

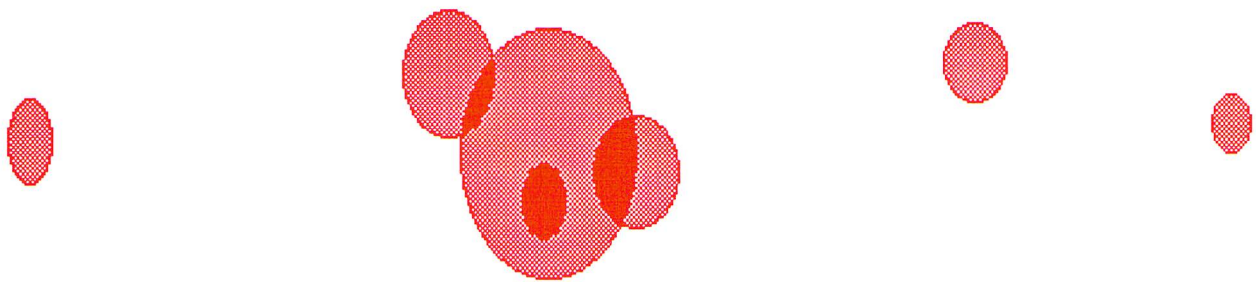
June/July 1993
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dieHard

the Flyer for commodore 8biters

This month's exciting episode -- "The Connection!"

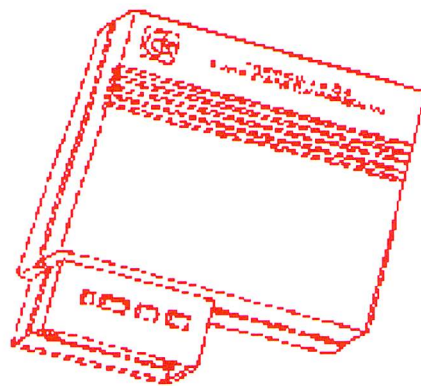


Reviews

Tips

Basic

Archaic Computer



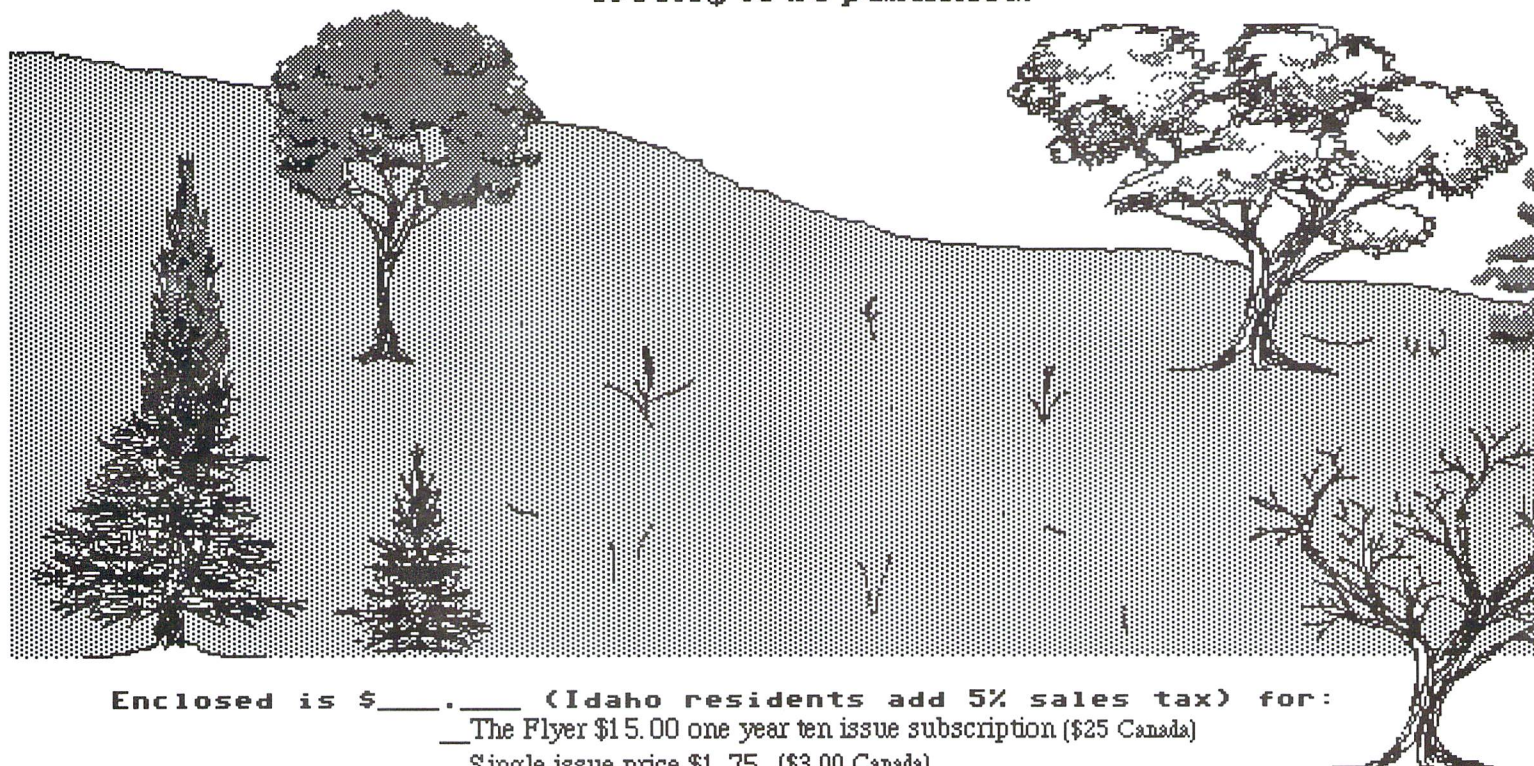
and much much more!

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

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View From The Underground

by

Brian J. Crosswaite



Hello! I've been getting E-Mail from readers on Q-Link! That's too cool. Seems like I used to log on, and nobody knew who I was. The only people that would talk to me were the SYSOPs just to say hello. The one time somebody sent me an on line message. I accidentally pressed f-5 cancelling the message as well as the name of the person sending it! Bummer! E-mail is a great way to get a fast answer to something. I'm dieHard0 in case anyone wants to chat. I try to get on every night, but my schedule is so crazy, it's hard to be consistent. When I do get on, it's never at the same time.

I check my messages at the Q-Link post office and I do answer. I also check my messages at my work just about every hour or so and return those calls.

I can't always make it to the phone, or I may be on the line. If you do get the voice messaging for LynnCarthy, leave your name and number and anything else that you feel is important. Lots of people call and hang up when they find that they got the voice mail. They don't like to talk to a machine. Well, guess what? You can't talk to a machine, because it won't listen. When you leave a message you will be talking to me, or another fellow dieHard. And if you don't leave a message, I won't get a message, and you will be where you were before you called.

Lots of people are concerned about LynnCarthy Industries Inc. dumping the Commodore computers. Never fear. I started this company solely for the purpose of publishing dieHard. I have put everything I have into this company, including ten years of accumulated knowledge. dieHard is here to stay!

The reader's surveys have been coming in and I was amazed to see how many other commodore computers are out there. "Other" as in "other than the 64 and 128." It's nice to know that there are 8bitters out there that still use their "first."

I just got a VICMODEM for my VIC20. The Model 1600 is a screaming 300 bauds! The program is on cassette and there is no manual -- I just love hacking!

I also picked up a program called **Wordspot** on cassette that is supposed to run on *both* the 64 and the PET!! Love these machines!!! Ok, ok, I'm back.

Well, last month we made the change. Laser printed and saddle strapped. You may have noticed that the content of each page was shifted to the left. And there was a couple places where the original formatting changed unexpectedly. Other than that, I think the overall change looks good.

The magazine is still published using **geoPublish** on a 128D using a 1764 REU

expanded to 512k, a 1581 disk drive, and an FSD-1 disk drive. Other hardware on the system include an M-1 mouse, TAC-2 joystick, Card?+G parallel printer interface, MPS-1270 inkjet printer, MPS 803 printer, Amiga 1080 monitor (a commodore 2002 look alike), commodore 1701 monitor, Aprospand cartridge port expansion, **Simons' BASIC, Super Expander 64**, and Hearsay 1000 voice synthesizer.

Software used include many **GEOS** programs, **Fleet System 4** and others.

Just to give you an idea of what those little 8 bit computers can do take a look at what you have in your hands!

Well, this issue is shaping up. Stay tuned for a telecommunications column, a MIDI column, more reviews, more tech and more programs in up and coming issues of **dieHard the Flyer for commodore 8bitters**.

Anyone wishing to submit articles and programs -- remember it **PAY\$** to be published!

Well enough already -- Enjoy this month's issue!

-- Brian

READY.



REVIEW!

by
Brian L Crosthwaite

Key:

- * * * * * Excellent
- * * * * Great
- > * * * Good <
- * * Poor
- * Rotten

The Simpsons ARCADE GAME Konami Inc.

I've loved the Simpsons ever since they debuted on the Ed Sullivan Show back in 1967, ah, no, that was the Tracy Ullman Show in 1987 or some year like that. Naturally when I heard there was a game starring my favorite family I had to run right out and get it. But I was busy that night, so I feed the cat instead. Well, it's two years later and you can still buy the game!

I managed to talk the senior staff into allowing me to purchase a copy, so I could, well, play it. Being the senior staff, I said, "ok, but only if you play it at work!"

Before you can enter the game you are confronted by a screen called **Simpson's Password Challenge** showing a number and several of Springfield's finest. You have to open the manual up and look up what character goes with the number and, with the joystick plugged into port 1, highlight the correct character.

After a long wait, about a minute or so, the opening sequence begins. The familiar theme music plays via SID, the resident 64 maestro, as we see Bart flying out of the school doors on his skateboard. It's a beautiful day in Springfield. The entire family is introduced giving age, hobby and alias. Bart's are: 10; Bart; insighting disobedience; el Barto, the Bartman. The graphics are well done, colorful and cartoony. And of course they end up on the couch watching TV. Marge throws the baby up in the air once. Pressing any key takes you to the next screen -- after a wait... A long wait.

The loading sequences are rather long and neither my Final Cartridge, nor my Turbo Load and Save Cartridge worked with the program so I was stuck with the speed of the 1541. I can't speak for all fast load cartridges,

so if you decide to get the game, at least try it out first with the your fast loader. Note: the game was not tested with JiffyDOS.

At the next screen you get to choose your character from the family. Any one except Maggie, that is. Once you choose your character, the game is afoot. The next screens load and you see a jewelry store crook crashing into Homer Simpson. The crook is wearing a white lab smock and looks suspiciously like Mr. Burns' right-hand-man -- Dithers! A newly stolen diamond flies up into the air and lands in baby Maggie's mouth. And true to her nature she sucks on it as though it were her own binky. The crook grabs her and runs off!

The next screen is downtown Springfield. Your character is there. Two hoods appear and proceed to pound on your character. You must kill them (or maybe you just knock them down then they vanish). Once this is done you can scroll the screen a little and two more hoods will appear. Killing is done different ways by different characters. Bart can smash them over the head with his skateboard, Marge hits them with her hair and a vacuum cleaner. The controls remain the same regardless of what character you choose.

I found the games controls to be easy to use. Most fighting games have many hard to master joystick and button combinations for maneuvering your character. This game is not like that at all. Control is very basic. Press the fire button for a short time and the character attacks. A long press causes the character to jump, add a short press during the jump and the character kicks. The kicks are deadly to the villains.

While the joystick is the obvious choice for me, many may prefer the keyboard controls -- they are there. It's just that the manual was converted from the PC instructions to the 64 and they refer to all the wrong keys except two: the "@" key ends the game and the "<RUN/STOP>" key pauses play. The real controls on keyboard are only for player one and are as follows:

- "+" up
- "-" right
- "P" down
- "L" left
- short ">" attack
- long ">" jump

There are no keyboard controls for player two, so ignore what it says in the manual. All other keys do not exist. You

WILL need a joystick to enter your initials for high scores, which get saved to disk. You also need two joysticks for two player mode. This is a nice feature since both players get to play at the same time.

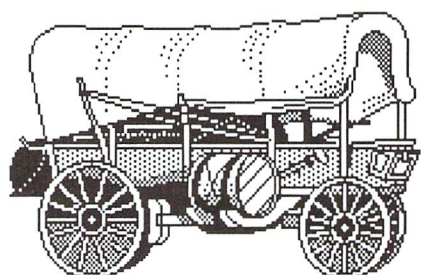
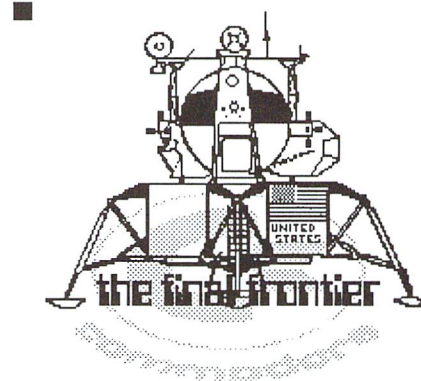
This game has multiple levels including eight stages and a couple of bonus rounds. I found game play to be very challenging. I played most games with Bart as my character. This game is very unique in that it is an arcade game, but is very much like an adventure game. There are objects such as signs that you can grab and carry with you to bonk your deadly foes with. Other type of items that you can find to help you out include hammers, brooms, and slingshots. Various food items such as apples and hamburgers will restore your character's energy. Once the energy runs out, however, unlike other adventure games, your character dies and a new one flies in until all five replacement characters have been killed.

Over all I give this game a * * * . The only things I really don't like about it are the long load times, its incompatibility with my fastloaders, and the miss-information on the keyboard controls in the manual..

This game is available from TENEX for \$29.95. Write to TENEX Computer Express, 56800 Magnetic Drive, Mishawaka, IN, 46545 for more info.

Note: Software Support International has this program listed as discontinued.

READY.



TIPS

R. Scot Derrer

Printer ribbons are one of the ongoing maintenance costs embedded into using a computer system. If you need quality printouts, new ribbons are the best for dark printing. For my Star NX1000 Rainbow, I have been purchasing inexpensive ribbons through the mail and recently, reasonably priced Pelikan ribbons from a local office supply. Now that I have both ribbons on-hand, I have noticed the new bulk ribbons do not print as dark as my used Pelikan ribbons. More of the "You get what you pay for," syndrome slapping me in the face.

Some programs written for the C64 before the advent of the C128 will not boot on the 128 when in 64 mode. Here's something to try. On your 128, lock down the <CAPS/LOCK> key *before* you turn on your computer. Now try running the program(s) that you couldn't boot before, it just may work now. This has allowed me to use my Koala with the original software -- Koalainter on my 128D.

READY.



geoTips

by

R. Scot Derrer & Brian L. Crosthwaite

geoOh! configure

DO NOT un-configure the RAM expansion unit after it has already been configured as part of your system and filled with files. The data, of course, will be lost. (Nosh It Sherlock. A friend of mine, Zen Golly, once said, "If you don't want it, put it back." -- Asst.Ed.) (Now, do you speak from experience? -- EIC)

multiDrive GEOS

Inside the GEOS 2.0 128 Manual Addendum, it says not to boot GEOS with more than one drive turned on. If you use two drives with GEOS here's an idea. I have three drives hooked up to my 128D: the internal 1571, device 8; an FSD-1, device 9; and a 1581, device 10. I leave the FSD-1 turned off when I boot GEOS. I don't use it. I have configured my REU as drive "B" (or 9). The 1581, however, is on and is configured as drive "C" (or 10). Since it set as device 10, I have had no problems. Unless they are warning users away from trying to boot up with two drives with the same number or it is left over from the earlier version that had some sort of bug, I have no idea why this is in the manual.

Also, I have never had to do any of that funky stuff to boot up with a parallel printer interface.

halfLine geoPublish

If you get a dialogue box directing you to choose the text box after having already chosen the text box and text, you may be about to encounter some strange effects. If your printout ends with the lower half of a text line missing, you may have inadvertently installed some text out of order.

If columns of text appear out of order, you may have this problem. The same text appears on two different pages -- from one **geoWrite** file.

Say you had two pages in a **geoPub** doc. Three columns each. You remove text already in page 2 columns 1 and 2, but not 3. Then you change your mind and put the text back in to columns 1 and 2. Strange things can happen if **geoPub** get lost or mixed up.

Where's the out? Simply remove all instances of the text in question and start over.

READY.





The Screen Editor Part II -- Direct Mode

Six years ago George Christensen and I formed our company, The Plotting Shed, to create software for the Commodore 1520 Plotter/Printer. We decided up front to write everything in BASIC for three reasons. It is far easier to understand and learn from than machine language. It is a fun programming language, especially on Commodore 8-bit machines. And if necessary, it can be compiled to run faster. Most of the 8-bit magazines (R.I.P.) had articles and columns covering BASIC and so will **dieHard**. It is, after all, the language available when you boot up. With BASIC there are two ways to communicate with your computer's operating system, through a BASIC program and in DIRECT MODE. DIRECT MODE is what we shall work in today.

I want feedback, criticism, suggestions, questions, etc. from our readers so I may cater to your needs and not just spew what I think. Write to me at **dieHard**, ATTN R. Scot Derrer, P.O.Box 392, Boise, ID, 83701. For now, though, I'll pick up Brian's ball and go with it as best I can. Due to the necessity of organization, I may re-cover some of what was in the first column, so bear with me.

The Most Useful BASIC Command

The PRINT statement is a useful BASIC command. It has a multitude of uses and is just plain fun. Looking at your computer keyboard, you'll see the alphabet, numbers, punctuation, and on some keys, two sets of graphics characters. All of these symbols can be printed on your monitor.

Displaying Information On The Monitor or Screen

All of what you see on your keyboard can be displayed on your monitor. Let's try a few examples. Your computer is on and the cursor is blinking, just waiting. Type the following

command on your keyboard:

```
PRINT"DIEHARD"
```

Now press the RETURN key and you will see the computer PRINTed the word DIEHARD.

REMark: Because of keyboard shortcuts, it's not always necessary to type the full BASIC keywords. Try typing a question mark instead of PRINT. For example, ?"DIEHARD" is the same as PRINT"DIEHARD".

How about a sentence?

```
PRINT"I LOVE 8-BIT COMPUTERS."
```

See, it's easy and painless. Now let's explore some of the graphic capabilities.

PRINTing Graphic Characters

Some of the keys on your keyboard have two graphic symbols on the front, one on the left and one on the right. These symbols are easy to print and are useful in making screen designs and pictures. To draw a line across your monitor, use the left symbol on the <@> key.

```
PRINT"_____"
```

To make this line, hold down the <C=> or Commodore key and press the <@> key 40 times if you have a C64, C128, Plus4, or C16 or 22 times if you have a VIC20.

REMark: To type a right graphics symbol, hold down the <SHIFT> key while pressing the graphics key. To type a left graphics symbol, hold down the <C=> or Commodore key while pressing the graphics key. Also remember to hold the <SHIFT> key down and press the <2> key to get quotation marks.

Now try a right graphics symbol, the spade (found on the <A> key). Remember to hold down the <SHIFT> key to get the spade.

CLEARing The Screen Using The PRINT Command

Find the key marked <CLR/HOME> on your keyboard. When you hold down <SHIFT> and press this key, the screen is erased and the cursor is moved to the top, left corner of the screen. This is called the "home position". This is very useful to use in a program to clear the screen and position or home the cursor.

```
PRINT"[CLR]"
```

The CLR in braces [] indicates that you should hold down the <SHIFT> key and press the <CLR/HOME> key. A reverse heart will appear which represents the <CLR/HOME> command inside quotation marks.

To clear the screen and position a message in the upper left-hand corner of the screen, type the following command and press <RETURN>.

```
PRINT"[CLR] YOUR MESSAGE HERE"
```

'MOO'VE OVER CURSOR

I couldn't resist. Here are some methods of moving your cursor where you want it on the screen using the PRINT command. Let's clear the screen, move the cursor down six spaces, move the cursor right six spaces, and PRINT "HOWDY". It is a one line command like this:

```
PRINT"[CLR] [5 CRSR DOWN]
[5 CRSR RIGHT] HOWDY"
```

Looking at the lower-right area of your keyboard, you'll see two keys called CRSR. Each key has two directional arrows, the left CRSR key has up and down arrows and the right CRSR key has right and left arrows. These control cursor movement.

REMark: Quote Mode or Quote Zone. It's a fact, once you press a quotation mark onto the screen, you're in Quote Mode and it won't end until you either press <RETURN>,

<SHIFT><RETURN>, <ESC><ESC> or <ESC><O> (on the C128), <ESC> (on some CBMs) or another quotation mark. When you're in the Quote Zone, there are keys that provide 'special' graphic characters and these are the <CRSR> keys, <CLR/HOME>, <INST/DEL>, and the color keys.

Where were we? The [5 CRSR DOWN] means to press the cursor down key five times, and the [5 CRSR RIGHT] means to press the cursor right key 5 times. While in Quote Mode, notice that pressing the cursor down key makes a reverse Q, and cursor right makes makes a reverse bracket. To access cursor up and left in Quote Mode, hold the <SHIFT> key down and then press the appropriate <CRSR> key. While in Quote Mode, notice that pressing the cursor up key makes a reverse ball, and cursor left makes a reverse vertical line.

COLOR Your World

Like Walt Disney, Commodore offers a wonderful world of color at your fingertips. The VIC20 has 8 color keys accessed by pressing the <CTRL> key and one of the color keys (1 - 8). The C64 uses the same color keys, but 16 colors are available.. The C16 and Plus/4 have 16 colors plus the added fun of 8 levels of luminance giving a total of 128 colors (sort of)! The C128 has two sets of 16 colors, one set in 40 column mode and the other set in 80 column mode. On all computers but the VIC20, the additional 8 colors are obtained by pressing the <C=> key and a color key. Unfortunately, the standard PET/CBM machines have no color.

Try changing your cursor color by pressing some of the color keys. The original colors may be quickly restored by holding the <RUN/STOP> key and tapping the <RESTORE> key, resetting the screen. Setting color inside the PRINT statement is simple. Let's put a few colored diamonds (<SHIFT><Z>) on the screen.

```
PRINT"[CTRL-1] [SHIFT Z]
[CTRL-2] [SHIFT Z]"
```


[CTRL-3] [SHIFT Z]"

PRINT 6*111
PRINT 99/9

Multiplication
Division

The CTRL-# inside brackets [] means to hold the <CTRL> key down and press the corresponding number key. This will show a reverse graphics character on the screen. You need to press <SHIFT> <Z> to put the diamond graphic character on the screen.

If you combine calculations, it might look like this:

PRINT (6*111)-(99/9)+(25-14)

Reverse Characters

All of the graphics characters on the keyboard can be printed in reverse, that is, instead of a " " you'd see a "▣". This is a handy variation when you need it. On the same row of keys as the color keys, notice the two keys with RVS ON and RVS OFF (<OFF/RVS> key on PET/CBM). Holding the <CTRL> key down and pressing either one of these keys enables and disables the reverse function (<OFF/RVS> and <SHIFT><OFF/RVS> on PET/CBM respectively).

If you want to combine a message with a calculation, remember to have the message inside of quotation marks and the calculation outside of quotation marks.

PRINT"5280 FT IS";5280/3;" YDS"

REMark: The PRINT statement calculator works under the same rules as My Dear Aunt Sally (Multiply/Divide, Add/Subtract). All orders of functions are the same except powers. All exponents are calculated FIRST.

PRINT"[RVS ON] RVS ON
[RVS OFF] RVS OFF"

Remember, the brackets indicate a graphics display function. All text outside of brackets, but inside of quotation marks, is simply that --- text.

Next month I will continue with calculations and variables and then jump out of DIRECT MODE into BASIC programming. I must credit Michael S. Tomczyk for his influence on this column.

READY.



PRINTing Calculations

Everything within quotation marks is treated as a displayed character. This includes alpha, numeric, and graphic characters. Outside of quotation marks, alpha and numeric characters are treated as variable names and expressions containing a value, such as those used in mathematical equations. Your computer is now a desktop calculator.

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

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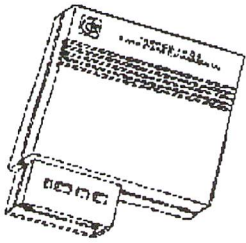
The Support
dH, is constantly looking for more support. In the form of articles, programs and advertising. For more information, write to LynnCarthy Industries Inc, P.O.Box 392, Boise, ID, 83701.

PRINT 93

Here, the value 93 is displayed on the screen.

Some examples of how the PRINT command can be used to calculate the result of a mathematical operation might look like this:

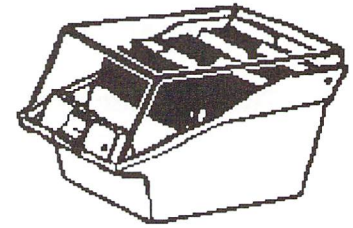
PRINT 5+6 Addition
PRINT 25-14 Subtraction



PAPSAW

custom color part ii

by
Brian L. Crosthwaite



The graphics commands for the Plus4, C16, C128 and 128D are wonderful. But without the Super Expander cartridges, the VIC20 and the C64 are left to the hardened programmers to do high resolution graphics. If you ever dredged through the 64 Programmer's Reference Manual, you know what I mean. Normal HIRES is one thing, but MULTI COLOR is a barrage of confusion. I was plotting on the HIRES only a couple of days after I got my Reference Manual. It took well into two years before I ran across some information (outside the Reference manual) that gave me only the slightest bit of help with MULTI COLOR HIRES!

There are four chips for the five color computers: the VIC (Video Interface Controller found in the VIC20), VICII (Video Interface Controller 2 in both the C64 and C128), TED (TExt Display in the C16 and Plus/4) and the VDC (Video Device Controller in the C128) This is our continuing exploration of the first three chips. This month we will be looking at some interesting capabilities of the VIC, VICII and TED chips. First, let's over view them and let the chips fall as they may. Keep in mind that TED and VIC handle things very similarly to the VICII.

Let's take a look at three important addresses that enable the MULTI COLOR HIRES feature and play around with them a little:

The Control register #1. This is where you extend text color, enable bit-map, blank the screen change the text display from 25 rows to 24 rows (and back {changes numbers of rows

and character matrix -- 8 x 8 or 8 x 16 on VIC20}), and control the Y dot positioning for the smooth scrolling. The smooth scrolling feature is a very elusive feature that Commodore promised, but programmers have long since struggled with.

Control register #2 enables Multi-Color, selects the 40 or 38 column text screen {alters number of columns on VIC20} and controls the smooth scrolling in X dot positioning.

The memory control register is the area that allows you to change the location of your HIRES screen and character dot-accessible base (more next time).

CONTROL REG 1

36865 (VIC20)

53265 (C65 & C128)

65286 (Plus/4 & C16)

Type in the following program:

```
0 FOR I=0 TO 255 :
PRINT "[CLR][CRSR
DOWN][CRSR
RIGHT]" I : POKE
REG1,I
1 GET C$ : IF C$=""
THEN 1
2 NEXT
3 POKE REG1,16 :
PRINT "FINO!" :
LIST
```

Where REG1= the control register number for your given computer. Save it to disk, then run it. Press and hold the space bar and be ready to release it. When you see the number 16 on the screen, release it. (I left the 0 to 15 in to let you see all, even though nothing has apparently happened except the screen blanking.) Don't worry if you pass 16 by a few

numbers, what your about to see will repeat itself a couple of times. Now, press <RETURN> repeatedly. Here is what you should see:

The screen should blank, then when numbers do appear they will scroll downwards one pixel at a time. Then the numbers will jump back up and scroll again. The screen will go blank once more, then the character ROM will appear. It will scroll downwards and then the whole thing will repeat itself again one and a half times.

CONTROL REG 2

36864 (VIC20)

53270 (C65 & C128)

65287 (C16 & Plus/4)

Now, change lines 0 and 3 to:

```
0 FOR I=0 TO 255 :
PRINT "[CLR][CRSR
DOWN][CRSR
RIGHT]" I : POKE
REG2,I
3 POKE REG2,16 :
PRINT "FINO!" :
LIST
```

Once again, replace REG2 with the proper number for your computer. Save this new version, run it and do the same as before. The most noticeable thing that will happen this time is the text will scroll one pixel at a time to the right. When the program ends you will wind up with a 38 column screen because of the last POKE. Actually the characters on the screen borders can be seen, at least part of the individual characters. To return to normal, hit the <RUN/STOP><RESTORE> combination.

Now for some real fun.

Remember last month's circle formula? Neither do I, so we'll write a new one! Type in the following very carefully: Save it before you run it.

```

1000 REMEMBER, COPYRIGHT 1993
    LYNNCARTHY INDUSTRIES INC,
    ALL RIGHTS RESERVED!
1010 PRINT "ICLR!E SPACE!28 *!
1020 PRINT "E SPACE!28 *!
1030 PRINT "E SPACE!28 *!
1040 PRINT "E SPACE!28 *!
1050 PRINT "E SPACE!28 *!
1060 PRINT "E SPACE!28 *!
1070 PRINT "E SPACE!28 *!
1080 PRINT "E SPACE!3 *!
    [22 SPACE!3 *!
1090 PRINT "E SPACE!3 *! WHOA, I
    THINK I'M A!2 SPACE!3 *!
1100 PRINT "E SPACE!3 *!
    [22 SPACE!3 *!
1110 PRINT "E SPACE!4 *!
    [22 SPACE!4 *!
1120 PRINT "E SPACE!4 *! GONNA
    BLOW CHUNCKS!2 SPACE!4 *!
1130 PRINT "E SPACE!4 *!
    [22 SPACE!4 *!
1140 PRINT "E SPACE!28 *!
1150 PRINT "E SPACE!28 *!
1160 PRINT "E SPACE!28 *!
1170 PRINT "E SPACE!28 *!
1180 PRINT "E SPACE!28 *!
1190 PRINT "E SPACE!28 *!
1200 PRINT "E SPACE!28 *!
1210 PRINT "E SPACE!28 *!
1220 PRINT "E SPACE!28 *!
1230 PRINT "E SPACE!28 *!
1240 XM=7 : XC=XM/2
1250 YM=7 : YC=YM/2 : R=3
1260 FOR N=1 TO 360 STEP 36
1270 X=INT( XC+R * SIN( N / 180 *
    (3.14) ))
1280 Y=INT( YC-R * COS( N / 180 *
    (3.14) ))
1290 IF X>XM OR X<0 OR Y>YM OR Y<0
    THEN 1310
1300 GOSUB 3000
1320 GOTO 1260
1330 POKE 53270,X OR 8
1340 POKE 53265,Y OR 16
1350 RETURN

```

Once you have your fill, do the <RUN/STOP><RESTORE> combination to stop the program and return to normal mode. Study the code carefully. The actual POKES into 53270 and 53265 are from 8 to 15 and 16 to 23, respectively.

To run this program on a Plus/4 or C16, change lines 1330 and 1340 to read:

```

1330 POKE 65287,X OR 72
1340 POKE 65286,Y OR 16

```

For the VIC20 change them to:

```

1330 POKE 36864,X OR 5
1340 POKE 36865,Y OR 25

```

You'll have to alter the PRINT statements so that the message fits on the 22 column screen.

To be continued next time.

___A Little Boolean___

Awhile back I said I'd elaborate a little more on Boolean logic. This is the basis for all functions on a digital computer.

The idea behind Boolean logic is actually quite simple. If you were to only look at the world as things that are there and things that are not there, you would live the simple logic of Boolean. If it is there it is true, if it is not there it is false.

Granted, the number 1 is only an idea that exists in your head, we will take a more ignorant approach here. If it is there, there is one there. Say I have one apple. It is true, it exists. Even if I have two apples, there are two one apples. If I don't have an apple it does not exist as one of my possessions. It is not true, I have zero apples.

Now, all I am going to do is look to see if it exists. I you have an apple *and* I have an apple then it is true, an apple exists with at least one of us. If you have an apple or I have an apple, then yes it is true, there is an apple, it exists.

```

OR
1 or 1 = 1
0 or 1 = 1
1 or 1 = 1
0 or 0 = 0

```

```

And
1 and 1 = 1
1 and 0 = 0
0 and 1 = 0
0 and 0 = 0

```

Unlike OR, where only one of us

need have an apple, AND looks to see that we both have an apple. If so then truth is met. If both you and I don't have any apples, then it is false we both don't have an apple.

Let's take a simpler operator yet -- "=" If I have an apple and you don't then "you = me" is not true. If you and I both have an apple then "you = me" is true. So basically every time you see A=B or something similar if they are equal then they are 1. If they not equal then they are 0.

Now, let's look at this:

```

IF A=B OR C=B THEN
PRINT "HI!"

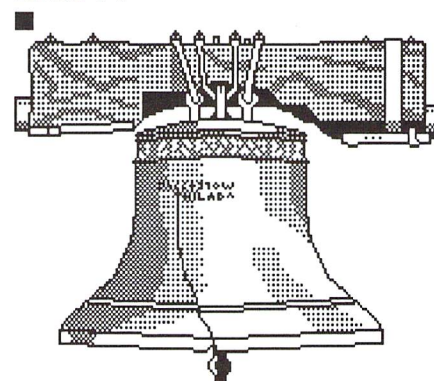
```

Simply put, if a=b then 1, well actually "-1." Commodores use what is often referred to as negative logic. If something is true then you get a minus number. In most cases it will not matter, but if it does, simply put your quotient within ABS(). This will make the number its absolute value. (The number will always be positive.)

If either A or C is the same as B, then the word "HI!" will be printed. If you were to change OR to AND both A *and* C would have to be equal to B in order to print "HI!"

Thoroughly confused? If the apple is truth, what's a sixty-four? -- To hold the space between 59 and 61! Until next time --

READY.





Archaic Computer

The Computer Store Of The Past

by
Brian L Crosthwaite



Let's see, 1982 that was the year the **commodore 64** came into existence. I was still majoring in art, working steadily towards starvation. Computers were still those things that Mr. Spock talked to. They were those mega vacuum-tube filled computational devices that had to have well over a million BTUs of cooling power to bring their temperatures down to 105 degree fahrenheit.

Ok, the PETs and CBMs had already become rather popular and TPUG was well into its fourth year. I had no thoughts of computers then. But the computer revolution was afoot regardless.

In '82 I played **Centipede**, **Donkey Kong**, and **Space Invaders**. I lost miserably at these games. Two games I did well at were **Tempest** and **Pong**. Ok, **Pong** was old hat by then, but I consistently got a fair score at it.

A strange game sort of like **Pong** came into arcades via Bally/Midway. I had never played this game until about a month ago. I'm talking about **Clowns**. Welcome to the Computer Store Of The Past.

CLOWNS

Commodore Electronics Ltd.
1982

reviewed by Reviewer Extraordinaire and kinda cool, but too hot -- Brian L Crosthwaite

* * * * *

This is one of the strangest games I've seen in a while. It is sorta like **Pong**. There is a clown standing on a spring board. There are two planks on either side of the screen and three rows of balloons at the top. Out walks

another clown onto one of the planks, who then jumps off the plank. Using the paddle, you move the seesaw right or left to catch the descending clown. If the clown lands on the the unoccupied half of the seesaw, then the other clown flies up towards the balloons popping any he touches. If the clown lands any where else, it is considered a miss.

Now, don't discount this game, it is a real rush. I have played many a **Pong** ripoff that used joystick, and none come close to this for control. The paddle is quick and concise. There is no slop in this game. When you miss the descending clown it goes splat and you hear Beethoven's Funeral March.

Game play is very challenging. But your game will not be a short one, as the game allows for five jumps. When one row of balloons is cleared you receive a bonus of 200, 500 or 1000 points. To get another jumper, you'll have to clear all of the top balloons. You get points for popping balloons as well as for bouncing.

If the clown hits the top of a balloon, he may bounce up on top and knock out several.

There is a two player mode. Players get their own paddle controller, but only play one at a time.

If you do not have paddles, I suggest you keep an eye out for a pair. They can be acquired at second hand stores and yard sales. If you have a pair, they can open up a whole world of computer games to you. And this is one top notch game, one worth the price of the paddles.

Clowns: C64 cartridge * * * * *

Available from TENEX at the

unreal price of \$2.99! For more information write to TENEX Computer Express, 56800 magnetic Drive, Mishawaka, IN, 46545.

Those of you who have been follow **Archaic Computer** throughout the last year know of my pipe dreams of large warehouses full of **commodore** stuff yet to be found. The golden treasure trove of the 8bit over rot imaginations. Well, it may not be so fantastic as it sounds!

Actually it really is FANTASTIC. Software Support International bought an entire inventory at a dog eat dog bid war against a party who had intended to send it off to Europe! They had to find an 8000 square foot warehouse to store it all! This was three months or so ago and they have been hand sorting it and inventoring it. It is a guesstimated 6 more months before it will be done!

Along with this boon, they have put together grab-bag bundles. 10 pieces of software for \$10! Unless you can go to their warehouse store, they'll have to pick out the items for you. And since the profit margin is so low, they can't take any of it back for exchange. So what they did on the one I sent for was enclose two extra titles in case something didn't work out of the original 10.

Titles I received were:

Slinky

Aztec Challenge

Space Games:

Creeps

Trek 64

Rebel Bomber

Swift Music

Printer's Artist

Strategy Games:

Real Estate Tycoon

Backgammon

Yahtsey (that's how they spelled it!)

Checkers

3D Tic Tac Toe

The Entertainer 2:

Checkers

Wall Street

Presidential Campaign

Master Blaster:

Phaserdome

Sentinel

Red Obelisk

Arcade Games II:

Kwixx

Centripod

Rail Runner

Sports Spectacular:

Baseball

Football

Hockey

The Educator 2:

Hickory-Dickory-Dock

Spellbound

Muggin

Captain Of Industry

That's 28 different programs! And as all-oldies-but-goodies go, some of the original price stickers are still on them and they ad up to \$38.99! (Five boxes did not have prices on them.)

If you want a taste of the past and don't mind taking a chance, you might just want to check this deal out.

Software Support International, 2700 NE Andresen Road, Suite A-10, Vancouver, WA 98661.

Tell them you heard about it in **dieHard!**

READY.



Q: I'd like to see information on using the 128D with Super Graphics Gold, Pocket Writer3, & the Panasonic KX-P4410 Laser Printer. As I cannot get bold & underlining in the printout. Thanks. -- Donald Armone, Bohemia,

New York.

A: You will have to get more information to me before I can diagnose the problem. What are your dip switches set for on your interface? Does the laser printer have Epson-emulation? That sort of thing.

If you can, set both the printer and the interface up to do NLQ or LQ printing. Set the interface on transparent mode.

What print driver have you been using? You might experiment with different drivers. If you have a set up that seems to work well, with exception of the bold and underlining, load the print driver into the word processor and tweak some of the codes around. Be sure not to save it over the original driver file.

Q: Can anybody tell me a current address for ERO Systems OR Dennis Davis -- author of PEDIGREE? This is a Shareware program and I want to register. -- John B. Hunter, Orlando Florida.

A: Does anyone our there in Commodoreland know the where about's of either?

Q: I have a Commodore PET 4008 computer, it works but what I really wanted was to use the video monitor for my 64. I have been unable to wire into the monitor. Can you help? -- Jarry Petterson, Ceresco, NE

A: I don't recommend that you hook your 64 up to a PET's monitor unless you have a schematic of it's wiring (Not a logic schematic). There are three wires that join into a plug that is located in the center of the mother board on all the PETs I have seen. I *have not seen* the 4008. These three wires go up into the board under the monitors picture tube.

I am intregued by this idea, although I don't really know why, some sort of strange curiosity. I will look into finding out what I can on this, since at this point in time I have no documentation on this particular PET.

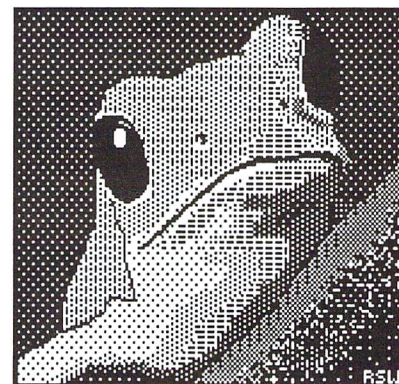
In the mean time, I can tell you what wires out of the C64 video cable you want to connect. On a three plug RCA out you will want the center wire on the yellow plug. On a standard composite, just run the center wire off of the video. I recomend that you also conect the outter wire also to get a definat ground for the best picture.

BEFORE YOU MAKE ANY CONNECTIONS BE SURE YOU HAVE THE POWER OFF ON BOTH UNITS AND THEY ARE UNPLUGGED! When you find out what wires you need to connect up to, be sure they are not connected to the mother board on the PET. Chances are pretty good that there is less impedance going through the board rather than the monitor.

Q: I would like to know how to convert Commodore **Print Shop** graphics to IBM graphics. I bought **Big Blue Reader 128/64** and have tried to convert them, but it does not work. -- Roger N Frye, Belvidere, Illinois

A: One way would be to convert them is to use **GEOS** to convert them with the **Graphics Grabber** into **geoPaint**. From there, convert them with **MacAttack II**. Then convert it on a Mac. Unfortunately, I don't know of any programs to do this. There are a few GIF file conversion programs out there, but in order to write to an IBM formatted disk you will need a 1571 or 1581 disk drive.

READY.



DOS and Don'ts

by
Joel Ellis Rea

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

The DOS Manager for the 64 is available for \$3.00 (\$5.00 Canadian) from LynnCarthy Industries Inc., P.O. Box 392, Boise, ID, 83701 and is in the public domain.

Channels =====

Now that we have learned the File Maintenance, or housekeeping type commands, we will now leap into learning how to actually use the disk drive under program control. Our first topic will be the Command/Error channel.

The 1541 Disk Drive supports 16 different 'channels', which can be considered as separate bi-directional data paths between the disk drive and the computer. Think of them like channels on a CB radio. With the CB, you can talk to and listen to another individual by using a channel. You can only use one channel at any one time, but by switching your attention from one to another, you could have several conversations going simultaneously although you could only be actively talking or listening to one at a time. The 1541 has 16 channels, numbered 0 through 15. Channel #15 is a special channel. Think of it as a channel to the FCC on a CB. Channel #15 acts to 'police' the operation of the disk drive. In fact, whenever you use the **DOS Wedge** to send a maintenance command, it goes through channel #15. When you ask **DOS Wedge** for the disk drive status, the message comes from the drive through channel #15. Thus, channel #15 is called the Command/Error channel.

The 1541 does not allow the use of all 16 channels at a time. Only three sequential data channels can be open. The Command/Error channel

does not count as one of the three.

Channels #0 and #1, although used as data channels, are special. Channel #0 is used by BASIC's LOAD command, and #1 is used by the SAVE command. The point is, only channels 2-14 are for general use with data files.

DOS & Don'ts --- Part 10

To use a channel on the disk drive, you must use BASIC's OPEN command. The OPEN command wants three numeric parameters and a string parameter. eg: open6,8,6,"houses"

The first parameter is the Logical File Number, which is simply an arbitrary number from 0 to 255 that is used by your program to identify the file from when you OPEN it until you CLOSE it. For now, avoid numbers larger than 127.

The second parameter is the First Address, which is actually the device number. For disk drives, the First Address can be 8, 9, 10, or 11. If you have only one drive unit, it is almost always First Address #8.

The third parameter is the Second Address. It is a number from 0 to 15 which passes additional information to the device specified in the First Address. In the case of disk drives, the Second Address is the channel number, plain and simple!

So, if we wanted to OPEN the Command/Error channel of drive unit 8 as file #10, the command would be:

```
OPEN 10, 8, 15
```

where 15 means channel #15, the Command/Error channel.

The OPEN command can also take a string parameter after the three numbers. This string is passed to the device immediately, with a special signal attached. For devices such as printers, the string is simply considered to be the same as any other data. The disk drive, however, uses it as a file name when a data channel is OPENed. If the Command/Error channel is OPENed, the string can contain a command. One command that is good to use is

the Initialize command, which verifies that a Commodore 1541-format disk is in the drive. So, a useful command to open the Command/Error channel might be:

```
OPEN15,8,15,"I0"
```

This time we used a Logical File Number of 15 to help remind us that this is, indeed, the Command/Error channel.

Now that the channel is OPEN, what can you do with it? Well, any DOS Maintenance command can be sent to the disk drive via this channel. By using the PRINT# command, data is sent to the file specified by the Logical File Number following the '#' in the PRINT# command. That means you can send most normal Wedge commands using OPEN15,8,15 and PRINT#15. Except for @\$ (Directory), @ (Disk Status, [more later]), @#n (to change the First Address used by the Wedge to 'n'), and @Q (to disable the Wedge).

For example, we can programmatically scratch all files whose name starts with the letter 'Z' by executing a command such as PRINT# 15, "S:Z*" Notice that the Wedge's '@' is not included in the PRINT# 15 command. The command above, of course, assumes that the Command/Error channel has been previously OPENed as Logical File number 15.

By INPUTting from the Command/Error channel (with an INPUT# command), the Disk Drive Status can be obtained. The following command:

```
INPUT#15,ER%,ER$,  
ET%,EB%
```

will sign the Error Code Number to ER%, the Error Message itself to ER\$, the Track on which the error occurred to ET%, and the Block number to EB%. This is a very important command. It allows the program to act on errors that may happen during data access.

-----to be continued -----

READY.



RARITIES

R. Scot Derrer

On Becoming a Midiot

Since I'm also a musician and synthesist, I used to subscribe to POLYPHANY and KCS (Keyboards, Computers, & Software). Now KEYBOARD and ELECTRONIC MUSICIAN fill the bill. Watching the evolving synthesizer technology has been fascinating. When I browse through the past issues of these magazines, it really becomes apparent how rapidly the growth and changes in this technology have occurred. The breakthrough of MIDI technology (with standards even) has changed the world. MIDI means Musical Instrument Digital Interface and allows computers and MIDI instruments to communicate with one another. Equip yourself with a C64/C128, a MIDI Interface, sequencing and sound Library software, a multi-timbral MIDI compatible keyboard, a 4-track cassette recorder, a desire to create music, and you'll have your own recording production studio. Invest enough money and you can easily compete with the big boys.

In fact, some of the big recording studios are reacting negatively to this. You can record and produce commercially marketable music in your dwelling at a fraction of the cost, thereby bypassing their fairly pricey services. In L.A., major studios throw up legal issues such as licensing and zoning trying to stop the competition from the 'little people'. This is very similar to the controversy of studios using keyboards with sampled sounds of various instruments played by one person as opposed to hiring musicians to play the real instruments. All this oppressive bull is in the name of creativity. My point? Keep on creating. And to assist you in becoming a

Midiot, MIDI SOFTWARE has a lot of public domain MIDI and music software available for the C64/128, Atari, IBM, and soon the Amiga and MAC. Write or call them for a catalog and tell them you read about it in **dieHard**. There are few other sources of MIDI software and hardware for the C64/128. Please let me know if I've missed anybody.

MIDI Software
PO Box 533334
Orlando, FL 32853-3334
(407)856-1244

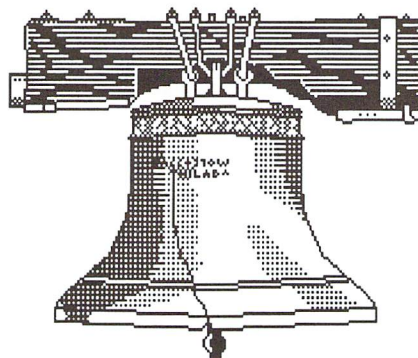
SOFTpacific
12240 Perris Blvd.
Suite A157
Moreno valley, CA 92557
(714)242-0454

DR. T'S Music Software
100 Crescent Rd.
Needham, MA 02194
(617)455-1454

Soundware
200 Menlo Oaks Dr.
Menlo Park, C 94025
(800) 333-4554 (415)328-5773

Fast Fingers Music Software
PO Box 8741
Rockville Centre, NY 11571
(516)536-0298

READY.



Have a safe and sane one on the Fourth!

PRG

by
Brian L. Crosthwaite

In **listing One** we have another program from the Grandmaster Programmer, Dr. James T Jones, the **dieHard Directory Printer** (great name)! The DDP will print a directory from any drive designated as drive 8 to the printer in three columns.

There are no POKES or PEEKs so the program will run on any **commodore** computer. It will print the entire contents of a full 1541 directory on one page -- that's 144 file names! The text isn't so tiny that you can't see it; the print out will be in your printers own default font.

I tested it on the HP Deskjet 500 as well as an MPS1270 Inkjet using the CARD?+G interface (MPS803 emulation) and it worked well on both. The MPS printed the header in reverse characters and the HP printed it in normal characters. The HP, however, placed a graphics-character before the header and one after the header due to the RVS/on and RVS/off codes that were sent, but there were no problems like the printer printing on one page and dumping out two sheets of paper, then printing characters on one line and dumping more paper out, that sort of thing.

I also loaded it up on my CBM 8032 and printed a directory off of both drive 0 and drive 1 onto a CBM 8300p daisy-wheel printer. To read drive one, I changed the "I0" to "I1" in line 60. To read directories on drives that are not 8, list lines 60 and 70 and change the 8 to the drive number you wish to read, in case you have a 1581 that is not drive 8. You can also use the DEVICE NR program on the test demo disks that came with any **commodore** drives (1541 on) to change the device number.

Listing One

```
5 REM THE FOLLOWING PROGRAM WILL
  PRINT ON A SINGLE PAGE A DIRECTORY
  IN 3 COLUMNS
10 DIM DES(145)
20 PRINT CHR$(147) "GET YOUR PRINTER
  READY AND INSERT THE"
30 PRINT "DISK WHOSE DIRECTORY YOU
  WANT PRINTED,"
40 PRINT "THEN PRESS RETURN." : PRINT
```

```

50 GET A$: IF A$ <> CHR$(18) THEN 50
60 CLOSE 15 : OPEN15,8,15, "I0" : CLOSE 15 :
OPEN 4,4,7 : NF = 0
70 CLOSE 2 : OPEN 2,8,0,"$ : *" :
   C$ = CHR$(0)
80 GET #2,A$,A$
90 GET #2,A$,A$,A$,B$: FL = ASC
   (A$+C$) +256 * ASC (B$+C$)
   : IF ST THEN 210
100 D$="" : IF NF THEN D$
   = MID$(STR$(FL) + "I3 space!" ,2,3)
110 GET #2,A$: IF NOT (A$ = CHR$(34)
   OR A$="B") THEN 110
120 D$ = D$+A$
130 GET #2,A$: IF A$="" THEN 170
140 IF (ASC (A$) AND 127) < 32 THEN 130
150 IF ASC (A$) > 192 THEN
   A$ = CHR$(ASC (A$)-128)
160 GOTO 120
170 D$ = LEFT$(D$,25) : DES(NF) = D$
180 IF NF=0 THEN PRINT CHR$(18);
   D$;CHR$(146) : GOTO 200
190 PRINT D$
200 NF = NF + 1 : GOTO 90
210 PRINT #4,"" ; CHR$(18) DES (0)
   CHR$(146) + CHR$(18)
220 NF = NF-1 : IF NF<0 THEN 310
230 DES (NF) = CHR$(18) + CHR$(18) +
   LEFT$(DES (NF),3) + "I space!" +
   MID$(DES (NF),4)
240 IF NF=1 THEN PRINT #4,DES (NF) :
   GOTO 310
250 IF NF=2 THEN PRINT #4,DES (NF-1)
   "I2 space!" DES (NF) : GOTO 310
260 IF NF=3 THEN PRINT #4,DES
   (NF-2)"I2 space!" DES (NF-1)
   "I2 space!" DES (NF) : GOTO 310
270 TH = INT (NF/3)
280 FOR I=1 TO TH : PRINT #4, DES(I)
   "I2 space!" DES (I+TH) "I2 space!"
   DES (I+2 * TH) : NEXT
290 IF NF <> 3 * TH AND NF-1 <> 3 * TH
   THEN PRINT #4,DES
   (NF-1) "I2 space!" DES (NF) : GOTO 310
300 IF NF <> 3 * TH THEN
   PRINT #4,DES (NF)
310 CLOSE 2 : PRINT #4 : CLOSE 4 : CLR
320 PRINT CHR$(147) : PRINT :
   PRINT "PRINT ANOTHER DIRECTORY
   ? (Y/N)"
330 GET A$: IF A$ <> "Y" AND A$ <>
   "N" THEN 330
340 IF A$="N" THEN END
350 GOTO 10

```

We've gotten requests for programs for small children from parents and grandparents alike. Listings Two and Three for the Plus/4, C16, and C128 is called *Baby TV*. It is a program for small children who just can't keep away from the computer's keys. When the keys are pressed the key's character is placed onto the screen in a random color. The screen and border colors will randomly change as well. And random sounds are generated.

The smaller of the small may not have the attention span required, so patience on the part of the parents (as always) is required.

Both use trap to by pass a bug that

is unfortunately built into the program. The <RUN/STOP> key has been disabled, since that is usually one of the first keys to get pressed. If you want to exit the game you can either use <RUN/STOP><RESTORE> or press the secret key combination, see line 1010!

Listing two runs on the Plus/4 and C16, while listing three runs on the C128. Stay tuned for C64 and VIC20 versions!

Listing two

```

1 REM A$="BTU.16+4"SAVEA$,8:VERIFYA$,8
10 POKE 806,103 :REM TURN OFF STOP KEY
20 TRAP 3000
100 DEF FN A (X)=INT (RND (TD) * X)+1
200 PRINT "I2 HOMEICLR!I2 CRSR DOWNI
   I7 CRSR RIGHTI0K, KID PRESS A KEY!"
300 GETKEY ES
1000 PRINT "ICLR!"
1010 GETKEY IS : VOL (FN A (9) -1)
   : IF IS=CHR$(6) THEN 4000
1020 V=FN A (3)
1030 F=FN A (1023)
1040 D=FN A (15)
1050 S=FN A (5)-1
1060 C=FN A (16)
1070 L=FN A (8)-1
1080 SOUND V,F,D : COLOR S,C,L
1090 PRINT IS;
110 GOTO 1010
1999 END : BY BRIAN L CROSTHWAITE
2000 REMI25 *I
2010 REM*COPYRIGHT 1993 DIEHARD *
2020 REM*THE SPINNER, LYNNOCARTHY*
2030 REM* INDUSTRIES ALL RIGHTS *
2040 REM* RESERVED I13 *I
2050 REMI25 *I
3000 RESUME NEXT
4000 PRINT "ICLR!ESCAPE ARTIST!"
   : POKE 806,101

```

Listing three

```

1 REM A$="BTU.128"SAVEA$,8:VERIFYA$,8
20 TRAP 3000
100 DEF FN A (X)=INT (RND (TD) * X)+1
200 PRINT "I2 HOMEICLR!I2 CRSR DOWNI
   I7 CRSR RIGHTI -- OK KID -- PRESS
   ANY KEY!"
300 GETKEY ES
1000 PRINT "ICLR!"
1010 GETKEY IS : VOL (FN A (9) -1)
   : IF IS=CHR$(6) THEN 4000
1020 V=FN A (3)
1030 F=FN A (1023)
1040 D=FN A (15)
1050 S=FN A (6)-1
1060 C=FN A (16)
1070 L=FN A (8)-1
1080 SOUND V,F,D : COLOR S,C,L
1090 PRINT IS;
110 GOTO 1010
1999 END : BY BRIAN L CROSTHWAITE
2000 REM I25 *I
2010 REM*COPYRIGHT 1993 DIEHARD *
2020 REM*THE SPINNER, LYNNOCARTHY*
2030 REM* INDUSTRIES ALL RIGHTS *
2040 REM* RESERVED I14 *I
2050 REM I25 *I
3000 RESUME NEXT
4000 PRINT "ICLR!ESCAPE ARTIST!"

```

The long awaited *Snailskin 64* has arrived! Listing four contains the HIRES picture that was one of the first mathematical artworkings I ever did on computer way back in 1993 when all I had was a 64 set on top of a TV tray connected to the family TV by the long 12 foot RCA cable that come with my first color computer.

Listing four

```

1 REM ***** SNAILSKIN *****
2 REM * BY *
3 REM * BRIAN CROSTHWAITE *
4 REM I27 *I
10 PRINT "ICLR!"
20 BASE=2 * 4096 : POKE 53272,
   PEEK (53272) OR 8
30 POKE 53265,PEEK (53265) OR 32
40 FOR I=BASE TO BASE+7999 : POKE I,0
   : NEXT
50 FOR I=1024 TO 2023 : POKE I,1 : NEXT
60 C=0
70 FOR V=1 TO 99 : FOR N=0 TO V
80 C=C+05
90 X=INT (160+V * SIN (N/(C/2) *
   I shift +1) )
100 Y=INT (100-V * COS (N/(C/2)
   * I shift +1) )
110 CH=INT (X/8) : RO=INT (Y/8)
   : LN=Y AND 7
120 BY=BASE+RO * 320+8 * CH+LN
130 BI=7- (X AND 7)
140 POKE BY,PEEK (BY) OR (2+BI)
150 NEXT N,V
160 POKE 2023,16
170 GOTO 170
180 THIS PROGRAM IS COPYRIGHTED BY
   BRIAN L CROSTHWAITE AND
   LYNNOCARTHY INDUSTRIES INC.
   ALL RIGHTS RESERVED
   COPYRIGHT 1993

```

The next two programs are similar to the long one in this month's PAPSAW. For an explanation on what's causing the motion be sure to check it out on page 7.

Listing five will run on the C16, Plus/4, C64, and 128. Due to the size of the program a down sized version had to be written for the VIC20 and appears here in Listing six.

Break out the blacklight, put on some Iron Butterfly, and run this puppy.

Listing five

```

1 REM
A$="SPYRAIL.41664128"OPEN15,9,15,"S0"
+A$:CLOSE15:SAVEA$,9:VERIFYA$,9
1000 C= PRG BY BLC :REMEMBER -- DON'T
   USE ANY CARTRIDGES!!
1010 REM * COMPUTER CIPHER *
1020 COMPUTER = PEEK (772) + 256 *
   PEEK (773) : GX=53270 : GY=53265
   : OX=8 : OY=16
1030 IF COMPUTER = 50556 THEN
   PRINT "SORRY, WILL NOT RUN ON

```



```

THE VIC!": END
1040 IF COMPUTER = 42364 THEN FLAG=64
: PX=PEEK (GX) : PY=PEEK (PY)
1050 IF COMPUTER = 35158 THEN
FLAG=+4/16 : GX=65287 : GY=65286
: OX=72 : OY=16
1060 IF COMPUTER = 17165 THEN FLAG=128
: FAST : GRAPHIC0,1
1070 IF COMPUTER = 62580 THEN
PRINT "SORRY WILL NOT RUN ON
PET/CBM!": END
1080 XM=319 : XC=XM/2 : YM=199
: YC=YM/2 : PA=8192 : WD=320
: REM SET UP 40 COL MACHINES
1090 IF FL=128 OR FL= . 25 THEN GRAPHIC1,1
1100 IF FL=64 THEN GOSUB 1320
1110 FOR N=0 TO 360 * 30
: REM * DRAW SPY RAIL *
1120 R=R+.01
1130 X=INT (XC+R * SIN (N/180 *
[shift ↑] ) )
1140 Y=INT (YC-R * COS (N/180 *
[shift ↑] ) )
1150 GOSUB 1380 : REM PLOT
1160 NEXT
1170 : XM=7 : XC=XM/2 : REM SET UP FOR
CHARACTER BOUNDARIES
1180 : YM=7 : YC=YM/2 : R=3
1190 : IF FL=128 THEN SLOW : REM TAKE
128 OUT OF OVER DRIVE
1200 : FOR N=1 TO 360 STEP 36 : REM BEGIN
THE SPINNING SCREEN
1210 X=INT (XC+R * SIN (N/180
* [shift ↑] ) )
1220 Y=INT (YC-R * COS (N/180
* [shift ↑] ) )
1230 IF X>7 OR X<0 OR Y>7 OR Y<0 THEN
1250 : REM KEEP IN RANGE
1240 GOSUB 1280 REM MOVE SCREEN
1250 NEXT
1260 GOTO 1200
1270 REM SCREEN MOVE ROUTINE
1280 POKE GX,X [space] OR OX
1290 POKE GY,Y OR OY
1300 RETURN
1310 REM SET UP HIRES ON 64
1320 BA=8192 : POKE 53272,PEEK (53272)
OR 8
1330 POKE 53265,PEEK (53265) OR 32
1340 FOR I=BA TO BA+7999 : POKE I,0
: NEXT
1350 FOR I=1024 TO 2023 : POKE I,1 : NEXT
1360 RETURN
1370 REM PLOT ROUTINE
1380 CH=INT (X/8) : RO=INT (Y/8)
: LN=Y AND 7
1390 BY=PA + RO * WD+8 * CH+LN
1400 BI=7- (X AND 7)
1410 IF X<XM AND X>XC AND Y<YM AND Y>YC
THEN POKE BY,PEEK (BY)OR(2+BI)
1420 RETURN
1430 REMEMBER, COPYRIGHT 1993
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RIGHTS RESERVED!

```

Listing six

```

1000 POKES2,20 : POKES6,20 : CLR
1010 GOSUB 1220 : XM=126 : XC=XM/2
: YM=126 : YC=YM/2 : PA=7168
1020 FOR N=0 TO 360 * 30 : REM DRAW SF
1030 R=R+.01
1040 X=INT (XC+R * SIN (N/180
* [shift ↑] ) )
1050 Y=INT (YC-R * COS (N/180
* [shift ↑] ) )
1060 GOSUB 1300 : REM VIC PLOT
1070 NEXT
1080 : XM=7 : XC=XM/2 : REM BOUNDARIES

```

```

1090 : YM=7 : YC=YM/2 : R=3
1100 : FOR N=1 TO 360 STEP 36
: REM SPINNING SCREEN
1110 X=INT (XC+R * SIN (N/180
* [shift ↑] ) )
1120 Y=INT (YC-R * COS (N/180
* [shift ↑] ) )
1130 IF X>7 OR X<0 OR Y>7 OR Y<0 THEN
1150 REM RANGE
1140 GOSUB 1180 : REM MOVE
1150 NEXT
1160 GOTO 1100
1170 REM MOVE ROUTINE
1180 POKE 36864,X OR 5
1190 POKE 36865,Y OR 25
1200 RETURN
1210 REM HIRES
1220 POKE 36869,253
1230 FOR I=5120 TO 7679 : POKE I,0 : NEXT
1240 POKE 36879,8 : PRINT CHR$(147)
1250 FOR I=7680 TO 8185 : POKE I,160 : NEXT
1260 FOR L=0 TO 15 : FOR M=0 TO 15
1270 POKE 7749+M * 22+L,L * 16+M
1280 NEXT : NEXT : RETURN
1290 REM PLOT
1300 CH=INT (X/8) * 16+INT (Y/8)
1310 RO= (Y/8 - INT (Y/8)) * 8
1320 BY=5120+8 * CH+RO
1330 BI=7- (X - (INT (X/8) * 8))
1340 IF X<XM AND X>XC AND Y<YM AND Y>YC
THEN POKE BY,PEEK (BY) OR (2+BI)
1350 RETURN
1360 REMEMBER, COPYRIGHT 1993
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```

Listing Seven is another one of R. Scot Derrer's **Cellular Automaton** programs followed by a couple of alternate line changes for different patterns. Back in the April issue I mentioned that he was going to do an article on this in more depth. Being as he too has a two year old, he has plenty of free time, as do I, for such simple endeavors -- please stand by...

Listing Seven

```

100 PRINT "[CLR] [DOWN] [9 SPACES]
[RVS ON] CELLULAR AUTOMATON
[RVS OFF]"
120 PRINT "[DOWN] [13 SPACES] [RVS ON]
PATTERN #2A [RVS OFF]"
130 PRINT "[DOWN] [2 SPACES]
OUTPUT TO:"
140 PRINT "[DOWN] [10 SPACES]
S - SCREEN"
150 PRINT "[DOWN] [10 SPACES]
P - PRINTER"
160 INPUT "[DOWN] [2 SPACES]
YOUR CHOICE:";0$
170 IF 0$<>"S" THEN IF 0$<>"P" THEN100
180 IF 0$="S" THEN W=40 : PRINT "[CLR]";
: GOTO 220
190 W=80
200 OPEN 4,4
210 PRINT #4
220 DIM R(W)
230 FOR I=1 TO W
240 : R(I)=0
250 NEXT
260 R (W/2+.5)=1
270 DIM S$ (1)
280 S$ (0)=" "

```

```

290 S$ (1)="[RVS ON] [1 SPACE] [RVS OFF]"
300 B=0
310 C=R (1)
320 FOR X=1 TO W-1
330 : IF 0$="P" THEN PRINT #4,S$ (R(X))
: GOTO 350
340 : PRINT S$ (R(X)) ;
350 : A=B
360 : B=C
370 : C=R (X+1)
380 : R (X)=0
390 : IF A+B+C=1 OR A+B+C=2
THEN R (X)=1
400 NEXT
410 IF 0$="P" THEN PRINT #4 : GOTO 430
420 PRINT
430 GET A$ : IF A$<>" " THEN END
440 GOTO 300

```

Be sure to save the original to disk before you make these changes and ENJOY!

Listing Seven A

```

120 PRINT "[DOWN] [13 SPACES] [RVS ON]
PATTERN #6A [RVS OFF]"
390 : IF A-B+C=0 THEN R (X)=1

```

Listing Seven B

```

120 PRINT "[DOWN] [13 SPACES] [RVS ON]
PATTERN #7A [RVS OFF]"
260 REM : R(W/2+.5)=1
390 : IF A-B+C=0 THEN R(X)=1

```

Listing Seven C

```

120 PRINT "[DOWN] [13 SPACES] [RVS ON]
PATTERN #9A [RVS OFF]"
260 REM : R(W/2+.5)=1
390 : IF A-B+C=0 OR A-B+C=2
THEN R(X)=1

```

READY.



OOPS!

On page 16 of the May 93 issue Listing 1 has a missing RETURN in it. Line 6000 should read:

```

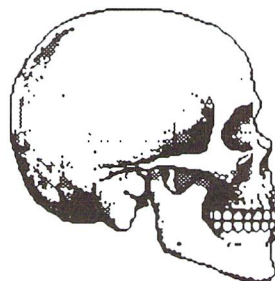
6000 FOR W=0 TO 999 : NEXT
: RETURN

```

READY.



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INPUT:

Letters from our readers!



As a subscriber to **Commodore**, **RUN**, & **Compute** Magazines, Plus **LOADSTAR**, I welcome you to the void left by the demise of two of the four. (**Commodore** and **RUN**). As a retired Senior Citizen, I devote many hours a week (using, not programming) on my C128. My interest runs mainly to Helpware/Utilities & Graphics. I've many and varied Word Processors for the 64 and 128.

Type-in programs have given me many hours of joy. They also help me understand BASIC, etc. Although I can't and do not want to program, I enjoy whatever I'm able to learn from the listings (seeing how the programs work).

I have one of the first GEOS disk programs out. Although I have documents, I'm not impressed. I hope your articles remedy that. Not being computer literate, I've found it hard to use (or understand). I can use it - but to incorporate GEOS utilities from another disk to to it -- I have problems.

I wish you the best with your magazine. If Fender Tucker is impressed, I'm sure I'll be pleased with what you offer. -- R. Dorman, Everett, Massachusetts

I hope you are too! This very publication is done using GEOS! Let me know what printer you have and the specific problems you are having with GEOS and I'll see if I can't help get you up and printing.

I have a request. Can you locate the three graphics programs that go with Springboard's "The Newsroom."

I know they sold out. I made phone calls all over the country trying to find where I could purchase any or all of the graphic disks that go with "The Newsroom." -- Breen Savage, Kennebunk, Maine

You might try calling Software Support at 800-356-1179. Ask them if they have it in their used software collection. I wouldn't wait until I see it listed. Every time I see something I want in their used software listings it is gone before I even get the catalogue. If any of our readers have a used copy they want to part with, write us and we'll pass the information on to Breen. I wish you luck.

I have three C64's and Speedscript. It does everything I need! I truly hope you prosper! -- Henry Fales, Orleans, Massachusetts

I'm 81 and have three Commodore 64 computers, four 1541 drives, two Star Printers, and approximately 800 disks. I have 28 people who just wait for the holidays to get their special cards. I'm having a ball with the 64! -- Walter Schroeder, Rochester, New York

Please include us on your holiday mailing list. We'd love to see your cards!

Love the name, I'm a 'dieHard' C64 and C128 user. -- I. McCracken, Plymouth, Massachusetts

I still use my C64, although a Mac Centris may be in the future. Suggestion! Publish some reviews of readers' much treasured public domain programs. I'd be happy to nominate my favorite utilities -- Disk Doctor, Ultra.

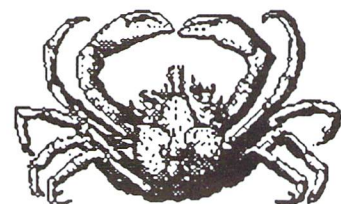
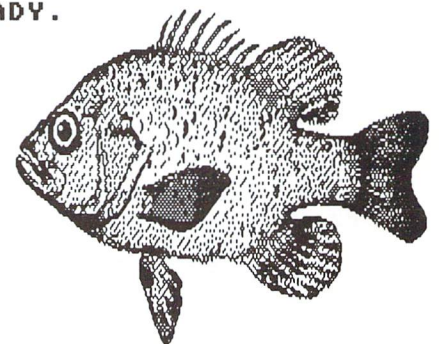
Best of luck in your enterprise. -- Joe Bobst, Downs, Illinois

Thanx! We plan on doing a lot with public domain programs! And reviewing PD is a great idea! There are some amazing programs out there -- stay tuned for our August PD extravaganza!

I don't even own a computer yet, but some day I'll buy a Commodore (I'm 54 years old). -- Charles Witkowski, North Bergen, North Dakota

Well, you've got your travel brochure, climb on board! And welcome to the commodore world!

READY.



Creative Pixels Ltd. presents
For the Commodore 64/128 in 64 mode



ESCAPE ROUTE

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The Apex Detective Agency has been assigned the case of recovering the rare Acme diamond, which has been stolen by the infamous Icelady! The chief has assigned you, Eric Hawthorne, to cover the case! You have just three weeks to recover the gem! A new game for the Commodore 64, Escape Route is a combination of the B movies genres of the 50s and 60s. There are elements of detective, comedy, horror, and Ninja movies woven throughout the game. The game is a combination of arcade, strategy, and board games. Numerous multicolor bitmaps are used throughout. This game will make a great addition to your Commodore 64 library!

ISLAND OF THE DRAGONS



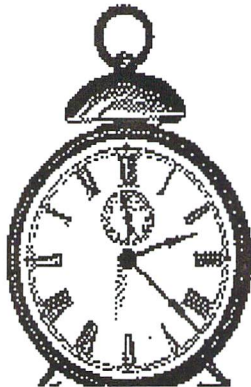
Island of the Dragons is a new action/adventure/role playing game for the Commodore 64. Hi-res multicolor graphics give the program an Amiga-like look. The game plays as an interactive novel or movie with a plot that unfolds as you play. Your plane crashes on an island that is inhabited and ruled by dragons! You will learn the secret origins of these beasts and their link with the prehistoric past. You must rescue your girlfriend who has been captured by evil forces, and you will befriend the gold dragons who will help you on your quest. Explore caverns and battle prehistoric creatures as you attempt to locate your girlfriend and learn the secrets of the island. Great graphics and a unique storyline helps make this new game a must for your Commodore 64 library

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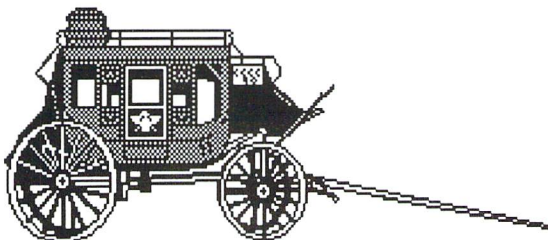
NEXT DAY SHIPPING!

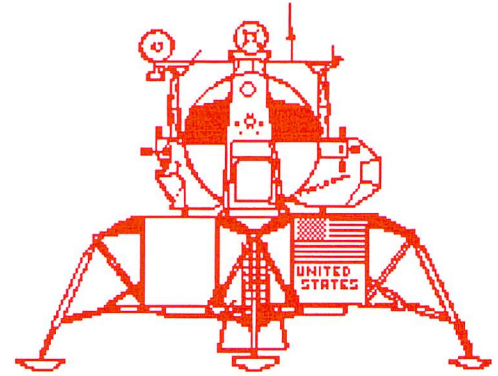
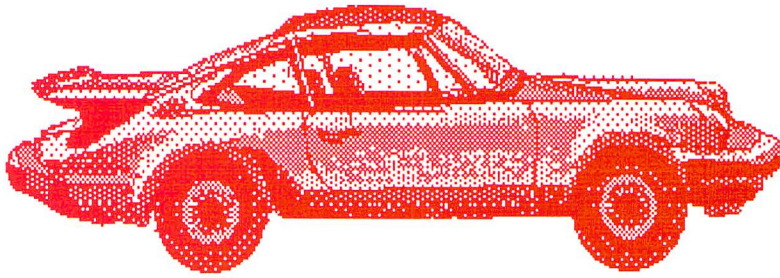
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