LOUISVILLE USERS of COMMODORE of
 KENTUCKY, INC P.O. Box 95SI Laulswille, KY 40209-0551


## The 1581 Drive

The standerd drive for the Commodore system is a 1541 with a 5.25 " disk, and all systens and software are built around it's architecture. Then along came the 1571 and upset the whole applecart. It sports double-sided mode and burst mode for speed while still maintaining 1541 emulation. Now comes the 1581 and the $3.5^{\prime \prime}$ disk. Fast and high capacity, it doesn't even attempt to be compatible with the standards of the 1641, so what good is it? What can, and can't it be used for?

The 1581 is a mass storage device which holds 3160 blocks of deta. A 1541 holds 664 blocks 50 if we divide 3160 by 664 we come up with 4 . 76 or just over $43 / 4$ disks per 1581! With disks seldom beine full. you can usually store the contents of 51541 disks on one 1581 disk.

Well, that's interestine but since it's not 1541 compatible, what GOOD is it? The 1581 loads and runs almost any kind of program that isn't copyrighted. As device 8 the 1581 will work with most nonprotected programs. This is because copy protection on Comodore software is pretty much specific to the 1541 disk. Any progran which doesn't use specific tracks and sectors to store information is probably going to work on the 1581. Actually the best use for a 1581 is to store "DATA". Data, meaning letters typed on your word processor or data from some other application software. Most of us use our 1581 es drive 8 and load and run from a 1541 or 1571 and use the "81" es a place to keep the "data". A 1581 will hold the entire dictionary and several years of letters and address files for the average word processor like SuperScript or FontMaster. Almost any application that allows the use of a second drive (i.e. drive 8) will make full use of the great speed and space provided by the 1581 drive.

Copying is different when copying to a 1581 because most copy programs assume that both drives are the same. Since most of the time you will be copying from a 5.25" drive to your $1581^{\prime \prime} 53.5^{\prime \prime}$ disk you will have to use a "file copier". These copy files one at a time or in groups but do not attempt to copy by tracks or position or any other format. Files are copied by filename and no attempt is made to check where it comes from or where it goes.


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 LUCKY，INC．，is a Non－Profit Organization whose purpose is to unite and educate users of Commodore computers and related equipment．
LUCKY in no way condones nor allows copying of copyrighted materials at any group function．Guilty parties will be subject to dismissal．
GENERAL MEETINGS are held the second Tuesday of every month at the Beechmont Community Center，6：30－9： 00 PM． Demonstretions are given on both hardware and software at these functions，with occasional guest speakers and a regular question and answer session．Also available to Members Only are Public Domain Program Disks from the Club＇s Library for a small copying fee．
BOARD MEETINGS are held at the Central Jefferson County Government Center， 7210 Outer Loop，from 7： $0-8: \infty$ PM，the Wednesday of the week following the General Meeting．
MEMBERSHIP is $\$ 20.00$ a year，per family， which includes access to the LUCKY BBS， Library，Monthly Newsletter，and special drawings．
The LUCKY REPORT（newsletter）is publishod monthly and is available at the General Mesting．DEADLINE for submissions to the REPPRT is two weeks prior to the General Meeting．It is＂manufactured＂on a $C=64$ ， $C=128$ ，various $15 \times 0$ drives，Pocket Writer II 128，FontMaster II，both 64 and 128 versions，and printed on a Panasonic $K X$－ P1180 and C．Itah 8510 printers．
The LUCKY BBS is operated 24 hours a day and is desiened with Commodore Users in mind．Special access is granted to LUCKY members，but all callers are welcome．The phone number is：502／833－5397．
Participetion and input is appreciated by
all Members.
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To avoid confusion，please direct all questions to the Library Assistants ot the other end of the table．PIEASE Io Not POIFIE IRE COMPUIED OPTDATOR！？This will minimize mistakes on backups being made．Thank you．

To order diskettes，fill in the order forms provided by the Library Assistants． Make sure you PRIFT clearly the Information requested on the form．This will speed up the filling of orders．

# Notes from the Red Room: 

By: Dan Koleski (club president)

Fellow L.U.L.K.Y. members:
HOWDY: Just thought I'd throw a little western plavor into thie article. It's early on Tuesday morning and our June meeting is tonight. So why am I writing my July article this early in June. VaCation! I leave for my vacation Friday and will be gone for over two weeks. I didn't want to return and have to hurry up and throw something together and put Leg and Dan under a lot of pressure to get the newsletter out. Now they will have plenty of extra time, at least with my part.

Since I'm writing this so early on, I may not be covering everything that has taken place, but $I$ will try to cover everythine I can remember and need to cover. There will be NO E-board meeting for June, so I'll hit the highlights.

To be honest, not a whole lot has happened the past month to write about. All the library books are completely up to date for the first time in about three years. We have plenty of new disks available for the librery, so check them out. We just received the disk from the club in Boise, Idaho as well as one from C=T.U.G. in California and a couple of others. Also, don't forget to check out our club's own Disk of the Month that Larry Bailey has put together for us and while you're at it, thank him for his efforts.

If you ordered one of the T-shirts with the Commodore Logo on it, come by and pick it up. If you still want one, see me and I will take your order. We did really well on the raffle for the 1581 drive and we should give it away tonight. Our next large raffle will be a complete C64 system including a 1541 drive and a 1702 monitor. Don't forget to get your tickets for this rafile as well as the software raffle.

The board has been pretty busy according to Dave. He is slowly but surely getting programs put back into the download section, so check it out. Leg has also been pretty busy with the board and is still working on the game SIGMA that he intends to install on the board. As for our demo for this month, at this writing, I'm not sure what it is going to be. I believe Legacy mentioned doing a demo on something, so we will just have to see what develops. We have decided to go ahead and have our Telecommunications SIG either during July or August. We will let you know when we decide this for sure. Don't forget, the Dayton Computer Festival is sneaking up on us fast.

We have been picking up several new members this year and I usually try to announce the names in here somewhere. But, people are joining so fast and through so many different people, I am not sure who all has joined of late. I do know of two new members, both from out of state. We welcome Lynn and Dan Fleming from Columbus, Indiana and Terrance Deak from Dickson, Tennessee. If someone else has joined and I didn't mention you, I apologize.

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I'm done. I know that thrills you. Try to enjoy your summer, but don't completely abandon your computer and your computer club. We will still be here working for you.
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Later,
Dan Kalester

# The Borゃd Hoom 



Ah, the LUCKY BBS. Its been around for years. Matter of fact it's been around long enough to be the oldest continuously running BBS in the area. most of that is good news. The down side 15 that users are taking it for granted. It's assumed that it will always be there. BBS's generally come and go. Some last only a few days, others a few months. If you value your BBS, USE IT!

LUCKY BBS has been active for about 8 years. I'm not sure even $Q$-link lasted much longer than that. Actually, there 15 pretty good usage as far as callers. But as one user commented, many of them are 'LURKERS'. People that come and look and leave no sign that they were there. That is a good thing when visiting the wilderness or national parks, but when visiting a BBS, you want people to know you were there by posting messages and sending mail.

Users of the BBS might have noticed a new touch lately. There is a feature that pops up a little tag line every time the main menu appears. Keep watching for new little items now and then. There might be something for you. Did you know that C - Net wishes you "Happy Birthday" at your next logon on or after your birthday?

This month the G-Files section is back in operation. G-Files are just text files for your reading pleasure or you con use your buffer to capture them for saving to disk or printing. There are some of the old topics and a few new ones that we found on the internet. We are finding new things weekly on the internet, but we need to know what you are interested in. Areas that don't get any responses in D long time wili probably be shut down. There is no sense in keeping an srea open that is not creating responses. It's hard to find things to keep the active areas going, let olone the ones with no activity. It bust takes a second to let us know you are there. If you don't know how, no
problem, just ask. If you don't want to ask just hit 'h' from any menu and follow the instructions for the help files. They are very comprehensive and useful. You will be amazed what you might learn there.

It's coming up... its going to be great, the great 'LUCKY Telecom SIG'. That's Special Interest Group for those of you who didn't know. We're going to have everyone bring their own terminal program and we will help you customize it and teach the fine points. We want your time on the nets fun and profitable. Start now thinking about what you want to know. Make notes and bring the notes and a copy of your favorite terminal program. If you don't have one, be there and check out what others are using. You can go home ready to communicate.

Summer is generaily the slow time for all computer activities, but there are good things happening around the clock. I just got a new "Commodore World" today and new stuff is being produced for the Commodore even though the company is 'dead'. I was reading that a new low power drain 1750 ram expansion is available. This one you don't need the heavy duty power supply to operate. Its called the 1750 clone. Everyone who wants to continue seeing support for the Commodore needs to get out there and return the favor by supporting the magazines and suppliers that are still there. Support is a fickle thing, if YOU want it you have to GIVE it back.

Dave Snyder, Sysop
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## The Bis Wheel in the Sky...

Well, due to technical difficulties beyond $m y$ control (aka $M Y J O B$ ), $I$ ar still here. I still have not determined the fate of a PC, but for the moment it is safe. My co-editor in crime has finally acquired a printer (o. least, a real one), so $I$ can begin io dump large amounts of stuff on hin now.

Summer is here, and $I$ am not fealing particularly fond of my machint friends, in fact, other than checking my mailbox on my Internet gateway, 1 have been downight trying to avoid them. They have done nothing to me, but I don't want to do anything to them either.

I have just returned from my vacation in New York, with my girlfriend, anc things are looking up. She is interested in the newsletter, and that makes me more interested in continuing to do it. She does not know much about computers, but she wants to learn, and maybe we can get her to help by writing some beginner articles.

I am guessing that Don-o (my co-editor) is looking forward to a transfer in his job sometime this summer. It will mean working on the newsletter vie the Internet. If this comes to pass, we may very well have to drop to $e$ permanent 12 page newsletter, simply because of the extra work involved. 1 wish you luck Dan-o, as I know you would me.

I'm trying to cut this short, as I don't feel very well right now, but i covered all of the major stuff. L8r...
ANO the wheel turns yet amother turn...
Segacy

## RHM3NATJONS...

This month I have both good news and bad news. The good news is that i am going to continue to write for the newsletter. The bad news is that I will be doing it long distance. That's right, I have been transferred to a store in Dayton, Ohio. It's only about an hour and a half from Louisville so I will continue to try to make it to the meetings. Also, I will still call the BBS, I'll only be able to call about once o week or so. Actually, that's not really much of a change. I haven't been calling as of ten as I should lately. The transfer isn't exactly a promotion, however, I am getting a raise and from a business point of view it will be a better location for me. Also, I'll only be minutes away from the Dayton Computer Festival (BIG grin)!

You'll notice that this month's newsletter is only twelve pages long. We have had a shortage of contributions lately. I am hopeful that this is only because we are in the middle of summer and in future monthe we will get more submissions from new sources. If you haven't written anything for the newsletter but maybe have on idea for an article, WRITE IT!:! Any and all submissions are welcome.

I have a lot to do in the next two weeks because of the move so $I^{\prime} m$ going to have to rely on Legacy a lot for the August newsletter, but I should be back full tilt in the September issue.

Well, that's all for now, I'll be in touch, so don't forget me or your Commodores!

LIVE LONG AND PROSPER, L.U.C.H.Y. P६AC乏 AND LONG LIf天, COmmodore.
TANSTAAFL Dam 7rauls

## BEACH-HEAD C64

I've been a little slow about doing a review. So I have picked out one of the best, in my view, war games. We have many, many of these in the Commodore stock pile to chose from. So sit back and let's review.

BEACH-HEAD; this is for the C64 computer. Most computer war eames involve moving little units of your army around a grid map. I do not care to much for these, even though some may. Not the most action - packed way to fieht a war. However, Beach - Head, puts you right in the thick of things, facine enemy ships and plenes headon. It's a one- or twoplayer game whose object is to win a naval victory, then move inland to knock out the enemy fortress of KuhnLin. There are six different phases in the campaign, each presented with finely detailed and colorful high-resolution graphics.

As the game begins, you get on overhead view of your ten-ship fleet, represented by four white dots floatine in the ocean. On the left, a long stretch of beach reveals a narrow entrance to the bay. The fortress can be seen blinking in the lowerleft corner, and the enemy fleet lies at anchor in the harbor.

Your first decision is strategic: Steam streight into the harbor, or try to sneak up on the enemy by approaching throueh a secret pessageway into the bay, located further up the coast.

Guide the Fleet through mines and torpedoes. You do this by maneuvering your ships one by one across the lake and out the exit at the upper-left side of the screen.
Un paralleled
Animation! The three-
dimensional sensation
achieved in this sea-to-
air batte is
unparalelled. It's like
really being in the
midde of combat. Even
flashing bursts as shells explode.

Calculating your broadsides. This is the ship to ship battle. The shrill whistling of incomine shells alerts you before they hit. Each time the joystick is pushed forward, the guns are elevated half a degree. You will think that you are on the battle ship USS New Jersey.

Attacking the beach. Sink all the ships, and the overhead view reappears 50 you can steer your fleet to the beach. This scene puts you in the seat of a small tank that must
weave through a series of closely placed walls and mines while you blast away at eun emplacements. Once in motion, you can't turn back. The sight of the cannon explodine and a little white flae waving from the remains of the fort is another visual plus that makes this shoot-em-up one of the best of its kind. You can choose from four skill levels. Even has a pause function, in case you want to call a temporary truce. I'm loading my eame up now.

Beach - Head is by Access Software. Load it up and blast the $0 *$ ! \#\#\# out of them. MAY COMMODORE LIVE FOR EVER.

FROM THE ROOM DOWN UNDER
Carru Balle4


## Disks Of The Month

L.U.C.K.Y D.O.M. F177<br>July 1995<br>\section*{SIDE ONE / 128 Prograns}

Progrem One-
DISASSEMBLER -80. Program will disassemble object code for the C\&D 128 models, that is stored in memory, or it can disassemble a disk file containine the object code, also can view code on monitor or print to printer. Use a Seq. file reader to read the Disassembler. Doc. This is in directory, does not show up in menu.
Program Two-
LHARCS. DOC. ARC. A 128, REU, 1571 drive needed. Program is for making SFX files. Needs REU or 1750 or larger capacity to use this to its fullest. This will dissolve an LHARC file. DOCs are included. Runs under CS-DOS. Modules are to include the LHX files. LHX is a file that will dissolve 64, and 128, MS/DOS any Amige formats. Full docs and specs are included, dissolve with CS/DOS.
Program Three-
Gradebook $128 / 80128$ program, 80 col, 1571 drive. Will print, several printer options to choose from. Program is a grade filing system. You can keep records of people on file, delete, load, save, reorder, average grades, correct, menu has these options and more.

## Program Four-

RESURRECT 1571 Program needs to loaded in 40 col. mode. A 128,1571 disk utility. This program will take a 1541 disk and run it for errors using a 1571 drive. With this program you can save a sector, save a file, save entire disk, read instructions. This progran will correct "soft" read errors on your disk. Help you to retrieve at least a portion of the bad file.
Program Five-
PROVERBS A collection of sayings, proverbs, and definitions. Hes instructions for 128, 80 col, 1571 drive. For you poem lovers.
Program Six-
128 C/G EDITOR 128 computer, 1571 drive. Continue, list, edit, display, load, save, DOS Wedge. Program will use either single or dual side disk drive mode.

## SIDE TWO / C64 Programs

Program One-
RUNEMAL. 64 Program, tells your future. Like using rune stones. Gives you choices of three different readings. Gives you present and future or the notion of reincarnation.
Program Two-
PSY. XX- Arcade type game. You have your own fighter space ship. You try to stay glive by dodging cliffs, other guns, and ships that are out to get you. Lots of action, good graphics.
Program Three-
ARC. 250. SDA. This is a Self-Dissolving Archive. Put on disk with lots of roon before dissolving. A program to make your own SDA programs. Also has instructions. For the 1541, or 1571 drive.
Program Four-
SX64VIDEO Load "Run. To. View". This will load up your six DD files. You can use the 1541 or 1571 disk drive with your C64. You can read some DD files, other pictures. Program tells you how to install external Video/Audio input jacks. Also, how to install a power supply isolation switch. Program will also run Kosla pictures. File limit is 17 files.
Program Five-
FORMATTER Disk utility for the 1541 drive. Gives you nine options of different things you can do. For the C64 computer.

## FROM THE ROOM DOWM UNDER <br> JOYSTICKS

Welcome back to another LUCKY REFORT. More great reading from each and every article. I would like to discuss a subject that everyone may enjoy. An 1 tem that has been around forever. Joysticks.

JOYSTICKS REPAIR. This covers some minor repairs that may be done on the stick yourself. First there are several models and makes of the joystick. There are the C1311 and the Atarl model CX40. The C1311 cannot endure much heavy game playing. The ilre button no longer fires, or you have little or no movement in one or more directions, or the character moves only in one direction and you have no control over it. Although the stack looks fine on the outside, to take it apart would be more trouble than it's worth. Right? Wrong!

A turn of the SCREW. I've repaired several joysticks. All it takes is a small phillips screwdriver (about \#1), a small slotted - head screwdriver (about a $1 / 8$ inch head), and about fifteen minutes of your time.

[^0]the tripads in position. The tripad's feet rest on the outer edge, and its center hovers over an inner runway. Each outer runway has a 4.5 vol tage level on it and each inner runway has a zero-voltage level on it. Forcing your joystick in the direction of the pad forces the pad down to short the inner runway to the outer runway, causing your screen character to move in that direction.

Now to the problem. More likely than not, one or more of these pads have been flattened by your excessive joystick maneuvering. As you can see by the construction of the board, it doesn't take much force to damage one of the pads. Locate the flattened pad. Example, if you don't have fire power, its the pad located under the firebutton. If you can't move to the left, it's the pad to the left, and 50 on. Go to the closest edge of the board and work your slotted-head screwdriver under the tape, being careful not to scratch the runways. Work it under the pad, and holding down the tape around the pad, give the screwdriver a small, careful turn and raise the pad up off the contact. This should arch the pad so that its feet are touching the runway but its center 15 slightly raised.

After you are sure that the pad has a convex shape, withdraw your screwdriver and press the tape back in place. Make sure everything is in position and assemble the stick, reversing the steps you followed to take the joystick apart. That's all there is to it! If everything is in order and you were careful not to scratch through a runway or leave a wire hanging off, or leave a spring setting on your work table, your stick should be ready for action.

Do not throw your old sticks away, if they cannot be reparred, they are good for salvage of parts to repair other sticks. Hope you have enjoyed this article. See you next time.

FROM THE ROOM DOWN UNDER
Carms Balles

## MHANTASMS AT GSOO BAUDD

This month is going to run a little out of sequence. I received a couple of letters asking for ways to choose an Internet Provider. So I did a little research, and this is what 1 came up with:

* Check with your employer (you might already have access)
* Ask a friend or co-worker
* If you have access to email (via a friend or online service):
- Send a message to ftpmailedecwrl.dec.com that reads: connect nic.merit.edu chdir /internet/providers get Internet-access-providers-us. txt quit
- Send a message to listprocewwo.cern.ch that reads: http://www. umd.umich.edu/~clp/i-access.html

You can always use one of the national providers. Some of the major ones are: Netcom (800/501-8649); Performance Systems International, or PSI (800/774-3031); and AlterNet, the largest (800/258-9695).

You also have the option of accessing the net from the major online services, such as America Online (AOL), CompuServe, and Prodigy. In the end, they will be more expensive, since you have to pay hourly connect charges for their other services, regardless of whether or not you use them. Most Internet providers offer flat rate access, where one price gives unlimited access for the month.

Once you have located the provider(s) in your area, you need to compare the access provided. They should offer 14.4 Kbps or 28.8 Kbps dialins (even if you are not going that fast, it shows that they are going to stay current). They should offer at least e-mail, Usenet News, telnet, and FTP services. Usenet is the Internet's discussion forums like Subboards on BBSs). Telnet allows you to logon to other computers, as if you were at a local terminal to them. This allows some features you may later wish to use. And lastly, FTP, or File Transfer Protocol, for retrieving files from the net.

If you are going to be using a Commodore, SLIP/PPP access is not going to be an option for you. This is a special protocol for access the net with systems like PCs, Macs, Amigas, and larger machines. I have heard of a project to make a graphical browser for the Commodore 128 , but it will require some extra hardware, namely o Swiftlink, and a REU.

Remember, once you are on the net, you can look for other providers, and you can talk to a large number of people. Ask around... you might find a cheaper provider, or better one... and once again, if you are on the net. and have email access, drop me a line. My address is:

LEGRCYEIGLOU.CDM

##  <br> To all LUCKY Officers, and Members:

Thanks for a wonderful year. It was our first, it shall NOT be our last!<br>-Legacy \& Dan<br>n)

## 

A $\$ 020$ ）simple．Commodore made office furniture，which includes desks and filing cabiners．They simply used rbe facillites and paris on hand．The fact $\tau$ bat，ar the $\tau$ ime $\boldsymbol{r b e}$ per came our， people equares physical stabllity of a machine as an indicarion of irs month， served only ro eifforce rbe decision． Also，rhe system had ro hold up rbe bulir－in moniton．
A $\$ 029$ ）The ansares las looking for are Eno and stop，alrhough someone cornectly pointed our rhar Go ro can be constaued as a misspelling．
A \＄02A）CiA－Complex interface Adaprer． てbe german magazine $64^{\prime} e \mathrm{e}$ calls iv a Control interface adapter，but rbat is not irs offlcial name．
A（02B）A lot of people anseresed
Redefinable characters，but rbat alone does not provide FULL－GCREEC graphics． $25680^{8}$ cells gives you a litrle oven $1 / 2$ of the screen in graphics，but the vic has rhe abllity ro make eath chanacten cell be otib，which gives enough pixels ro map the entire default screen． A $\$ 02 \mathrm{C}$ ）too．One on back，one on slde near the back．
A $\$ 020$ ）CBMBO ar $\$ 0004$ ．The lertens must have bit 7 ser．So，rhe actual perscil codes are：

195，194，205，056， 040.
\＄c3，sc2，\＄cos，\＄30，\＄30 in nex A（O2E）MOBS（Movable Oblect Blocks）．
－A $\$ 02 \mathrm{~F}$ ）Uloo， 1 got so many esponses ro rhisl rbls question actually dealt olth a rypical usen，bur people cent in descriptions of mhat rhe code does and how ro parch ir．8o，thene ane roo sers Of anceresto this：
（Complex ansere omirced）
1）If you put the curson at the botrom of the sceen and rype 82
characters (not 01 ) and then reying ro detere back to rbe $70 \tau \mathrm{~b}$ one．

2）Any of the following will work： oo not use rbe following colors for the curcor：aed，blue，yelloon，light red，dark grey，light blue，light gray． Some people devised a IRQ wedge rbat will recover from the lockup．have rbe folloaing lines as the first lines of a pROgRam：

10 opan 15，0，15 20 inpur＂ $15,0 \$$ ．
3）てrere are actually two ways $\tau 0$ recover．They are：
if you bave a reser burton
installed on the 64，Reser rbe macbine， then load and Run an unnem program．（l accepred rhis，bur figured most people would assume this much）．If you have a zape drive installed，press either shift－ 3 or move a joystick installed in port in the Up direction．そhen，respond ro the directions on the screen＂PRESG PLAY
 the tape load．

Commodore Trivia comes to you compliments of Jin Brain．Jim posts a monthly trivia contest on Internet． His address 1s：BRAINGMAIL．MSEN．COM Thanx ifim！！！
（1）$\$\left({ }^{\prime} 00\right)$ ）（hi a（ommokeny（i4，what is the anomit： or＇RAN available for BASIC piognams to pesich in？
（1）\＄（kil）Names one Comaxkore compliter（piet－


（）$\$(x+2)$ That ary thes？
（）$\$\left(X_{3}\right)$ Who was the Chier Executive Orificen
 intirochexed？
 others）have a TOD reatiny．What ckeos TOD stand for？
 Kermal holds the version momenr？
 the KIPH－1．How mok RANI wes available on thes KITF－1＂
0）\＄（037）Who designed the architectione for the （hacy integnated cincuit？

## SEffict－f－djifl

## THEME：WORD PROCESSING TERMS

Find the following words in the puzzie below either across，up－and－ down，or diagonally．

| block | insert |
| :--- | :--- |
| copy | merge |
| cut | move |
| delete | paste |
| find | tab |


| 9 | $f$ | $y$ | C | D | $r$ | e | z | i | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | k | 9 | $u$ | － | t | c | $y$ | 0 | $b$ |
| k | 4 | $u$ | t | $r$ | k | 0 | $\Pi$ | 1 | k |
| $\square$ | $f$ | P | E | z | E | 1 | $\square$ | $f$ | 4 |
| ヨ | $P$ | 5 | 口 | 1 | $f$ | ［ | 9 | 1 | m |
| h | $\Pi$ | E | E | c | $k$ | z | m | n | e |
| 1 | $f$ | t | 9 | 5 | $\square$ | 0 | $b$ | J | $r$ |
| k | E | 5 | 0 | 9 | $v$ | a | 1 | $\square$ | 9 |
| $J$ | $\square$ | a | 1 | E | t | $p$ | $y$ | $v$ | E |
| $u$ | k | $p$ | $x$ | 0 | J | $p$ | ［ | $y$ | e |


| POKE | 19,65 |
| :--- | :--- |
| POKE | 22,35 |
| POKE | 152,0 |
| POKE | 157,0 |
| POKE | 157,84 |
| POKE | 157,128 |
| POKE | 157,182 |

POKE 188,0
POKE 189, 1 (0)
POKE 204,0 (255)
POKE 211,x $\quad(x=0-78)$
POKE 21
POKE 214,y $\quad(y=0-24)$
POKE 646, $c \quad(c=0-15)$
POKE 649,0 (10)
POKE 650,65
POKE 650,128
POKE 657,1
POKE 657,128
POKE 774,0
POKE 775,100
POKE 775,168 (167)
POKE 788,52 (48)
POKE 782,183 (71)
POKE 808,127 (237)
POKE 808,234
POKE 808,239
POKE 816.157 (165)
POKE 816,32
POKE 818,32 (237)
POKE 53285,11 (27)
POKE 53272,21
POKE 53272,23
POKE 53280, c ( $c=0-15$ )
POKE 53281, $C \quad(c=0-15)$
POKE 84296,v ( $v=0-15)$
POKE 56325,s ( $0<\mathbf{s}<256$ ) (58)
POKE 46, PEEK (46) +1 , LOAD" $\$$ ", 8
POKE 46, PEEK (44-1)
PRINT PEEK(63)+PEEK(84)*256
POKE 186,8:SYS 52224
POKE 770,106:POKE 771,223
POKE $770,106: P O K E$ R71, 223 Reset fast load.
(Editor's note: SYSS7184 will reactivate FASTLOAD correctly)
POKE 770, 131: POKE 771,164 Disable fast load.
(Editor's note: SYS 64738 *TWICE* will disable FASTLOAD best)
POKE 774,226: POKE 775,252 LIST gives a cold start:
POKE 781, In:SYS 58日03 ( $1 n=0-24$ ) Erases a sinele line from screen.
POKE 54286,15: POKE 54296,0 Makes a click sound.
POKE, PEEK, and SYS List
POKE 19,65
$\begin{array}{ll}\text { (norm=0) } & \text { Turn off "?" during INPUT. } \\ (25) & \text { LIST won't show line numbers. }\end{array}$
POKE 22,35
$\begin{array}{ll}\text { (norm=0) } & \text { Turn off "?" during INPUT. } \\ (25) & \text { LIST won't show line numbers. }\end{array}$
LIST won't show line numbers.
Closes all files.
Turns off error/control messages.
Turns off error messages.
Turns off error messeges.
Turns off control messeges.
Turns on error/control messeges.
NOTE: The POKE 157 command must
be on the same line es the LOAD command.
Clear keyboard buffer.
Prints in Reverse mode.
Turns cursor on durina GET.
Turns cursor on durine GET,
Disable quote mode.
Move cursor to screen line.
NOTE: Must be followed by PRINT.

Pages From The Sages

POKE 152,0
Change cursor color.
Sets keyboard buffer to o charecters.
No keyboard repeat.
ALL keys repeat.
Disables (SHIFT)/(CMDR).
Disables (SHIFT).
List line numbers only.
LIST performe a NEW.
Disables LIST.
Disables STOP.
Disables STOP.
Disable RUN.
Disable STOP/RESTORE.
Disable STOP.
NOTE, POKEing 808 messes up the clock, it
is recommended to use POKE 788,52 insteac
Disable LOAD.
Enable SHIFT-RUN to LOAD \& RUN a program
Disable SAVE.
Turns screen off.
Switch to upper case.
Switch to lower cese.
Change border color.
Change border color.
Change background color.
Set output volume of SID chip.
Set cursor speed.
List directory with a program in memory
Returns to program in memory.
Finds illegal quentity in DATA statements
Relinks DOS wedge.
Reset fast load.



[^0]:    LETS DO IT. Turn the joystack over and remove the four phillips-head screws and the bottom cover. CAUTION, watch out for springs. Take some time to look over the contents before going any further. That way, you won't forget where everything goes when it comes time to reassemble. With the bot tom cover removed, you are looking at a small board with six wires connected to 1 t. Make sure they are all connected, because the culprit could be as simple as a loose wire. Write down the color and location of each wire just in case two or more come loose. Now remove the board and turn it over. Make note of the red fire-button and spring and the clear plastic - molded wheel inside the joystick handle, remember their positioning.

    Now look at the board. It consists of five metallic tripads with the accompanying runways that go to the wires. The board is covered with a plastac nonconductive tape that holds

