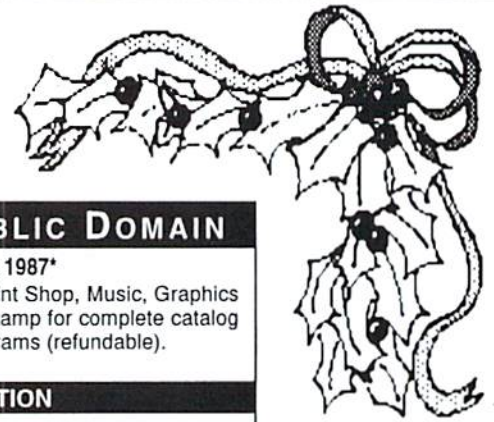
Baud rate is, in essence, the number of bits per second that can be sent or received through the modem. If you think about a byte of data as being eight bits, you can see that your modem, at 2400 baud, should be able to send and receive 300 bytes of 8 bit data per second (2400 divided by 8).

We shall call a byte a character and reduce baud rate to characters per second (CPS). After all, you don't really care about a single bit; the full 8 bit byte is what counts!

Our bottom line is that the higher the baud rate, the faster the information flows between two modems.

Shopping around for a modem is fairly simple. Keep in mind that 300 baud is much too slow for any serious online work. Most online services won't even accept baud rates under 1200, and the speeds of preference are 2400 and higher.

The old stand-by, the Commodore 1670 1200 baud modem, is still available through many mail order houses. The advantage of this type of modem is that no interface is required. You just plug it into the user port and the internal RS-232 system takes over. Another highly popular plug and go modem is produced by Aprotek. Both the 1200 and 2400 baud versions are still widely available. Companies such as Supra Corp. and U.S. Robotics still carry Commodore interface units for their products. I only mentioned a few here to give you an idea of the variety of choices available. I have used a number of different modems over the years, and finally settled down on the Aprotek 2400. The price is what influenced my choice. I needed 4 modems for a project I was involved in and the \$70.00 price tag fit my bank account at that point in time.



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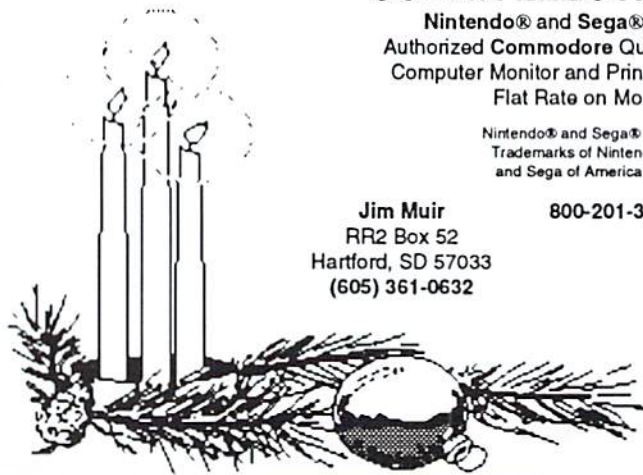
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The only thing that I would stress to a first time modem buyer is -- READ THE SPECIFICATION SHEET!

The modem should (at a minimum) support the Hayes command set, have auto dial and auto answer features and have both tone and pulse dialing capability. You will find that most all modems built after 1988 have these features as well as an on-board speaker system. The Commodore 1670 uses a

Non-Standard command set, and requires some adjusting when used by full featured terminal programs.

Next month we will talk about terminal programs.

**READY.**

*Michael W. Eglestone is a retired Senior Master Sergeant (USAF). His BBS Diamond Back is open 24 hours: (305) 258-5039.*

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by  
Brian B Crosthwaite

Along time ago at the dawn of the Information Age there was a most powerful machine called the commodore 64. In that ancient time of Two and Eighty of the Nineteen hundredth year, the sacred C64 came into reality and the world would never be the same again. With its extended color graphics mode and analog sound synthesizer, the extension of the mind had reached perfection.

Come with me now, on a voyage through time, to those early years, when the beloved C64 was in its infancy and early childhood. When thousands flocked together to see

what new marvels would exploit this machine's abilities.

Our voyage starts in the year 1984. This year is the high point of new developers entering a now well established market. When software talked and clip art became well known.

We will then move through the years and visit 1986. Magazines were plentiful. This is the time of our computer's youth, late night graphic screens and morning trips to K-Mart and Sears.

Join us now, in The Computer Store Of The Past...



## Space Taxi

Created by John F. Kutcher  
1984 Muse Software

\$9.95 (Plus postage. TENEX Computer Express, 56800 Magnetic Dr., Mishawaka, IN, 46545 (phone orders: (800) 776-6781))

Reviewed by Brian L Crosthwaite

*Get ready for a ride on the Space Taxi!*

25 levels in some games just means

it's an easy game. Space taxi is *not* one of those games. This is one ride you're not soon to forget. **Space Taxi** puts you, an ex-galactic fleet pilot, in control of what appears to be a modified yellow cab. It looks kind of like a VW Bug with an elongated front end, a scoop sticking out of the front, and legs instead of tires.

### *Hey taxi!*

You hear this as well as see it printed on the screen. You maneuver your taxi to the pad where the voice called from. It's your first passenger. Be careful, this game is a little like **Gravitron** or **1984**. You'll find yourself quite literally taking off, so just bump the gas gently.

The joystick controls the action. The goal is to make the most money you can before that deadly final cab ride or the end of your shift which ever happens first. The object is to get to the place where the passenger awaits and take him to his destination.

While the screens are simply a redefined character set, they are colorful and the animation is smooth. The multi color extended mode is used on the graphics of the taxi and the passengers. Each level is a maze that must be traversed in order to pickup and deliver passengers while avoiding walls, platforms, lasers, candy canes, moving pads and other objects.

When the program first loads, a close up of the cab appears on the screen drawn in **commodore** keyboard graphics. This is replaced by the title screen. The taxi cab appears in extended color mode near the top left of the

screen. Your character walks out from the right side and crosses over to the taxi, hops in and flies straight up! The program will then go into demo mode. A passenger calls out, "Hey taxi!" You will hear a digitized voice and see the words in the text window at the bottom of the screen. The taxi zips with ease through whatever maze it is in and picks up the passenger. The passenger walks over to the taxi and tells the driver which pad to go to. The taxi flies off and safely delivers the passenger to the pad. Then another passenger calls, "Hey taxi!" and the taxi is off, this time it shows you what happens when you run into one of the objects. The cab crashes and burns, rather well, I might add. Wonderful explosion.

The joystick takes you out of demo mode to the title screen. From here you can hit fire to start off on your own taxing adventure, I mean taxying of course. You can select the number of cabbies (players, from 1 to 4) and the shift you wish to work. There are five shift options: morning (beginner), day (intermediate), night (expert), standard 24 hour, and random 24 hour. The last two levels allow you to play the Mystery Screen if you succeed with the first 24 hours. These are not real hours of course, each hour is a level.

### **The Easy Level.**

The first level on the morning shift is entitled *Short and Sweet*. The screen consists of a lolly pop, a candy cane, some juju beans and a pad with someone on it -- your first passenger. Simply fly down and get him. "Up please," and you fly up and off the screen.

Ok, it's not quite that easy. You control the taxi using booster rockets. Gravity will pull you down, you don't want to hit the pad too hard, oh yes, don't forget to lower your landing gear or you will crash and burn. Don't hit the edge of the screen, or the top.

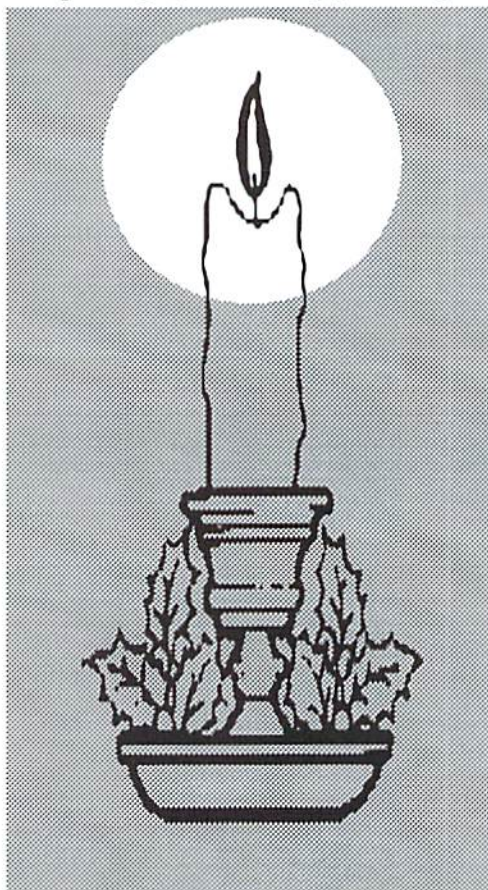
Now, through that tiny little hole... Swoow, that was easy.

The next screen is called "The Beach." Pad one is a cloud. Pad two is a gigantic lounge chair with a tall cold one sitting on it. Pad three is an umbrella type sun shade. The sun is out and the surf is up! Yes, this game is a little strange.

The game gets progressively harder as you go from level to level. With more obstacles, more riders and more gravity and sometimes less gravity. You will have to fill up on fuel from time to time, simply land on the pad that has the fuel shed and the fill up is automatic.

### **Scoring.**

You get \$5 per ride when you deliver a passenger safely on the same screen. If the passenger goes from one screen to the next you get \$10. On the right side of control panel at the bottom of the screen is an amount that starts off between \$11 and \$19 and counts down. This is your tip. The quicker you deliver the passenger, the more tip you will get.



### **The Control Panel.**

The control panel at the bottom of the screen, displays:

*the number of remaining cabs* -- These are your lives.

*speed indicator* -- This tells you when it is safe to land. It changes color depending upon status. Blue means you can land, yellow means to proceed with caution and red means you will crash if you try to land.

*fuel gauge* -- This tells you how much fuel you have.

*takeoff indicator* -- If this is red you cannot takeoff. If it is yellow you're ok.

*screen indicator* -- This indicates what hour (level) of your shift you are in. There are 8 hours for the first three shifts and 24 for the last two.

*total earnings* -- This is your score.

*messages* -- The words spoken by the passengers appear here.

*tip meter* -- This tells you how much of your tip is left. As you deliver your passenger it counts down.

### **Other controls.**

The <SHIFT LOCK> key will suspend game play so you can take a break and go get that espresso off the stove. The <RUN/STOP> key will end the current game and return you to the title screen.

### **Over all.**

I found this game to very enjoyable. The manual is short, to the point, and comprehensive. The screens are colorful and well drawn. I did, however, notice a lack of female voices among the passengers. Actually the variance in the voices is done with programming by playing sound samples at various speeds to give the illusion of lots of different voices. I presume the programmer used his own voice.

This one gets a:

\*\*\*\*\*

# The Print Shop

Created by David Balsm, Martain Kahn, and Corey Kosal

Broderbund

1984 Pixellite

\$29.97 (Print Shop Graphics Holiday \$18.97; Print Shop Companion \$23.97, plus postage. Software Support International, 2700 N. E. Andresen Rd., #A-10, Vancouver, WA 98661 {phone orders: (800) 356-1179})

Reviewed by Noel Plank

**The Print Shop** by Broderbund Software allows you to design your own personalized greeting cards, invitations, announcements, thank you notes, stationary, letterhead, banners, signs, and more.

This is one of the easiest programs to operate for the C64, and the end results are truly outstanding and professional-looking.

**The Print Shop** comes with a simple-to-follow 28 page reference manual and a quick reference card showing the 60 built-in graphics included in this program. If that's not enough to make this program easy to use, a help screen is provided for editing your creations. Besides choosing border designs and selecting graphics, you can choose between eight different fonts, vary the size and position, as well as have the characters outlined in 3-D effect, or have them printed out as solid letters.

**The Print Shop** can make multi-colored cards, signs, or banners, by dropping in a colored ribbon. You can modify an existing graphic, for instance, by putting more candles on a birthday cake, or draw your own graphic designs using either a KoalaPad or a joystick and the Graphic Editor feature.

There are graphics collections available for use with **The Print Shop** program, **The Print Shop Graphics Holiday Disk**, **The Print Shop Companion**, and thousands of Public Domain disks filled with **Print Shop** graphics.

**The Print Shop** is not without its faults. The program

comes with only a few sheets of red and blue colored traction printer paper. There is not enough paper to get your feet wet, and you may run out before you learn what you are doing. The traction edging on this paper disconnects very easily, thus making it nearly useless. The paper is too stiff and thick to pull effectively through a friction feed. The end result is smearing or printing over and over on the same lines. The manual mentions that there is not a paper positioning test for the VIC-1525 or MPS-801 printer. You will find this is true for any interface that duplicates the functions of the Commodore 1525 printer. The manual suggests "...adjusting the position of the paper may take a bit of trial and error to get it right." That's an understatement!

Overall, I think this program is one of the best programs developed for the C64.

## Newsroom

Created by Mark Dunn, Sean Callahan, Jon Clauson, Robert Eyestone, Scott McSpadden, Robert Muefflmann, Robert Carvey, Karen Christansen, and Jerry Cratsenberg

1986 Springboard

\$14.97 (Chip Art #1 for \$9.97; Chip Art #2 \$9.97; Chip Art #3 \$9.97, plus postage. Software Support International, 2700 N. E. Andresen Rd., #A-10, Vancouver, WA 98661 {phone orders: (800) 356-1179})

Review by Noel Plank

Springboard Software, Inc. has created a software program for the home computer journalist of any age called **The Newsroom**. You can design sophisticated news letters that provide surprisingly professional looking print-outs. **The Newsroom** can be used to develop newspapers, brochures, flyers or bulletin board notices for

school, work, club, family or neighborhood organizations.

**The Newsroom** comes with two disks, one containing the Master Program and the other containing clip art. It comes with an easy to follow 86 page instruction booklet with some actual examples. The booklet displays pictures of the over 600 pieces of the clip art available on the second disk, thus making them easy to find. There are even sections in the manual on creating a newspaper including

In order for **The Print Shop** to produce the correct graphic or font output, you must have a compatible printer and interface.

Compatible printers:

Epson RX-80  
Epson MX-80  
Epson MX-100  
Epson FX-80  
Epson FX-100  
Star Micronics 10X  
Star Micronics 15X  
C-Itosh 8510  
Legend 880/1080  
NEC 8023A  
Panasonic P1090/1091  
Mannesmann Tally Sprint 80  
Blue Chip  
Okidata 92/93  
VIC1525/MPS-801

Compatible interfaces:

Xetec  
Cardco  
Grappler CD  
Tymac Connection  
TurboPrintGT  
Micro World-350

I personally use the Star Micronics SD10, which is an upgraded version of the Gemini Delta 10 printer, and the Micro World MW-350 interface with superb results.

such details as organizing a staff and strategies for getting an interview.

Most of the features that go into creating a newspaper are accounted for in this program. You create the banner, the heading across the top of the page, then you can add artwork by using the clip art disk provided or purchase additional

disks, **Clip Art Collection Volumes 1, 2 or 3**. **The Newsroom** also provides a versatile graphics area for creating your own designs similar to the **Doodle** or **Koalainter** programs. Any of the pictures used for your creations may be moved around or modified in size, direction it is facing or even produced as a negative image of a clip art picture.

A complete word processing system for entering and editing your text is included at the Copy Desk. You can place clip art in your layout first so text can be set up around the pictures. The only thing missing is a good spellchecker. Five different fonts in both small and large type style are available for your printed text too.



A unique modem terminal feature allows you to exchange anything created from within this program to any previously incompatible computer. This means that photos and text sent between Apple, IBM or Commodore modem-equipped computers will look identical as long as both use this same special coding **Newsroom** software. However, text from

other word processor programs cannot be uploaded because **The Newsroom** transmits graphics characters instead of true ASCII codes (perhaps you could fax it). The Wire Service section supports the following Commodore and Hayes modems.

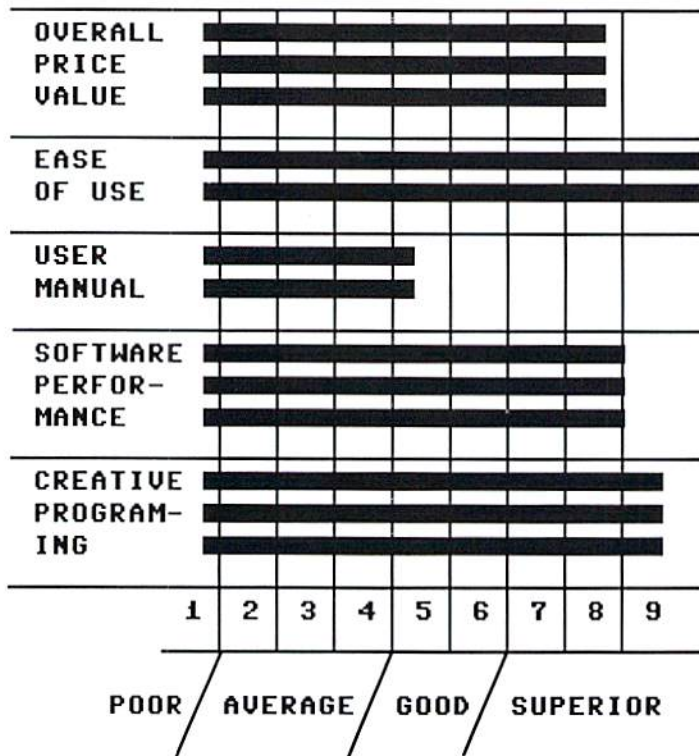
**The Newsroom** can be run on two floppy disk drives or on a single drive system but you'll find disk-swapping a real nuisance. You will also find it takes some time for the final printout of your newsletters to occur and the single-impact dot-matrix screen dump tends to be light. Finally, even though the program is filled with icons to

guide you along through each work area, you will have to spend some time experimenting to make full use of all its many features.

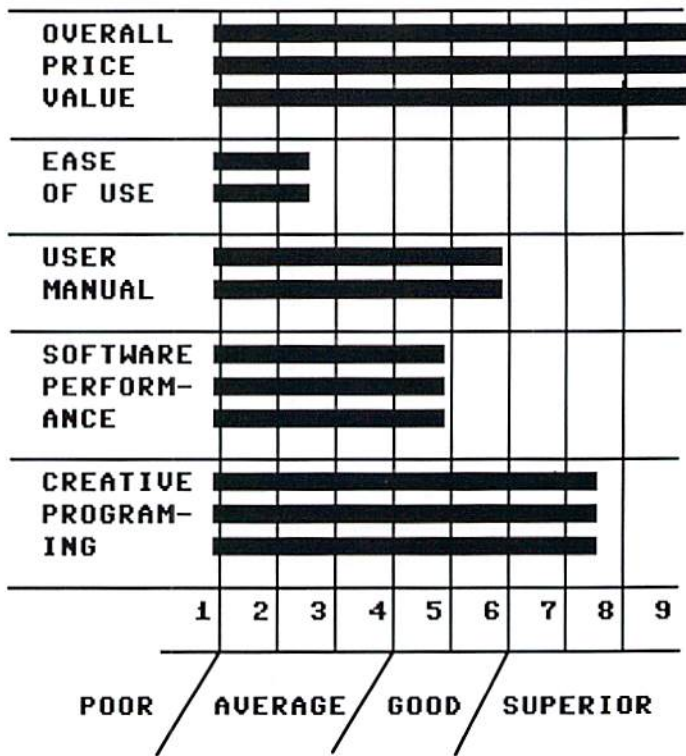
**READY.**



**PRINT SHOP  
PRODUCT EVALUATION REPORT CARD**



**NEWSROOM  
PRODUCT EVALUATION REPORT CARD**





# DOS & Don'ts

by Jimmy Weiler

DOS & Don'ts is reprinted with permission from LOADSTAR. The Complete DOS and Don'ts is available on 1541 disk for the C64/C128 for \$9.95, plus \$4.50 shipping for 2nd day delivery from Softdisk, P.O.Box 30008, Shreveport, LA, 71130.

## OPENing REL Files (part 2)

*(This is a continuation from last month's DOS and DON'Ts.)*

Now, let's look at the actual BASIC code that might be used to write the name and number into any record.

```
100 PRINT#3,NAME$
120 PRINT#3,NUMBER$
```

(There's more to it than that, but we're not ready for the full technique just yet.) Line 100 prints "SCHLABOTNIK" followed by a carriage return. Line 120 prints "8687247" followed by a carriage return. Both fields AND both carriage returns will be written into the file, so when we determine our record size, it will have to be the sum of the maximum lengths of the each of the fields plus the number of fields.

In our case, the desired record length would be  $11 + 7 + 2 = 20$ . (That's eleven characters in the NAME field, seven characters in the NUMBER field, and a total of two fields.) Any record length greater than 20 would also work, but would waste space on the disk. Let's stick with our record length of 89 -- we may decide later that we want to store more information than just names and phone numbers... or someone called Vladimir Byrzschny-scvylmynschmylnovsky may join the class.

That's how you open a REL file THE FIRST TIME. When you open a RELative file that already exists, you don't need to use the LENGTH parameter -- the syntax is the same as for a SEQ file. If you want, you CAN specify the record length, but if you use the wrong length you will get an error 50, RECORD NOT PRESENT.

When you OPEN a disk file, the

parameters must all be contained in a single string. In RELative files, those are the NAME and LENGTH parameters. In other types, they are the NAME, TYPE, and MODE parameters. (Type is SEQ, PRG, or USR. Mode is READ or WRITE.) To make a single string, the individual parameters are CONCATENATED with the BASIC symbol "+". If your file name, "PHONEFILE" was stored in the variable FILE\$, and your record length was stored in the variable L\$, you could open a file like this:

```
10 FILE$ = "PHONEFILE"
20 L$ = CHR$(89)
30 OPEN 3,8,4,FILE$+"",L,"+L$
```

Or you could do the concatenation first:

```
10 F$ = "PHONEFILE,L,"+CHR$(89)
30 OPEN 3,8,4,F$
```

Or you could put EVERYTHING between the quotes. Did you know that CHR\$(89) is the letter "Y"?

```
30 OPEN 3,8,4,"PHONEFILE,L,Y"
```

Of course, this third technique is enormously confusing when you look at your code later and try to figure out what record length "Y" will produce. I don't recommend it.

Let's look at that "bug" I mentioned earlier -- record lengths of 58 are not allowed. Well, as you may know, CHR\$(58) is the colon. You have probably also seen statements like this: OPEN 15,8,15,"S0:SCRATCHFILE". This is the DOS command to SCRATCH (remove) the file named "SCRATCHFILE" from disk drive 0. Most of us don't have a drive 1, but the 0 is still required for many commands. The point is that the COLON is the special character used to separate a DOS command from the filename upon which

it is supposed to act.

Another syntax for opening our REL file with a record length of 89 is: OPEN 3,8,4,"0:PHONEFILE,L,Y". If the record length was 58, the parameters would be "0:PHONEFILE,L,:". The second colon is obviously in the wrong place, and DOS knows it, thus the SYNTAX ERROR.

## Closing REL Files

Closing a RELative file is as simple as closing any other kind of file -- CLOSE <file number>. In our case, this would be: CLOSE 3.

The 1541 disk drive has an area of "buffer memory" where it stores PRINT# information until it has enough to write onto the disk. This usually means that the last few things you sent to your file are still sitting in memory waiting to be written. If your program ends suddenly, you lose that data. The way to force the data onto the disk is to CLOSE your file.

When you close your file is up to you. Some programs CLOSE only when the user selects the QUIT option -- this results in faster disk access, but if the user STOPS or RESTORES during the program, something could be lost. Other programs CLOSE after every PRINT# to disk. This virtually guarantees that no data will be lost, but it takes extra time to CLOSE and OPEN the file every transaction. The scheme you use depends on what is more costly to you - a little data lost or slow disk access.

Next time we'll get right into the READ and WRITE statements when working with RELative files.

**READY.**



# ? ? ? ? ? ? ?

NOTE: When writing **dh** with your question, be sure to give us every detail you can, like equipment used, software, specific print drivers, dip switch settings and what they mean -- that sort of thing. This will help us to help.

**Q:** In our group, "Matamoro Commodore Users," many are still playing the old program

**Boulder Dash** from Epyx because of the unique feature in allowing you to build your own sequence of caves. Each game is a real challenge and every time it is more difficult so there is no limit of entertainment. I am sure that there are a lot of **Boulder Dash** enthusiasts and we wish to share our games with fellow 8biters. And that is why we would like to know if the **Boulder Dash** program is public domain to avoid problems with Epyx. Dr. Fernando Perera

**A:** To the best of my knowledge, **Boulder Dash's** copyright is still held by Epyx. The game mazes you make with the program can, however, be placed into public domain libraries for use by others who have **Boulder Dash**. Very much like files created by a program such as **geoWrite** have been entered into the Public Domain, while the program itself is not in the Public Domain.

**Q:** My plus/4 has quit on me. I've written to PLUG and Toltech Inc. to no avail. Can you tell me where I might get it repaired? Richard Pattee of Fort Wayne, Indiana

**Q:** My monitor -- 1804 -- was struck by lightning and if it can be fixed I'd do so. Georgia E. Houseman of Burlington, Iowa.

**Q:** Do you have a source for floppy drive cables? A. Henderson of Bridgeport, Connecticut

**A:** In reference to the above 3 questions, **Tech Star Computer Center**, 7036 188th South, Kent Washington, 98032 ((206) 251-9040) is one of the many companies still

offering full support to **commodore** computers from the **VIC20** on. Tell them you read about it in **dieHard**.

**Q:** Where can I get an Excelerator Plus FSD2 disk drive for a C64 repaired? KOYNO International, Inc. of Orange, California which serviced them at one time, does not answer the



## Questions & Answers

last phone number I have. Cecil C. Cammack of Tyler, Texas

**A:** Emerald Component International, manufacturer of the FSD drives (or at least they distributed them) also made one of the various models of the 1541 disk drive for Commodore. Many of the parts should be interchangeable. This is why they were the only "third party" manufacturer who could claim 100% compatibility with the 1541 disk drive. But as we all know the equation, **commodore = commodore**, just isn't always true. Therefore why would this be any different. If you local service person thinks that the parts are not interchangeable, you might drop Tech Star a line. Their address is listed in the answer above.

**Q:** I believe I'm having trouble with the alignment of my disk drive. When I try to load a program the disk starts up then makes a knocking noise and gives me an error message, "can't find the file." For some reason, which I don't understand, it will run my **LOADSTAR** disks. My system is a C128D, external 1571, Star NX 1020 printer, JiffyDOS, Commodore 1084 monitor, external 1541-II, Xetec Supergraphix Jr, and Commodore 1700 RAM.

The internal 1571 drive is the problem. Gus Osnato of Ridgefield, New Jersey.

**A:** Probably the best thing to do would be to have a qualified service person check it out. Unfortunately, we're talkin' about down time for your computer. Contrary to popular belief, drive misalignment is a rare bird. It does happen, but the problem is usually something

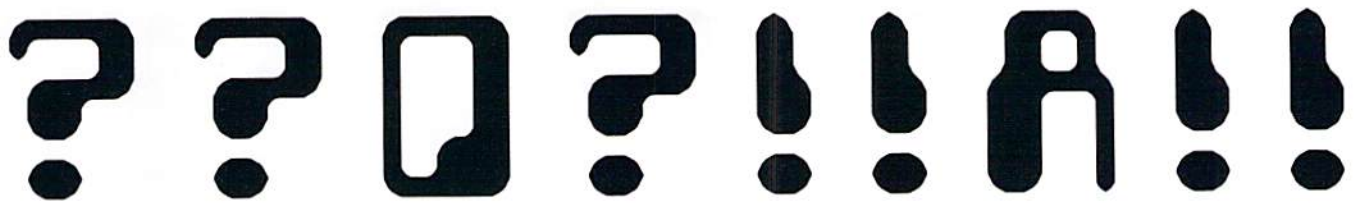
along the lines of dirty rails causing the head to misread information. You might try formatting a disk on your external 1571, fill it up with a bunch of files, validate it (**CATALOG** in 128 mode), then read the directory. Make sure both drives are in 1571 mode -- **OPEN15,8,15,"U0 >M1":CLOSE15** will place drive 8 into 1571 mode, simply change the 8 to a 9 for drive 9. If you can get though the validation and directory reading, the alignment should be ok.

**Free Sprite Software** has the **1541/1571 Drive Alignment** program (\$24.95 from **TENEX**). With this software, you can check the alignment and, if you have the proper tools and feel comfortable doing so, helps you set the alignment, stop setting, and drive speed. Of course, if you don't feel confident about doing this sort of thing yourself, you should take your drive in to have it checked by a professional.

Another possible cause of disk reading troubles is that the drive may be in 1541 mode while the disk you are reading was formatted in 1571 mode. You would be able to read the directory and some files. But some files may be written on the top side of the disk, that only the 1571 mode can read. This would explain why **LOADSTAR** will load and run.

**Q:** We have two **commodores**, one 128, and one 128D. I have tried unsuccessfully to access a second disk drive first, with the use of software instead of the dip switches. Do you know if this is possible and how it is done? Arthur Miller of Westminster, California.

**A:** The **Disk Addr Change** and **Change Unit** programs found on the **Test/Demo** disks



from Commodore will change the disk drive numbers. This is known as "softwiring" the drives. Some programs and utility cartridges support softwiring, such as **Maverick** and **Super Snapshot**. The Commodore programs are easy to run, just follow the prompts. When doing so, you need to be careful that the drives never wind up with the same number. If the drives are drive 8 and drive 9, renumbering should go something like this: change 8 to 10, 9 to 8, then 10 to 9. If both drives are 8 to begin with, shut off the outer most drive, then

renumber drive 8 to drive 9 and you're done. Turn on the outer drive and that is your drive 8.

Now you can load and run the software as you normally would, from the second drive. Some software will reset the drive numbers making it impossible to load from a second disk. Many programs that need to be booted will do this. Programs that do not do this will work fine.

**Q:** My friend bought the Star 1040 printer since he couldn't get the 1020 like I use. He has a C128 and I'm not sure of the interface. If you are familiar with this printer, it is a color printer, but unlike the 1020, you cannot change the colors from the front panel. To change colors, the program has to be set-up to change them. We did this with **Superscript 128** by setting up a print feature to incorporate the color commands rather than font commands. But this was no help. He wants to just change the print to a different color with programs such as **Print Shop** or such. Can a short program be used to change the color to the one you want prior to loading the desired program or would it be nullified when the new program is loaded. Danny Koleski of Louisville, Kentucky.

**A:** A BASIC program could be written to set up the printer for printing in one color.

Something along the lines of: `OPEN4<4: PRINT#4,CHR$(27)+CHR(color code)`. This is probably similar to what you did, only outside a driver file. The problem with this approach is when a graphics program like **Print Shop** sends anything to the printer, it first sets up the printer to do graphics and may reset the printer when doing so. This leaves you at step one again.

`CHR$(64)` or "@" is the code to reset many printers (consult your manual to be sure). If you could locate the reset code and strip it out

**A:** **Common Sense**, the software packaged with the **commodore** modems has a VT100 emulation package for the C128. Unfortunately these modems have been discontinued. Software Hut (Software Hut, Folcroft East Business Park, 313 Henderson Dr., Sharon Hill, PA, 19079) or other mail order houses may have some at fairly good prices. You might also check with a software dealer to see if you can find a copy of the program separately. Commodore shops that sell

used software may also have a copy. Software Support International, 2700 N. E. Andresen Rd., #A-10, Vancouver, WA 98661 (phone orders: (800) 356-1179) sells used software and may have it.

Another avenue to search is to write **Public Domain** software houses, such as **Caloke** or **8 Bit**, to see if they carry one. Don't forget to ask if they have one for CP/M.

Online services such as **Q-Link** or **Delphi** may have one. There is one on **Q-Link** for the C64 that was posted in 1987 called **VT100.c64 V3 Emulator**. The C128 version may have since been posted.

In the mean time, we'll place you a **Trader's Corner** posting.

**Q:** In an old BASIC program titled **TRIVIA** that I was reviewing, I noticed a `SYS46374: REM GARBAGE COLLECTION`.

When I looked up that location in my C64 memory map, it gave a description of the routine. The C128 has a built-in automatic String Garbage Collection. Can this `SYS` be safely used in C64 programs to avoid "Out of Memory" problems associated with programs a user may have written? Larry Pankey of Fallbrook, California

**A:** The C64's garbage collection routine had a bug in it. I don't know if it ever got fixed. This is the method of using the routine:



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--	--

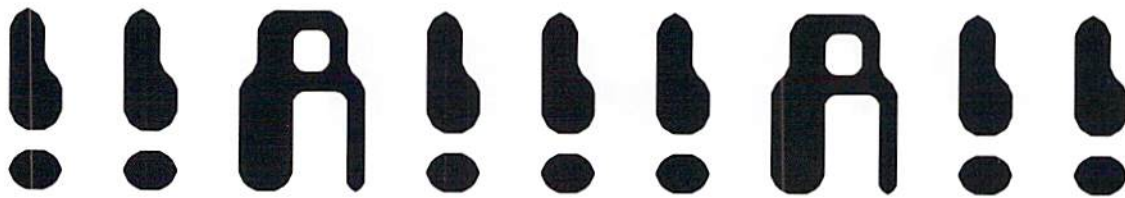


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of the program's print driver you should be able to set up the color by simply replacing this code with the color you wish to set up. Let me know what you come up with.

**Q:** I just packed my C128 away out of frustration. I was unable to track down a VT100 emulation program. Could you please tell me where I might find this? Sol Demuth of Cary, Illinois.



```
10000 SYS46374 : POKE1,0 :  
PRINT"[screen color]"FRE(0) :  
RETURN
```

To perform the collection simply GOSUB 10000 and it should go off well. Apparently the bug tries to send something like an OPEN to device #2 when FRE(0) is executed which causes a CLR. POKE1,0 takes care of that. The [screen color] is just so you don't see the memory size printed to the screen and is not necessary.

On the C128 garbage collection takes place whenever FRE(1) is checked.

**Q:** Can anybody tell me where I can find a Y serial cable (or switch box to allow two printers to be connected to one printer)? Ross Cherednik of Tacoma, Washington.

**A:** Master Software what you are looking for. It's called the Y-NOT?. Y-NOT? is a six foot "Y" serial cable with 1 male and 2 female jacks (\$15.00, plus \$2 shipping. Master Software, 6 Hillery Court, Randallstown, MD, 21133). They also have the Y-YES!, which is a "Y" serial cable with 3 male plugs. Be sure to tell them you read about it in *dieHard!*

**Q:** With your dedication to **commodore** 8 bits I figured you'd have a source for 1525-VIC Graphic Printer Cartridges. I've tried all the regular sources. Les Luusan of Howell MI.

**A:** Radio Shack carries these. Fortunately for us they are a universally used commodity. CAT#26-1480A is a three pack of black only and CAT# 26-1481A is the three pack with one red, one blue and one green.

**Q:** I tried something I haven't done in years, i.e. to type in a program. I picked RIP on page 25 (*dieHard*, October 1993) and typed it as slowly and carefully as possible. It would

not run. SYNTAX ERROR in 999, a non-existent line in that program. I then went back to my old manuals and examined RIP in detail. Some results:

1. Lines 1060 through 1140 are all GOSUB each with a RETURN. But once the program RETURNS after 1140 it hits line 1170 which says "GOTO 1070". This seems to be an endless loop with lines 3000 to 9999 permanently excluded. Did I miss something?

**A:** This is the main loop of the program. The REMARK statements to the right explain what is happening. A screen is drawn, then the SOUND1 routine is engaged. This will go on forever, unless you press <RUN/STOP>.

Lines 3000-3020 are accessed only when the program is run on a C64 and C128 and only once. Line 1060 sends execution to 10000, the setup routine. After setting up screen and character colors line 10050 will send execution to line 3000, to clear the sound routine. 3020 returns execution to 10070.

If the program is not being run on a VIC20 then line 10090 defines SP\$ as a null string, clears the screen and returns to 1070.

Lines 3028 to 3100 are used by the C64/C128 to create the thunder sound effects. These lines are accessed from line 30030 of the SOUND1 routine. This routine is accessed from the main loop at lines 1080, 1100, 1120, and 1140.

Line 9999 is just an END statement I put in when I first started writing the program. I section off areas of the program this way. If, while I write a program, I forget to place a RETURN, GOTO, or GOSUB my program will safely stop and I won't have a crash. Sometimes these END statements get used by the program later. Most of the time I leave them in simply to signify the end of a routine or loop.

2. Line 30010 contains 82 characters even if you leave no space after the line number. The limit on a C64 is 80. This bug is easily swatted by breaking the line in two. Did you intend this?

**A:** This is an old habit of mine, and it is worse when I write on the C128. I use the keyboard's abbreviation, rather than typing out the full

keyword. As a result I often get more characters on a line than 80. You can safely enter the line using the abbreviations as long as the total amount of text on the two lines that you can enter BASIC code into, is 80 or less. See *Oops!* page 6 for more on this.

3. Line 50150 seems to omit PRINTSP\$ and starts instead with [5 space]. Is this right?

**A:** No. These lines got messed up during typesetting. See *Oops!* page 6 for the fix.

4. Line 50160 is similar but starts with PRINT[10 space].

**A:** This line should have SP\$ after the PRINT (PRINTSP\$...), but is only necessary when run on the 8032 or other CBM 80 column machines. Once again, see *Oops!*

5. Line 60160 looks just like 50150 except for the omission of the letters "R I P" and different space numbers.

**A:** Booboo here, see page 6 once again.

6. There are RETURN commands at 3020, 3100 and 4999 with never a preceding GOSUB. James V. Christy of Clearwater, Florida.

**A:** The first two RETURNS have already been addressed above. Line 4999 returns execution from the SOUND1 routine. Line 30040 sends execution to 4000 when the program is run on a C16 or a plus/4.

As for the syntax error in line 999, there may be a bug in your computer's memory that gets saved every time you save the listing as you type it in. Sometimes bugs like this are created by running a partial program that has something missing (like a needed back switch) or remnant of a program that was in memory previously. It's always good to be sure the computer's memory is cleared before typing in a new one. You may have typed one of the POKE statements incorrectly or an IF statement that executes a POKE for some other computer (this PRG runs on all CBMs).

With the program loaded, type: 999 and hit <RETURN>. If the computer locks up, it's time to start over, or at least an earlier saved version of the program.

**READY.**



# REVIEW!

Christmas time is here again. And we all know what that means! Food! Gifts! More Food!

Ok, now, what to get who? Well, one of the chief things we at **dieHard** feel that **dieHard** should and does provide is support whenever and wherever we can. So we thought we'd help

you out with some ideas for those special gifts you plan to give this coming holiday. No, we can't help you pay for them, but we can give you a few ideas.

Let's see now... Aunt Mitsy gets the muffler. Uncle Milton gets the electric socks...better get fire insurance. The boss needs a new racket ball racket, things

always seem to get done faster when the boss is out of the office. But what to get that hacker cousin of yours... HEY! I know! Check out the goodies right here in **REVIEW!** There's bound to be *something* for that computer whiz. Perhaps a game would go great with that gift subscription...

## What any dieHard would want under a tree!



### Escape Route

The adventures of Eric Hawthorne, P.I.

For the C64 with joystick

Created by Jim Hilty

Creative Pixels Ltd.

1992 JC HILTY

\$19.95 (Creative Pixels Ltd., P.O.Box 592, Library, PA, 15129)

Reviewed by R. Scot Derrer

This is an interesting and fun little game. The only complaint I have is the constant disk access. And you know what that's like on an unenhanced C64 and 1541. S-L-O-W. Other than that, Escape Route is a wonderful game at a reasonable price.

In a 50's style mystery, you are Eric Hawthorne, P.I. and you have three weeks to solve the crime. The Icelady has stolen the rare Acme Diamond which you must find and recover. The first screen presents seven

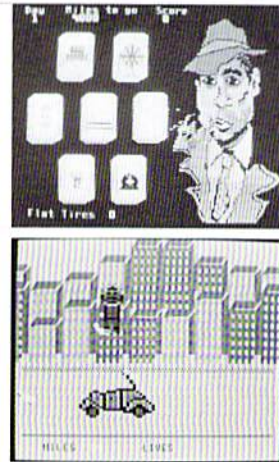
icons around which Eric is flashing over quickly, much like a roulette wheel. Press fire and hope you don't get the flat tire, just one of the icons. The other six icons are Piano Drop, Roulette,

Expenses, Driving, Gem, and the Icelady's Castle. The Flat tire was a popular one for me. Just lucky I guess. The graphics are adequate and the text and storyline is often humorous.

Sneak into the Icelady's castle while avoiding the ghost. Drive as far as you can through the ducks. Fight Ninja guards. Dodge falling pianos. In this madcap adventure, you gain and lose miles as you solve the case. It isn't easy

being a gumshoe.

All in all, this game is pretty good. The screen graphics are well done and the joystick response is timely. There is fun music and nice sound effects



scattered throughout different areas of the game. Again, the most frustrating aspect is the constant and slow disk access. By the time loading is finished, there is a good chance of losing interest in the game, especially for children. The gameplay

was OK for me, but some adults might find it too simple. It would be nice if there was more interaction with the player and less waiting for the next segment to load. \* \* \* Good

# Island of the Dragons

For the C64 with joystick  
Created by Jim Hilty  
Creative Pixels Ltd.  
1992 JC HILTY PRODS.

\$19.95 (Creative Pixels Ltd.,  
P.O.Box 592, Library,  
PA, 15129)

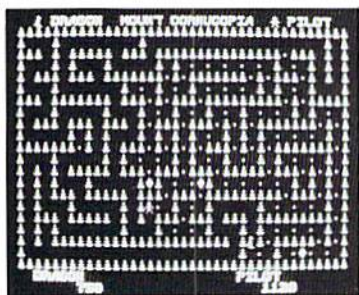
Reviewed by R. Scot Derrer

This is another great game from Creative Pixels Ltd. at a very reasonable price. Your plane crashes on an island and your girlfriend is taken hostage by an ancient prehistoric creature. You want her back so your sojourn begins. With the help of good dragons perhaps you can save her from the evil Dragon.

During the game you must collect certain items like strength, a key, a dragon's egg, an emerald ring, a healing potion, and a gold sword. There are eight territories you must conquer while you gather your strength points. And you will need them. The

territories are Mount Cornucopia, Thunderhead, The Avian Lowlands, The Plains of Tricorn, The Swamps of Dragdor, The Caverns of Wyvernia, and the Wyvern Cliffs. There is a lot of fighting necessary to accomplish your goal so it's not a game for the timid. It is entertaining, fun, and full of action.

It is entertaining, fun, and has action-filled moments. The graphics and text are simple, but well done and the joystick action responds well when you need it to. The music is nice, but sparse, and there are few sound effects. Unfortunately, disk access is a problem in this game. It occurs too often and takes a long time, causing one's interest to fade. There is enough action, however, to keep your interest once those particular game segments are loaded. The graphics and text are well done. The joystick action is constant. This is a game my family will play often and we look forward to more games from Creative Pixels Ltd. \*\*\* Good



# Test Pilot

For the C64 with joystick  
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Reviewed by R. Scot Derrer

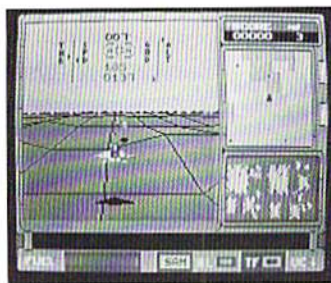
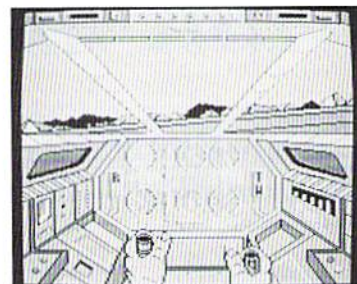
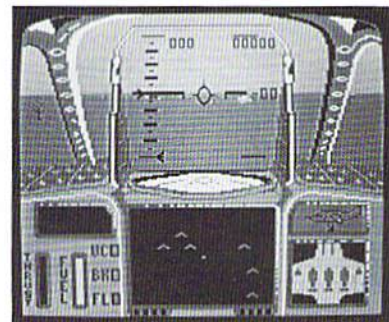
At one time these games came packaged with a Commodore 64C computer, a 1541-II disk drive and a

joystick. Nowadays you can find this package of five games dirt cheap. That's right, there are five complete games in this package and four of the games are fairly complex. These four games, **ATF** (by NDC PMD, Digital Integration), **Tomahawk** (by D. K. Marshal, Datasoft), **Harrier** (Mindscape), and **Infiltrator II** (by Chris Gray, Mindscape), are flight-simulator-type games in a war environment. The only simple game is **Crazy Cars** (by Titus, Titus Sarl) which is a racing game.

In the first four games you have various aircraft to learn how to fly and assigned missions to attempt. For instance, in **Infiltrator II** you fly a chopper across enemy lines. If you land your chopper successfully, you move on to your ground mission where you infiltrate the enemy lines into hostile territory, complete your ground mission and return to base. To give you an idea of the complexity of this game there are three different missions. The control panels are as extensive as the scenarios.

**Crazy Cars**, on the other hand is an easy to get into, fun racing game. You start by driving a Mercedes and if you're good enough, you can race a Lamborghini Countach or even a Ferrari GTO. Even though I couldn't get passed driving the Mercedes, I had a ball.

So grab your flight glasses and pick up this package. It is a good deal and will keep you occupied for many, many hours. \*\*\*\* Good



# Risers and Sliders

For C64 with joystick  
1992 MicroStorm Software  
\$ 24.95 (Plus \$ 3.00 S&H MicroStorm Software, P.O.Box 1886, Sidney, MT, 59270)

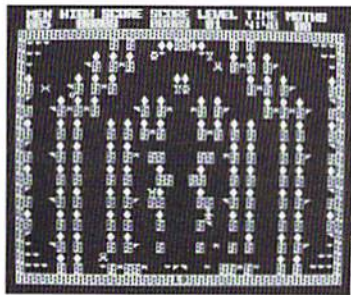
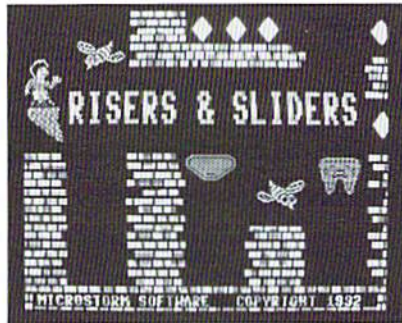
Reviewed by R. Scot Derrer

This is an arcade style maze game with fifty different mazes. Your goal is to collect diamonds as you maneuver around each maze, avoiding the killer moths! Within each maze, there are 'tricks' to learn in order to move to the next higher level. Game play is for one or two players and requires at least one joystick. With 50 different mazes packed with challenges and diamonds, there is a lot of gameplay packed into this game for a reasonable and affordable price.

I am not a joystick wiz so games like this are very challenging for me. Even if you were Edward Joystick-Hands, this game would be difficult to master. The goal is to move a little stick-type character around the mazes using risers and sliders while gathering up diamonds. The risers move you up and down and the sliders move you from side to side. There are even sliders which allow you to move diagonally. For each diamond, you get 1 point and for each 200 points, you get another life. Then there are those pesky killer moths whose bite is deadly so watch out. If you manage to kill

twelve moths, you get another life and you also get five points for each moth you kill. In moving from one maze to the next, you get 600 bonus points if you do it in one try, 400 points for two tries, and 200 points for three tries. Since you begin the game with only three lives, these bonus points are helpful. There is a time limit of five minutes per maze to add further stress and excitement.

This is a fun game that will keep you entertained for many hours. The cleverness of the game is the attraction. Graphically, the screens are adequate, although the C64 is capable of much better graphics than this. If it weren't for their movement, the moths would be very difficult to see. The



music for this game is really good and sounds contemporary. It's nice to hear music you haven't heard before.

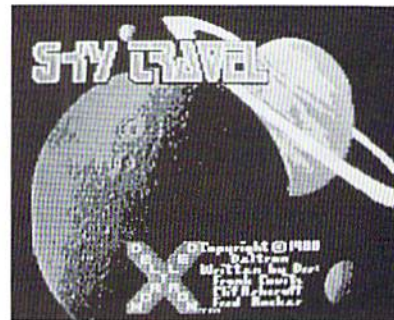
There is a time limit of five minutes per maze to add further stress and excitement. All in all, it is a great game for the money. \* \* \* \* Great

# Sky Travel

Created by Dr. Fred Ancker, Dr. Frank Covitz, and Dr. Clif Ashcraft  
Microillusions (Originally published by Commodore in 1984)  
1988 Deltron, Inc.  
\$20.00 (Plus postage. Creative Micro Designs, P.O.Box 646, E. Longmeadow, MA 01028 (phone orders: (800) 638-3263))

Reviewed by Brian L Crosthwaite

This package is dubbed *An All Encompassing*

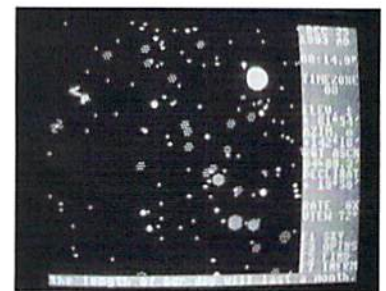


*Astronomy Program.* This is no overstatement. There are four main modes of operation within the program: *sky*, *map*, *set*, and *chart*.

## Sky Mode

This is the default mode when the program boots up. From sky mode you see just that, the Sky. The sky that appears upon start up is from Washington D. C. early morning January 1, 1988 with stars, planet symbols, and lines drawing the constellations along with their names. The planet symbols can be removed. The lines can be removed along with the names of the constellations. And deep space items such as quasars and galaxies can be made visible.

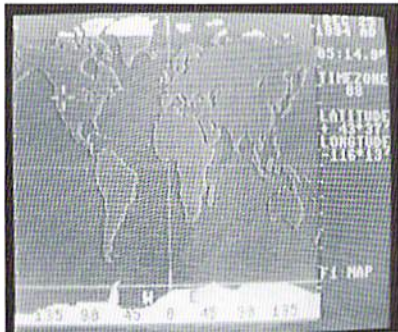
Any sky from earth may be viewed at any time from about 10,000 years in the past to 10,000 years in the future. Daytime skies are progressively lighter until they are light blue. The sky below the horizon sky can also be seen, the through ground view is shown is brown. This allows you to track objects from your chosen view point for more than just the time they appear in the sky. Daylight savings time is not taken into account. Time



is set determinate upon global timezone, not artificial timezones that have been set up based upon political boundaries. Each 15 degrees longitude equals one hour of time distance (360 degrees/24 hours=15 degrees per hour). This flexibility makes **Sky Travel** the premier Astronomy program, not only in the Commodore, but the Apple II and Mac realms as well.

### Map Mode

To go to any place on the planet you can do so easily via map mode. In map mode, the entire planet is displayed as a Mecator Projection. To select the location you want to view the sky from, simply move the cross hairs with the joystick or



cursor keys to the point over the planet and enter it either by pressing the firebutton or **<RETURN>**. The actual coordinates are displayed to the right, along with the time, date, timezone, elevation, azimuth, right ascension, declination,

rate % (time progression), view angle, and the f-key menu. This display is also visible from the sky and chart modes as well. The coordinates can be fine-tuned for a very accurate display. If you are not sure of the actual coordinates for your area, you can consult the back of the manual for the latitude and longitude table. This table lists many major cities of the world. Believe it or not, Boise is listed. If your location is not listed, you may be able to get an approximate setting by selecting a nearby city that *is* listed. For more accurate coordinates you may have to call the nearest University and talk to someone in their physics department.

### Set Mode

You select a mode by pressing **<f1>** until the mode you want to enter is displayed, then press **<RETURN>**. After the disk drive stops running the screen will change to that mode. Set mode can be entered from any screen and the current screen will still be displayed. The cursor will appear on top of the date on the right side of the screen. You can cursor around to set the date, time, timezone and calendar type: Gregorian, Julian, or Auto. The **<+>** and **<->** will increment and decrement (as do cursor up and down) whatever is highlighted under the cursor. Dates before 1 AD are automatically set to BC.

Since the world has only in the last 300 years adopted the Gregorian calendar and much of recorded history's dates are in the Julian calendar the Julian calendar will make your night

skies for those early dates accurate. The auto mode automatically changes the calendar depending upon the date.

### Chart Mode

This mode is similar to sky mode, except that it is a reverse field of the sky, that is, black stars on a white sky. This mode allows you to make custom charts of any sky and send them to your printer.

### More

Sky mode is what the program is all about. There are many features that **Sky Travel** gives you.

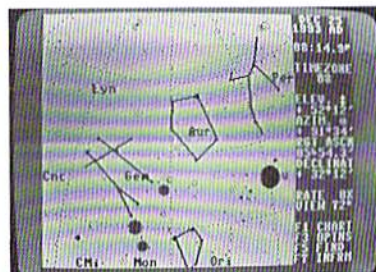
You can use the **find** option to find an object in the sky, it will appear centered on the screen. You can then lock in on this object add watch it over a period of time. The sky can be frozen in time or it can run in real time. This way you can set up your computer near your telescope and track an object all night long. The rate that the sky changes can be set to different speeds. From frozen, up to 64 times normal time, as well as run backwards up to 64 times normal time.

One feature called **sound** will display a starship that looks suspiciously like the USS Enterprise (NCC-1701) on the sky and chart. In the map mode the starship turns into a jetliner. When you move the cross hairs the sound of the rockets firing may be heard.

The viewing angle can be changed to zoom in close to objects so they fill the sky. Changing the viewing angle is much the same as using a more powerful telescope or a less powerful telescope. The objects, however, do not appear any larger.

The sky can be moved by moving the cross hairs (or the starship) to any screen edge and the screen will update as you turn your window on the sky.

If you want information on a celestial body that can be



seen, simply move the cross hairs over that object and press **<f7>**. The name of the object, along with other information including catalogue numbers, will load from the disk. These catalogue numbers are the HD numbers

(Henry Draper Catalogue), NGC numbers (New Generation Catalogue), and the Messier number (from the original 1781 catalogue done by Charles Messier). These numbers are standards used by astronomers world wide and allow you to do further research on objects at the library if you would like more information.

Certain areas have pictures that are ground objects. For



instance, when viewing the horizon from Paris, France the Eiffel Tower can be seen.

### The Manual

The manual is very thorough, professionally typeset with screen photos and well drawn diagrams. Along with general setup and use information, the manual takes you on a guided tour of the Universe. There is history/archaeology, navigation, and space exploration. The manual contains 61 pages of information that includes latitude and longitude tables, well known stars and their declination, right ascension, the constellations they're in and comments, constellations, major astronomical events, conversion tables for distance and hours/degrees, a glossary, supplementary reading and a command key table. It is well written and easy to follow.



### Draw backs

The only problem I had with this program was booting it on a system that uses a 1571. It can't happen. The program *must* be booted from a 1541 drive. Putting the 1571 in 1541 mode does not cut it. Like two titles from the **Test Pilot** package, this program is large, but loads exceptionally fast since it totally re-programs the 1541 drive in a way the 1571 can't be programmed.

Printouts are sent in VIC1525/MPS801 code so anyone who owns a VIC1526/MPS802 will have the usual printout problems.

### Overall

This is one heck of a package. It runs from one disk and is full of information.

\* \* \* \* \* Fantastic!

## Classifieds

Classifieds are \$0.25 per word. Write to **dieHard**, ATTN Classifieds, P.O.Box 392, Boise, Idaho, 83701.

NEW AND LIKE-NEW COMMODORE 128D computers with built-in 1571 disk drive and 30 day guarantee. Runs all Commodore 64 and 128 programs. Compatible with all accessories. This is the best of the 64/128 series. For more information call 801-466-8084 from 4 - 6 p.m. Mountain Time or write: Computer Bargain Store, 3366 South 2300 East, Salt Lake City, Utah, 84109.

## Trader's Corner

To respond to a **Trader's Corner** ad, please write to **dieHard**, Trader's Corner, P. O. Box 392, Boise, ID, 83701. Be sure to include the name of the person to whom you are writing along with their ID number .

**Wanted:** VT100 emulation software for the C128. Sol Demuth, #004471.

**Wanted:** **GEOWORLD** Magazines, **Transactor** Magazines, **Commander** Magazines. Cartridges for Plus/4, C16, VIC20. CBM 4040. SuperPET system disks. BLC #000000.

**Wanted:** Original **Compute!**, **RUN**, **Ahoy**, & **Transactor** disks. Pre-volume 5 **Transactor** mags. R. Scot Derrer #0000B.

**To Trade:** Working Cardco Write Now Cartridges, with manuals. Cecil M. Howard, #000574.

**Wanted:** I am looking for two out-of-print books from ABACUS Software: "C128 Internals" and "BASIC 7.0 Internals." Paul S. Highland, #000425.

**Wanted:** **Electronics Projects for your Commodore 64 and 128** by John Lovine. Paperback or Hardcover. Jack Miller, #001725.

**Wanted:** A program for recording and tracking stocks in a portfolio, that is user friendly. Marcus Krejci, #000137.

**Wanted:** DEAD OR ALIVE (working or not) Xetec Super Graphix Gold Printer Interfaces. Ronald L. Hanson, #003356.

**Wanted:** The program **Sylvia Porter 64** with documentation and works. Richard W. Herbert #001855.

**Wanted:** **WordWriter 128**, have documentation, need to replace damaged disks. H.A. Hamm #000652.

**Wanted:** Speech 64 cartridge. Dennis Ward #003367.

**Wanted:** BASIC 8 on disk or chip for the C128. Also, a Super Graphix Gold printer interface. Joey Holman #003416.

**To Trade:** I have a plus/4 and a 1520 printer-plotter that I would like to trade for a C128 with a good working mother board and power supply (a good keyboard is not a requirement). William B. Wells #000336.

**Wanted:** C128D System Guide and/or User Manual, CP/M disks for C128. Owners Manual for Digital's "Rainbow" word processor for the model PC100. Joseph A. Kaiser #002955.

**To Trade:** 1541 drive or GEORAM (512K REU) for two Timeworks programs with documentation: Wordwriter 128 and Database 128. J.R. Crawford, #004243.

**Wanted:** Working Cardco Write Now Cartridges, with manuals. Cecil M. Howard, #000574.

**Wanted:** Commodore 64/128 compatible hard drive, RAM drive, RAMlink, Quick Brown Box, etc. Mark VanderVoord, #001490.

**Wanted:** Games or programs for an old TRS-80, cassette only. Can trade for VIC20 games. Marc Lafreniere, #000377.

**Wanted:** Wordwriter 128 most recent version. Dennis Fry #003966.

**Wanted:** Information! Help me try out my swap meet Blue Chip disk drive. What power supply voltages go to which pins? Jeff Fleming, #003979.

**Wanted:** Electric Evangelist by Jim Strasma in the public domain. I am also interested in getting a Bible program. Harold E. Evans, #000480.

**Wanted:** MICROLOG disk and/or cartridge variously known as "Airdisk / Airrom / Airdos / SWL" for either the VIC20 or C64. Bud Hessedahl #003651.

**Wanted:** Master 64 by ABACUS Software for the C64. Don Cigelske Transmissions, #004020.

# PRG

## TipeRite V1.0 (C64)

By John P. Green

**TipeRite** is the long awaited checksum utility designed to assist users in finding errors when typing in listings for the C64 from the pages of **dieHard**.

Type in the listing **TipeRite V1.0** carefully and exactly as it is printed. When finished, save a copy or two of it. Before running the program, you will want to make sure that you do not have any other programs or cartridges in use that utilize the function keys, as **TipeRite** uses them.

When you RUN **TipeRite** you will be greeted with a FILENAME? prompt. If you are starting a new listing, type the appropriate filename (up to 13 characters). If you are continuing or checking a previously typed listing include the extension .CK at the end of the filename. This will tell the program that you want to load a listing into memory. It will then ask you for the last line entered, so remember where you left off. Make sure you have the disk in the drive that contains the file with the extension.

The prompt ENTER LINE n: will then appear, where n is the next available line in the listing or 10 for new listings. Type in the line, including the line number, and press <?RETURN>. Shortly, a four digit code will appear at the top of the screen. Check this code with the code printed in the magazine. If it matches, then the line is typed in correctly. If there are any mistypes, then the codes will not match. Take into account that **TipeRite** counts spaces in *and* out of quotes, therefore 10 PRINT and 10PRINT will get different codes. Substituting keywords with abbreviations, such as ? for PRINT, will result in a different code. It also notices when characters aren't in the right order, so PRNIT and PRINT will have different codes.

When you see the code, you will now be in Command mode (when you see a cursor you're in Edit mode.) When in Command mode the f-keys have the following functions:

<f1> - Saves current listing as a sequential file. Saving can be used so that you can continue a listing later and must be used before compiling. If there is a file on the disk with the same filename and has the extension .CK, it will be overwritten.

<f2> - Compiles current listing. To compile a listing you must

first save it, unless you already have a copy saved with the .CK extension. Compiling will list the program into memory and then erase the **TipeRite** program from memory. It is recommended that you save a copy of the compiled program before running it. After compiling, you cannot return to **TipeRite** unless you reload it.

<f3> - Lists the current listing in memory to screen. <CTRL> slows it down. When it is done, press any key to return to the line you were at last.

<f4> - Prints the current listing to a printer. If you have the coder enabled (default) it will print out the codes next to each line, provided you first put the codes into memory by checking each line. To print without codes, disable the coder (<f7>).

<f5> - Goes to a line number that you enter. You cannot go to any line higher than the highest line in the listing.

<f6> - Asks you to re-enter the line you are currently on. Use this if you mistyped a line to re-enter it.

<f7> - Toggle coder. When enabled (default) the code for each line will be displayed after you enter the line and the codes will also be printed (if you try printing a listing with codes and you haven't viewed each line, the codes printed will be 0.) When the coder is disabled, the codes will not be displayed or printed.

<f8> - Quit **TipeRite**.

<+> - View next line.

<-> - View previous line.

<SPACE> - Enter next available line.

You need not type a listing using **TipeRite** to check it. You may find this to be faster for you.

First save a version of your file as a program. Then save it as a sequential file by typing OPEN8,8,8,"0:filename,S,W":CMD8:LIST and press <RETURN>. Remember to include .CK at the end of your filename. When the cursor returns, type PRINT#8:CLOSE8 and press <RETURN>.

Load and run **TipeRite** and type in the filename you saved your listing as (with .CK) and the last line number. When it's done loading, go to the beginning of the listing and check each line's code. You can make any corrections just like you would if you had originally typed it in with **TipeRite**. Just remember to resave it and compile it when you are done.

There are certain aspects of **TipeRite** that you'll need to take into consideration. Entering a blank line counts. This will not matter when saving or compiling, however when you print a list you will see empty screen lines. **TipeRite** will automatically place the *next* line number on the screen. To remedy this, go to the blank line and re-enter it. Another aspect is that all listings begin with line 10 and increment by 10's. In actuality, these lines are only a reference for the checksum. You can type programs starting with any line number (under 63000) and increment however you want, just so long as you can keep track of what line you are on, what line number to type if you want to goto a line, and what the last line number is if you save and want to continue later. Another solution is to type in a program by 10's and then renumber it later. Another aspect of **TipeRite** is that it has a maximum of 750. This shouldn't be a problem, as 750 lines is about 75 blocks (that's BIG!) Last is that if you are loading a listing that's last line number is higher than 2000, it will take quite a long time to load. Don't worry, though. It eventually will.

You can't RUN programs while using **TipeRite**. You will have to first save and compile the listing to see if it works.

Well, that's about all you need to know. Of course, if anyone has ideas for improvements or upgrades, send them in. We might include them in the next version of **TipeRite**.

```

2940 63000 REM COPYRIGHT 1993
      LYNNCARTHY INDUSTRIES
      INCORPORATED ALL RIGHTS
      RESERVED
3009 63010 REM TIPERITE V1.0 - BY
      JOHN GREEN
2236 63020 DIM CH$(500):DIM GQ%
      (500):INPUT" [CLR]
      [2 CRSR DOWN]FILENAME";F$
      :IFF$=""THENEND
3060 63030 IF RIGHT$(F$,3)=".CK"
      THENINPUT"[1 CRSR DOWN]LAST
      LINE #";LL:LG=((LL+10)/10)
      :J=1
2277 63040 IF LL=0THENF$=F$+".CK"
      :GOTO63130
1627 63050 OPEN15,8,15:OPEN8,8,8
      , "0:"+F$+",S,R":INPUT#15
      ,EN,EM$:GET#8,A$:GET#8,A$
3018 63060 IF EN<>0 THENCLOSE8
      :CLOSE15:PRINT"

```

```

[1 CRSR DOWN]ERROR: ";EM$:END
1760 63070 IFJ=LGTHEN63120
2976 63080 A$="":GET#8,A$:CH$(J)
      =CH$(J)+A$:IFLEN(CH$(J))
      >82 THEN LG=J:GOTO63120
2354 63090 IFA$=CHR$(13)
      THENJ=J+1:GOTO63070
2454 63100 IFA$=CHR$(10)THEN
      LG=J:GOTO63120
1375 63110 GOTO63070
2210 63120 CLOSE8:CLOSE15:LN=LG-1
      :LK=(LG*10):GOTO63420
2079 63130 POKE204,0:LN=LN+1:LK=LN
      :IFLN>500THENLN=500:GOTO63420
1972 63140 PRINT"[CLR][2 CRSR DOWN]
      ENTER LINE";LN*10
      ;"[1 CRSR LEFT]":PRINT
2361 63150 A$="":GETA$:IFA$=""
      THEN63150
2384 63160 CH$(LN)=CH$(LN)+A$:PRINTA$;
2537 63170 IFA$=CHR$(13)THEN
      POKE204,255:GOTO63420
2690 63180 IFLEN(CH$(LN))>254THEN
      CH$(LN)="" :LN=LN-1:GOTO63130
1373 63190 GOTO63150
1668 63200 IF WG<>0THEN63240
1950 63210 MD=6:GQ%(LK)=0:FORI
      =1184TO1223:CG=PEEK(I):IFCG=160
      THENCG=32
2733 63220 GOSUB63570:CK=CK+INT(I/(
      CG+MD)):NEXT:IFCK<1000
      THENCK=CK+1000
2598 63230 GQ%(LK)=CK:PRINT"[HOME]
      CODE:[CYN]"CK"[BLU]"
      :QP=0:CK=0:CG=0
2210 63240 B$="":GET B$
      :IFB$=""THEN63240
2629 63250 IFB$=CHR$(133)OR
      B$=CHR$(137)THEN63650
2056 63260 IFB$=CHR$(139)THEN63500
1711 63270 IFB$="[SPACE]"THEN63130
2259 63280 IFB$=CHR$(134)
      THEN J=0:GOTO63380
2058 63290 IFB$=CHR$(140)THEN63450
2511 63300 IFB$=CHR$(135)THENINPUT
      "[CLR][2 CRSR DOWN]GOTO WHAT
      LINE #";LG:LK=LG/10:GOTO63420
2099 63310 IFB$="+ "THEN
      LK=LK+1:GOTO63420
2096 63320 IFB$="- "THEN
      LK=LK-1:GOTO63420
2057 63330 IFB$=CHR$(138)THEN63610
2055 63340 IFB$=CHR$(136)THEN63360
1372 63350 GOTO63240
2004 63360 WG=WG+1:IFWG<>1THENWG=0
1372 63370 GOTO63420
1752 63380 PRINT"[CLR][25 CRSR DOWN]
      ":FORJ=1TOLN
1813 63390 PRINTCH$(J);"[1 CRSR UP]"
2688 63400 NEXT:PRINT"[2 CRSR DOWN]
      PRESS ANY KEY TO CONTINUE"
2001 63410 K$="":GETK$
      :IFK$=""THEN63410
1757 63420 IFLK<1THENLK=1

```

```

1976 63430 IFLK>LNTHENLK=LN
2149 63440 PRINT"[CLR]
      [2 CRSR DOWN] LINE"
      LK*10":":PRINT"[1 CRSR DOWN]
      "CH$(LK):GOTO63200
1498 63450 PRINT"[CLR]
      [1 CRSR DOWN]QUIT?"
2275 63460 B$="":GETB$
      :IFB$=""THEN63460
2111 63470 IFB$="Y"THENEND
1787 63480 IFB$="N"THEN63420
1370 63490 GOTO63460
1677 63500 LR=LK*10:CH$(LK)=""
2114 63510 PRINT"[CLR][2 CRSR DOWN]
      RE-ENTER LINE";LR;
      "[1 CRSR DOWN]":PRINT
      :POKE204,0
2361 63520 A$="":GETA$
      :IFA$=""THEN63520
2941 63530 PRINTA$;:CH$(LK)
      =CH$(LK)+A$
2537 63540 IFA$=CHR$(13)THEN
      POKE204,255:GOTO63420
2789 63550 IFLEN(CH$(LK))>254THEN
      CH$(LK)="" :GOTO63510
1372 63560 GOTO63520
1882 63570 IFCG=34THENQP=QP+1
3399 63580 IFQP=1ANDCG=32THENC=160
2332 63590 MD=MD-1:IFMD<0THENMD=6
1504 63600 RETURN
1448 63610 OPEN4,4
2361 63620 FORJ=1TOLN:IF WG=0 THEN
      PRINT#4,GQ%(J);"(3 spaces)";
2142 63630 PRINT#4,CH$(J);:NEXT:
      PRINT#4,CHR$(10)
2049 63640 PRINT#4,CHR$(10)
      :CLOSE4:GOTO63420
2161 63650 IF B$=CHR$(137)THEN63700
1984 63660 PRINT"[CLR][2 CRSR DOWN]
      SAVING...":OPEN15,8,15
      :OPEN8,8,8,"@:"+F$+",S,W"
2086 63670 PRINT#8,CHR$(32)
      :FORJ=1TOLN:PRINT#8,CH$(J);
      :NEXT:PRINT#8,CHR$(10)
2439 63680 INPUT#15,EN,EM$
      :IFEN<>0THENPRINT
      "[1 CRSR DOWN]ERROR: ";
      EM$:FORT=1TO2500:NEXTT
1966 63690 CLOSE8:CLOSE15:GOTO63420
1467 63700 OPEN8,8,8,"0:"+F$+",S,R"
1622 63710 POKE152,1:FL=0:L$=""
      :PRINT"[CLR][2 CRSR DOWN]"
2540 63720 GET#8,CR$
      :IFCR$=""THEN63720
2863 63730 IF ST AND 64 THEN63800
2728 63740 IFCR$=CHR$(13) AND
      FL=0 THEN63720
2137 63750 PRINT CR$;:FL=1:L$=L$+CR$
1897 63760 IFCR$<>CHR$(13) THEN63720
2212 63770 PRINTCHR$(31);"GOTO63820"
      ;CHR$(154);"" :POKE198,0
2838 63780 IF NOT(ASC(L$)>47 AND
      ASC(L$)<58)THEN63710
1368 63790 GOTO63840
1561 63800 CLOSE8:LX=63000

```

```

1904 63810 PRINT"[CLR][2 CRSR DOWN]
      ":FORN=LXTOLX+60 STEP10:IF
      N<64000 THEN PRINTN:NEXTN
2056 63820 PRINT"LX=";N;:IFN<63950
      THENPRINT":GOTO63940"
      :GOTO63840
1467 63830 PRINT"[4 CRSR DOWN]"
      :GOTO63840
2159 63840 FORI=631TO640:POKEI,13
      :NEXTI:POKE198,10
      :PRINT"[HOME]";:END

```

**Lazy (All)**  
by B. O. Lowery

Motivated by laziness and by the **Decimal to Binary** program by James T. Jones (see **dieHard** Vol. 2 No. 9 Issue 14, page 23), Mr. Lowery has created another conversion program. **Lazy**, for all **commodore** computers, will convert from Bases 3-9 to decimal and from decimal to bases 3-9. LOAD"LAZY",8 and press <RETURN>.

```

2959 10 REM COPYRIGHT 1993 ALL
      RIGHTS RESERVED LYNNCARTHY
      INDUSTRIES INCORPORATED
2538 20 REM LAZY BY B. O. LOWERY
2158 30 PRINTCHR$(28):PRINT
      CHR$(147):GOTO50
2704 40 OPEN4,4:CMD4:LIST
      :PRINT#4:CLOSE4
2003 50 REM RUN40 FOR PRINTOUT
3321 60 REM ABOVE FOR SCREEN COLORS
      & PRINT OPTION
3774 70 PRINT"USE A SCIENTIFIC
      CALCULATOR TO"
3407 80 PRINT"CONVERT
      DEC/HEX/BIN/OCT."
1532 90 PRINT
2653 100 PRINT"USE LAZY, HERE, TO
      CONVERT"
2784 110 PRINT"1. BASES 3-9 TO
      DECIMAL."
2752 120 PRINT"2. DECIMAL TO
      OTHERS."
2380 130 PRINT"HIT 1 OR 2 FOR
      CHOICE -"
3611 140 GETA$:IFA$="THENGOTO140
2387 150 IFA$=CHR$(49)THENGOTO190
2389 160 IFA$=CHR$(50)THENGOTO450
3890 170 PRINT"START AGAIN":GOTO90
1310 180 :
4396 190 PRINT:PRINT"SHORTCUT BASE
      TO BASE 10"
2610 200 INPUT"TYPE BASE & HIT
      RETURN";B
2278 210 PRINT"TYPE NUMBER"
3049 220 PRINT"MUST USE SIX
      CHARACTERS"
3438 230 PRINT"USE LEAD ZEROS IF
      NEEDED"

```

```

1813 240 GOSUB310:T=B*P
1871 250 GOSUB310:T=T+P:T=T*B
1871 260 GOSUB310:T=T+P:T=T*B
1871 270 GOSUB310:T=T+P:T=T*B
1661 280 GOSUB310:T=T+P
1925 290 GOSUB310:T=T*B:T=T+P
2007 300 PRINT:PRINTT:PRINT:GOTO200
3612 310 GETA$:IFA$="THENGOTO310
2080 320 IFA$=CHR$(13)GOTO430
2272 330 IFA$=CHR$(48)THENP=0
2272 340 IFA$=CHR$(49)THENP=1
2273 350 IFA$=CHR$(50)THENP=2
2272 360 IFA$=CHR$(51)THENP=3
2271 370 IFA$=CHR$(52)THENP=4
2269 380 IFA$=CHR$(53)THENP=5
2269 390 IFA$=CHR$(54)THENP=6
2270 400 IFA$=CHR$(55)THENP=7
2269 410 IFA$=CHR$(56)THENP=8
2268 420 IFA$=CHR$(57)THENP=9
1495 430 PRINTP;
1637 440 RETURN
1482 450 PRINT
3247 460 PRINT:INPUT"TYPE TERMINAL
      BASE (RTRN)";B
2116 470 INPUT"TYPE DEC # (RTRN)";N
1999 480 S=INT(N/B)
1682 490 R=N-B*S:PRINTR;
2678 500 PRINT"*** READ BOTTM TO
      TOP ***"
1369 510 N=S
2041 520 IFB*S=0THENGOTO460
1484 530 GOTO480

```

**Scrolling Border 64 (C64)**  
by Tate Scharf

This relocatable C64 program scrolls text around the outer edge of the screen. When run, the program will ask for a start address. Locations 49152 or 820 are good choices. After entering a location, the program will pause for a moment, then end. To start the scrolling, type SYS SA, where SA is the starting address of the program (49152 or 820). To stop the scrolling border, type SYS SA+7 or hit <RUN/STOP> and <RESTORE>. To change the speed of the scrolling, type POKE SA+27,W:SYS SA replacing W with an number from 0 (slowest) to 255 (fastest).

```

2959 10 REM COPYRIGHT 1993
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3668 20 REM SCROLLING BORDER 64 -
      TATE SCHARF
3603 30 INPUT
      "ENTER STARTING ADDRESS";SA
3552 40 FORL=SATOSA+180:READA
      :POKEL,A:NEXT:C=24:GOSUB60
4488 50 POKESA+1,B:POKESA+3,A:C=11
      :GOSUB60:POKESA+5,B
      :POKESA+6,A:END
3580 60 A=INT((SA+C)/256)
      :B=SA+C-A*256:RETURN
1838 70 DATA169,24,160,192,76,11

```

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- C-SMario3, Krckout, Pkr. + 5+2 P-GPakC C128-40/80 60G 13+2
- D-128 Potpourri UPECT 5+2 Q-ClasseMU Bach-Haydn+ 7+2
- E-PLUS/4 Combo UPECT 5+2 R-PETS 347 PSG dom. 10+2
- F-Bke-Inet. Activitie 1+2 S-SPORTS 419 PSG Mix 10+2
- G-ED Pak-A MSEG 13+2 T-CARTOON Char 202 PSG 5+2
- H-ED Pak-B MSEG 70+7 U-COMPT PARADE 255PSG 5+2
- I-Bke Amazing C64or128 3+2 V-FASTCAD V1--Enhanced ---
- J-GPak-A SMario, Il, Ill --- CAD 3.0+SupportFile 10+2
- Brewery+Tetrie Clones --- W-FunGraphiceMachDemo+
- C64/64C/C128-40/80cl 9+1 50fnt+Hi Res ScrnDmp 6+2
- K-GPak-B Traehnn-Outlet --- X-1541/71/81 UTL Combo 12+3
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- JH03-C16 Combo 70 prge+ 4+1 JH11-G& Prge C16/+4/64 4+1
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- Speedecrpt/Reemblr+4 9+1 JH14-RugRider+4/64 JYS 7+1
- JH06-UT+4.,Prntcr,Cpre+ 12+3 JH15-Graphice+Prge +4 7+1
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```

,192,169,49,160,234,162,0
,134,251,120
1847 80 DATA141,20,3,140,21,3,88
,96,165,251,201
,10,240,5,230,251
1843 90 DATA76,49,234,173,39
,4,133,2,173,231,7,133
,3,173,192,7
2500 100 DATA133,4,169,216,133
,251,169,3,133,252,169,15
,133,253,169,8
2500 110 DATA133,254,162,39,160,0
,185,193,7,153,192,7
,200,189,255,3
2503 120 DATA157,0,4,202,208,240
,162,23,160,0,165,251
,24,105,80,133
2497 130 DATA251,165,252,105,0
,133,252,165,253,56,233
,80,133,253,165,254
2498 140 DATA233,0,133,254,177
,251,133,5,177,253,133,6
,165,251,56,233
2500 150 DATA40,133,251,165,252
,233,0,133,252,165,253
,24,105,40,133,253
2499 160 DATA165,254,105,0,133
,254,165,5,145,251,165
,6,145,253,202,208
2497 170 DATA185,165,2,141,79
,4,165,3,141,230,7,165
,4,141,152,7
2661 180 DATA132,251,76,49,234
,110TO172,115TO175,120TO176
,130TO177,135TO175,140
110 DRAW1,175,140TO170,148TO167
,150TO162,153TO160,153TO155
,151TO160,150
120 DRAW1,160,150TO162,145TO169,140
130 DRAW1,160,150TO150,150TO145
,149TO140,146TO130,147TO120
,142TO110,142TO100,138
140 DRAW1,100,138TO100,142TO95
,141TO90,141TO81,141TO80
,143TO73,142TO70
,140TO65,140TO65,133
150 DRAW1,65,133TO60,132TO56,130TO58
,124TO60,122TO65,124TO70,125TO75
,124TO80,122
160 DRAW1,64,123TO60,120TO55,115TO52
,110TO56,108TO60,109TO65,109TO70
,111TO75,115TO79,120
170 DRAW1,70,111TO80,108TO85,105TO90
,103TO95,101TO100,100TO105
,95TO108,88
180 COLOR1,10:PAINT1,170,130
190 COLOR0,1:DRAW0,65,133TO70,130TO75
,130TO83,130TO88,131TO90,132TO95
,135TO100,139
200 DRAW0,83,130TO80,124TO75,124TO70
,125TO63,122:DRAW0,80,122TO79
,120TO75,115TO70,110
210 DRAW0,79,108TO85,105TO90,103TO95
,101TO100,99TO105,95TO109,87
220 DRAW0,115,86TO116,100TO115
,105TO112,110
230 DRAW0,91,102TO106,105TO110
,110TO111,115TO111,120TO112
,121TO111,125TO114,130TO115,135
240 DRAW0,115,135TO118,139TO115
,141TO109,139TO109,140TO110
,136TO115,135
250 PAINT0,111,139
260 DRAW0,90,126TO95,125TO100
,129TO101,131TO97,131TO92,130TO92
,128TO95,125
270 PAINT0,95,129:DRAW0,160,150TO165
,144TO170,140
280 DRAW0,119,129TO122,136TO128
,130TO136,140TO130,138TO127
,132TO126,130TO125,122TO127,120
290 DRAW0,127,120TO130,116TO135
,111TO140,112TO145,115TO150,120
300 DRAW0,110,90TO109,94TO110
,100TO111,105:DRAW0,70,115TO76
,116TO70,119
310 DRAW1,123,85TO125,80TO126,70TO125
,65TO121,61TO120,62TO115,61TO111
,60TO107,55
320 DRAW1,107,55TO105,50TO104
,40TO110,41TO115,43
330 DRAW1,115,43TO120,43TO125,43TO130
,45TO135,48TO140,45TO145,44TO150
,46TO152,49
340 DRAW1,152,49TO156,45TO160,42TO170
,41TO175,40TO180,40
350 DRAW1,180,40TO179,43TO175,50TO172
,55TO170,59TO165,60TO161,60TO160
,62TO163,70
360 DRAW1,163,70TO169,75TO170,79TO168
,81TO162,83TO160,82
370 DRAW1,160,82TO153,80TO154,85TO160
,90TO165,91TO170,90TO180,88TO190
,87TO195,86
380 DRAW1,195,86TO200,86TO210,90TO215
,92TO221,100TO229,110TO230,115TO231
,120TO232,125
390 DRAW1,232,125TO230,130TO226
,136TO223,140TO221,138TO217,140TO215
,145TO210,142
400 DRAW1,210,142TO205,141TO200
,142TO190,141TO181,140TO175,140
410 PAINT1,225,125:DRAW0,125,85TO130
,86TO135,87TO140,90TO145,92TO150
,96TO154,100
420 DRAW1,154,100TO160,110TO164,118
430 DRAW0,161,110TO165,108TO169
,110TO171,115TO174,120TO176
,125TO175,130TO176,125TO174,140
440 DRAW0,115,43TO125,49TO123,49TO132
,54:DRAW0,122,52TO130,55TO129
,57TO125,59
450 DRAW0,130,55TO121,55:DRAW0,159
,52TO162,49TO170,45TO175,44
460 DRAW0,153,47TO159,51TO160,55TO161
,60:DRAW0,161,55TO162,50
470 DRAW0,161,80TO163,76TO168,76TO170
,79TO166,81TO161,80:PAINT0,165,80
480 DRAW0,140,61TO145,60TO150,61TO153
,68:DRAW0,153,66TO147,66TO145
,64TO140,60:PAINT0,149,63
490 DRAW0,180,130TO185,129TO195
,133TO190,129TO186,122TO185
,116TO185,110TO187,103
500 DRAW0,187,103TO191,100TO200,96TO206
,97TO210,100
510 DRAW0,134,72TO136,78TO140,80TO147
,80TO151,80:DRAW0,222,136TO222
,132TO228,136TO225,131
520 COLOR1,3:CHAR1,17,20,CHR$(14)
+"[space][shift M]ERRY [shift C]
HRISTMAS":COLOR1,1
530 COLOR1,6:CHAR1,17,21,CHR$(14)
+"[2 space]FROM DIE[shift H]
ARD":COLOR1,1
540 GETKEYES:GRAPHIC0,1

```

**READY.**



## Christmas Deers (C16, C128, & plus/4)

by Tom Francis

This 40 column graphic program is a beautiful example of BASIC 3.5's & 7.0's graphics capabilities. Tom painstakingly uses the DRAW and PAINT commands to produce a very appropriate Christmas scene for our readers.

```

10 REM COPYRIGHT 1993 LYNNCARTHY
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RESERVED
20 REM CHRISTMAS DEERS FOR C128
30 REM BY TOM FRANCIS
40 COLOR0,1
50 COLOR1,1
60 COLOR4,6
70 GRAPHIC1,1
80 DRAW1,79,108TO81,100TO83,93TO88
,90TO95,89TO100,87TO110,86TO112
,82TO115,86TO120,85
90 DRAW1,120,85TO123,85TO130
,86TO135,87TO140,90TO145,93TO150
,96TO154,100TO165,118
100 DRAW1,160,110TO165,108TO169

```

# of pink novels, software turntables, and forgotten logitheques

## ART AND THE HUMAN FRIVOLITY

Art has been sometimes outlined as a product of the human mind that retains or gains value with time regardless of fashions and customs of the period when the product was conceived. Apparently, all the millions of hours spent by programmers on the C64 went to produce the software equivalent of the literary pink novel, quickly in fame and quickly forgotten. All for a quick buck.

Time judges the value of human accomplishments. And the verdict is out, the accomplishment of all this effort for almost ten years is no more than a forgotten logitheque (software collection), one step removed from the attic waiting for the dump with the next household move. How can the world get tired of a major artistic piece, unless the world never really appreciated its value? Very much in line with the attitude of the father of George Gershwin who judged a music composition by its length, the world judged software compositions on the C64 by their technical novelty! Once the novelty was no longer new, nothing was left.

I just cannot believe that **ZORK** has been forgotten. Recently mentioning it to a software salesman, I found he didn't know what I was talking about! Others don't even know what a Commodore 64 is, they think it is an Atari-type of machine at best. Odly enough, they remember the old Atari 8-bits but not the Commodore!!

Only six years ago you could not hear anything other than the marvels of the C64. IBM then could only put out a "ding" sound and a 3-color

palette (black-white-amber or green). Stores like the Wherehouse and Sears had 60% C64, 30% Atari and 10% a mix of Apple and IBM. By the way, this last category was productivity software only except for the Sublogic **Flight Simulator** that was there for the after-hours entertainment of the poor executive with his expensive machine, certainly not for the quality of its graphics as the program was very slow in its screen updating -- far from the sharp, fast programs available on the C64 such as the **ACE (Air Combat Emulator)** masterpiece by England's Cascade Software Ltd.

I can't believe Commodore, the parent of the C64, who among other memorable statements, paid for such everlasting commercials as the "number of aliens killed vs programming accomplishment." You remember. That parent who abandoned its child as soon as the child could not support the parent! So the parent went on parenting new machines every year, each more expensive than the one before, until people just got fed up and went to the competition.

Not surprisingly, the same thing happened to the world around the C64.

Where are the reviewers that raved about **Jumpman**, **Raid On Bungeling Bay**, **ZORK** and **Telengard**?

Where are the Jim Butterfields that painstakingly described how to program in BASIC and Machine Language? (8-bit mind you, as you can forget about 16-bit -- only an android can follow that!)

Where are the pirates that boasted themselves of having more than 7000 programs for the C64 just 3 years ago in

**Compute's Gazette**? Their trashcans must be of an epic proportion!

In the meantime, guess what is the equivalent of Nintendo in Europe. This just blows my mind. This evolution tells me a lesson of history, how mechanized the human mind, when taken as a whole, really is. In America we rave about Japanese products and we hate them as a result! While in Europe they rave about American stuff and hate us in the process! So we buy Nintendo, they buy Commodore!

Commodore itself never knew the genius of its "little machine."

## THE GENIUS AND THE SOFTWARE TURNTABLES

The C64 is an open book. The software developers knew that, witness the fancy copy protection schemes they were putting out.

Let me explain via an example: the story of **Skate Crazy**, a marvelous artistic piece by Gremlin Graphics of England. It took three years for Mastertronic to import this program. In 1989, they were running out of programmers for the C64 as everybody went -- guess where! So they barely succeeded in providing a loader for that program with their logo on it. Except that they totally missed the main feature, the ability to jump from one part of the program to another part -- two complementary skating simulations in a gorgeous city background. The loader just simply considered the two parts as totally separate games, which you would select at start! As an immediate result, the program crashed when you selected to go to the other part at the end of a

level. What a way to trash beauty!

Anyway, if I would have dealt with an IBM or Amiga program, there would have been no way an ordinary user such as myself could have fixed the mess. But this was a C64 program! So I went into the program with my very simple debugger -- **Micromon** -- and unraveled a Trilogic-crunched binary file (two files to be more exact) and found out what was wrong. I reconstructed the missing link between the two parts of the program and now my **Skate Crazy** runs as originally intended, and furthermore it saves high scores to disk!

The "big machines" are closed, they use compiled programs in floating memory locations such that even the slightest modifications are almost impossible to make, certainly not on a casual basis as the average user can do. Their ubiquitous auto-boot completes the picture of software turntables, operating on canned products very much in line with the Nintendo system with its cartridges!

Long gone is the time when interest in real computing was pervasive everywhere, especially with the youth of this country. Where are the Will Harveys of today? He wrote **Music Construction Set** at age 18! The Commodore Clubs member's age group is now closer to 60 than to 30 and are still looking for word processors! (Fortunately we now have **The Write Stuff**.) Where are the **Turbo Outrun** (Sega) sessions at the Clubs on giant screen??? Where are the "hackers on modem" exchanging fun notes on the forbidden computer memory they visited the night before? Where is the

back room where you could get access to ... (you know what!)

#### OF TINMEN AND 2-DIME HACKERS

Even in the heyday of the C64, the typical salesman credo was that the C64 was a fun machine for kid games and, on the side, a machine for simple home applications if Dad was too poor to buy himself an IBM.

The salesmen of the software industry (and this includes the corresponding press) have never understood the difference between computer capabilities and software characteristics.

Back in the days of the new Macintosh (1984), that machine was sold as a fantastic new machine. Any respectable programmer could see that the only thing new about it was the part of its operating software dealing with the operator's interface, mainly the introduction of the concept of windows, a concept which could be applied to all machines including the C64. It took 3 long years for GEOS to show up after that! It took 7 years for Microsoft to "discover" **Windows**.

In its corner, the C64 was left in the cold while a machine that didn't even have color was making the headlines of magazines just for a simple piece of software!

In the same vein, along its entire history, the C64 has suffered to the point of dying from the ignorance of programmers about its superb, well ahead of its time, characteristics.

After all, the machine comes with 110k of memory including CPU and disk drive RAM/ROM. It has 2 micro-processors that can operate as co-processors if the programmer knows how to make them -- one in the CPU and one in the drive. It has memory expansion capability up to 16 Megs with RAMLink, well beyond IBM's potential. It has graphics and sound chips that are very close to the quality of the fancy named cards of its big brother. And when it comes to speed of

processing, its 1Mhz is very fast considering that it is not encumbered with three layers of compiled operating system routines within its programming as it is required in order to run 16-bit machines.

I have first hand experience about this Industry ignorance.

First, there was Commodore in 1982 struggling to put out software for its new machine that could only sublet the work to HAL Labs (now defunct) who came up with 8K cartridges for a machine that had ten times that memory!

Second, I still remember calling Microprose in 1983 when Sid Meier was trying to put out **Hellcat Ace** and **Spitfire Ace** as a conversion from Atari. He could not figure out how to have a clean split screen on the C64!

Third, also in 1983, there was Atari who attempted to bring the software from their limited machine (48k w/o bank switching capability) to the C64 using only a very small portion of the C64 memory.

Fourth, there was that CEO of Electronic Arts (EA) that called me in 1984 to show his veiled contempt for that "cheap machine" that bothered him as being too much of an open book. That's why EA produced such lengthy loaders just to hide their programs from casual observers, putting out lousy software in the process, such as **Axis Assassin**, **Last Gladiator**, **Realm Of Impossibility**, etc., etc., being mere conversions from Apple.

Fifth, there was Sheldon Leemon of **Compute!** who, in 1985, said in one of his books that he couldn't figure out why there was RAM expansion capability in the C64 with so much memory available!

Sixth, by 1987 Infocom (the maker of **ZORK**, now defunct) attempted the use of the new RAM Expansion but it required 15 minutes to load their program in that expansion (**Sherlock**, **Border Zone**, **Hitchhiker's Guide!**)

Why didn't they call Harald Seeley of Alien Technology

Group to the rescue with his **VMAX???** In fact, we had to wait until 1987 to get that fast loader called **VMAX** (and the corresponding Warpspeed cartridge) to get a decent loading speed for C64 software!

Going back to EA, Electronic Arts never understood that there was no way you could import programs from Apple to the C64 without putting out a monstrosity. Apple sound is tinny and its graphics are primitive (no sprites). Remember that at one time there was an Apple emulator for the C64!!! Apple couldn't emulate the C64, that's for sure.

How much better **Music Construction Set** (1983) would have been if Will Harvey sat at a C64 instead of an Apple first? It certainly would not have that tinny sound and would sound more like **Master Composer** from Access.

EA only came around to get rid of their slow loader very late in the game (1988) and tried to steal C64 programmers from Epyx and Accolade which by then were leaving EA in the dust on the big C64 market thanks to programs made genuine for the C64. They didn't succeed -- so they quit.

Across the Atlantic, it took 3 solid years (1986) for companies such as Gremlin Graphics, Mirrorsoft, Rainbird, Firebird, Hewson Consultants, and Ocean Software to come out from imitating the early U.S. programs. But then -- what fireworks with **Paradroid**, **Krakout**, **Eliminator**, **Uridium**, **Starglider**, **Rambo** and the like!

As far as I know, the programmers that used 90% of the C64 capabilities can still to this day be counted on the fingers of the hands:

Darrin Stubbington of Sega with his **Turbo Outrun** and **Crackdown**

Bruce Carver of Access and his **Beachhead**, **Echelon** and **Mean Streets**

Gary Kitchen and his **Doodle** and **Gamemaker**

Russell Lieblich of Activision and his **Master of**

#### the Lamps

Andrew Braybrook and John Phillip for **Uridium** and **Eliminator**

Harald Seeley of Gamestar with his **VMAX** loader

Ben Dagglish for his sound track on **Krakout** and many others

Kevin Pickel for his **Test Drive** at Accolade

Richard Garriott (and Dr Cat) with his **Ultima** series

The German group, System 3 for the **Last Ninja** at Activision.

When you look at and listen to the products from these people, you wonder if the switch to an Amiga is really justified. For me it is definitely not!

In summary, unlike what happened for many machines, the programmers of the C64 had to come up to the machine level, while for all these 10 years the machine was there ready to be used to its fullest. This was the problem faced by the C64, it was too much in advance of its time for programmers!

Look at the gap in software technology between Commodore's **Avenger** (1982) cartridge and Readysoft's **Wrath of the Demon** (1991). It is just mind boggling to believe the same machine operates both! It just took all that time for the programmers to discover the C64, and a big push from the Nintendo competition! Too bad now it is too late!!!

#### SUGGESTIONS FOR THE FUTURE

Concerning any company or individual that intends to continue producing C64 software, I would strongly suggest they require use of RAM Expansion as part of their release, provided they include a fast loader in the vein of **VMAX**. RAM Expansions can be found these days for half the price of Gameboys for crying out loud!

They should also have a schedule to release large cartridge games in the vein of **Wrath of the Demon** at least to see the public response in the U.S. (We



know the response in Europe!)

They must keep the high standard of graphics and sound that has been available for some time now. They must not fall in the trap of importing blindly from other machines! Witness **Electronic Zoo** in 1991 that was imported from the Spectrum, a lousy machine.

When it comes to the remaining C64 lovers, I will strongly suggest to them to first preserve their logitheque and second to improve it. Now that the set of software for their machine is mostly closed, either they can find a program dirt cheap or they can't find it at all!

I would advise everybody to use **dieHard** as an exchange office where references for every worthwhile program could be found, either via purchase or exchange.

I myself have a 2,100-strong logitheque with 70% commercial programs and could be a source of software impossible to find.

Another worthwhile concept for **dieHard** would be to provide an up-to-date hit list of programs and review those considered the best, regardless of when the programs were produced (example: The Scott Adams' Adventures).

Many programs being orphans as the companies that made them are no longer with us, there are C64 users that can volunteer to modify these existing programs as deemed necessary. Examples such as adding high score save to disk and fast loaders are only a small part of possible things! Hint books that can no longer be found from the original issuer can certainly be found somewhere, etc, etc.

A final suggestion will be for **dieHard** to maintain a list of new programs and a list of software companies and individuals that intend to produce new C64 software so their readers would be able to get the software before it disappears!

Let's hope for the best!

*Be aware of copyright laws. Just because a company no longer exists does not give*

*anyone the right to distribute copyrighted materials. As far as modifying programs goes, I suppose that is up to the individual who owns it. If you tear pages out of a book and glue them to the cover, you have modified it, but you cannot make copies and distribute them.*

**dieHard** spotlights software in many ways. We have **REVIEW!**, **Archaic Computer**, and **Rarities**.

**REVIEW!** of course, reviews today's software while **Archaic Computer** shares sources for older items, usually not currently being produced. **Rarities** spotlights supporters of the **commodore 8-bit world** who often sell hard to find software. We have **Trader's Corner** for those seeking an exchange.



**READY.**

Look out below!



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**\*\*\*\* BASIC BASIC \*\*\*\***

**BY R. SCOT DERRER 93 DIEHARD**

**READY.**

*BASIC BASIC is a series of columns on the Rules of BASIC and BASIC programming. Last month began an in-depth look at data storage. VARIABLES were discussed with particular attention to INTEGERS, FLOATING-POINT numbers, and ARRAYS.*

If you recall, any array is formed in memory by the DIM statement. The DIMension statement consists of a variable name consisting of an alphanumeric label with up to two characters. The label is followed by a % to signify an integer variable, a \$ signifying a string variable or nothing which makes it a floating point variable. A\$(5) is a string array with 5 elements. A(5,5) is a two dimensional floating point array with 25 (5\*5) elements.

Theoretically, an array may have up to 255 dimensions, but only so many characters can fit in one line of BASIC (C64, PET, CBM - 80 characters per line; C128 - 160 characters per line; Plus/4, C16, VIC20 - 88 characters per line). The maximum number of elements for an array is 32,767, but this is limited in size by available memory. There is no need to use the DIM statement if your array will have 11 or less elements, the computer will automatically dimension variables to 10 (don't forget, zero is an element).

Subscripts (the coordinates within an array) can be integer constants, variables, or the integer result of an arithmetic operation or calculation. The subscript value can be equal to or greater than zero up to the highest defined element. If the subscript value ever exceeds this range or if you try to reference an array element out of the defined arrays' range a ?BAD SUBSCRIPT ERROR IN nn will be displayed. For example: trying to access A(6) of the array DIM A(5).

**REMark:** There is some internal overhead (memory usage) when arrays are used in BASIC programs. The type of array determines the amount of memory used. Integer arrays use the least amount of memory and floating-point arrays use the most. While programming in BASIC, memory storage is a precious commodity. Large arrays use quite a bit of memory and when combined with large BASIC programs, it is easy to run out of available memory. The following diagram demonstrates how to calculate the memory each type of array uses.

- 5 bytes for the array name
- + 2 bytes for each dimension, then
- + 2 bytes for each integer element
- OR 5 bytes for each floating-point element
- OR 3 bytes for each string element
- AND 1 byte per character in each string element

Initially, 5 bytes are used for the array name, then you add 2 bytes for each dimension. After that the number of bytes added depends upon the type of array being used. Here are some examples of the different arrays and the amount of memory each uses.

Array Type	BASIC	Calculation	Bytes
Integer	DIM A%(12)	5+(2*12)+(2*12)	=53
	DIM A%(8,9)	5+(2*8*9)+(2*8*9)	=293
Floating-point	DIM A(12)	5+(2*12)+(5*12)	=89
	DIM A(8,9)	5+(2*8*9)+(5*8*9)	=509
String Array	DIM A\$(12)	5+(2*12)+(3*12)+12	=77
	DIM A\$(8,9)	5+(2*8*9)+(3*8*9)+(8*9)	=437

## What Do You Do With Arrays?

Good question. Arrays are very useful in programs that manipulate sets of numbers or characters. Games, puzzles, score keeping and grade averaging are examples of types of programs that might use arrays. Here is a BASIC program that loads all the elements of an array with the letters of the alphabet in ASCII format and then dumps the elements of the array to the screen in both ASCII and character formats. Type it in and RUN it.

```
10 PRINT "[CLR]"
20 DIM AR(26)
30 CH = 64
40 PRINT "[CRSR DOWN]LOAD THE ARRAY"
50 FOR A = 1 TO 26
60 : CH = CH + 1
70 : AR(A) = CH
80 NEXT
90 PRINT "[CRSR DOWN]THE ARRAY IS LOADED"
100 PRINT "[CRSR DOWN]DUMP THE ARRAY IN ASCII CODE
FORMAT[CRSR DOWN]"
110 FOR A = 1 TO 26
120 : PRINT AR(A);
130 NEXT
140 PRINT
150 PRINT "[CRSR DOWN]DUMP THE ARRAY IN CHARACTER
FORMAT[CRSR DOWN]"
160 FOR A = 1 TO 26
170 : C = AR(A)
180 : PRINT "[1 space]"CHR$(C) "[2 spaces]";
190 NEXT
200 END
```

After you type this program and RUN it, the following is what you should see displayed on your screen.

```
LOAD THE ARRAY

THE ARRAY IS LOADED

DUMP THE ARRAY IN ASCII CODE FORMAT

 65 66 67 68 69 70 71 72 73 74
 75 76 77 78 79 80 81 82 83 84
 85 86 87 88 89 90

DUMP THE ARRAY IN CHARACTER FORMAT

 A  B  C  D  E  F  G  H  I  J
 K  L  M  N  O  P  Q  R  S  T
 U  V  W  X  Y  Z
READY.
```

In the interest of furthering our education, let's examine the above program line by line.

Line 10 clears the screen.

Line 20 defines a floating-point array with 26 elements. This array uses 187 bytes total.

Line 30 initializes a floating-point variable to 64. The ASCII codes for A to Z are 65 to 90.

Line 40 prints a string to the screen indicating the array will be loaded. These type of messages are useful to let you know where the program is at as it RUNs.

Line 50 begins a FOR-NEXT loop to load the array with 26 elements.

Line 60 adds 1 to the variable that was initialized to 64 in Line 30.

Line 70 loads the 26 elements of the array with the current value of

the variable that gets incremented by one in line 60. Because of the FOR-NEXT loop, each time A is referred to it is incremented by 1.

Line 80 refers back to the FOR-NEXT loop in Line 50 until 26 is reached.

Line 90 prints another string to the screen to indicate the array has been loaded successfully.

Line 100 prints a string to the screen to indicate the array contents will now be dumped to the screen in ASCII format.

Line 110 begins a second FOR-NEXT loop to dump the array to the screen.

Line 120 prints the array elements to the screen. The semicolon after the PRINT command causes the values being printed to be printed one after the other, on the same line. Since there are too many characters to fit on one line, the displayed characters will wrap-around to the next line. Displaying floating-point values in Commodore BASIC includes the default of one space in front of and behind the actual value. This will cause the displayed ASCII values to have two spaces between each value.

Line 130 refers back to the FOR-NEXT loop in Line 110 until 26 is reached.

Line 140 is a simple PRINT statement used to finalize the printing done in the previous FOR-NEXT loop at line 110. The PRINT AR(A); statement in Line 120 is still in effect. This means that because of the semicolon, the computer thinks it should print the next PRINT statement as part of the same line. If we didn't use this single PRINT statement the computer will print the next string counting from the last displayed value, which is the number 90. Because we want this string to print one line down and left-justified, we have to use this single PRINT statement to reset BASIC's internal PRINT pointer. This way the pointer will be left justified on the screen in preparation to print the next string or value.

Line 150 prints a string to the screen to indicate that the array contents will now be dumped to the screen in character format.

Line 160 begins a third FOR-NEXT loop to dump the array to the screen.

Line 170 moves the current value of the array element being looked at into another floating-point variable, C.

Line 180 prints the array elements to the screen. The spaces are used to add blank characters around the letters of the alphabet. This is done so the display of the alphabet letters will line up with the display of the ASCII numbers done previously in the FOR-NEXT loop at line 110. The CHR\$ means character string and converts the value, C, from the ASCII code into character format.

Line 190 refers back to the FOR-NEXT loop in Line 160 until 26 is reached.

Line 200 ends the program.

This is a fairly simple little program which demonstrates the ease of using arrays, loops and introduces the concept of representing characters with numbers.

Programming is not difficult. It just takes time, demands attention to detail, and requires the ability to follow a sequence of events from beginning to end. As my geometry teacher, Mr. Fricke used to say, "Just plug in the values, turn the crank, and out comes the answer." Programming is really that simple too. I hope you all have wonderful Holiday with family and friends. 'See' you next year. And please don't forget to write me with your suggestions, comments, and criticism. dieHard, R. Scot Derrer, P.O.Box 392, Boise, ID, 83701-0392.

**READY.**

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the Flyer for commodore 8biters

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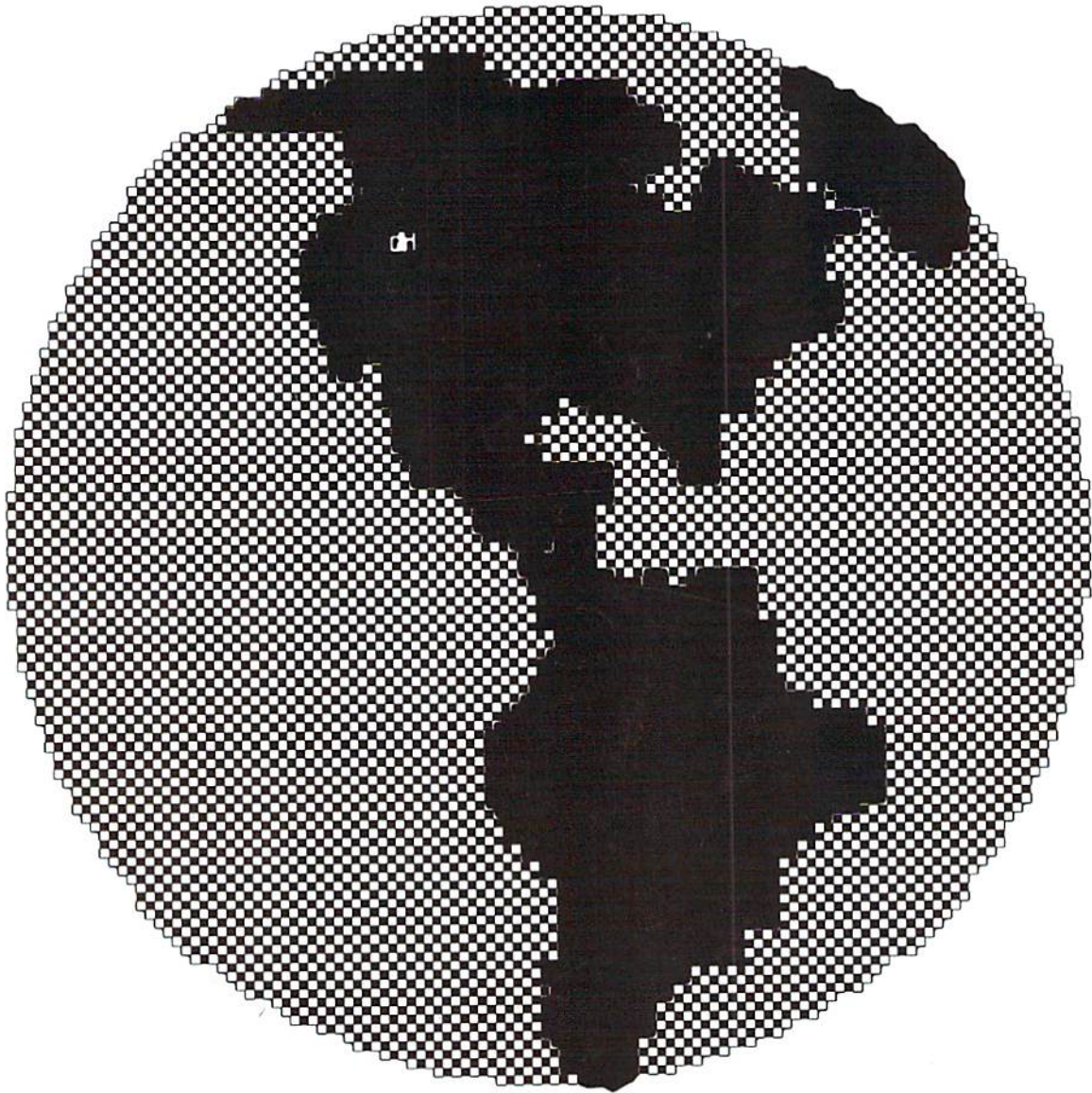
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