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THE CBUG ESCAPE
Summer 1986, part 1

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THE CBUG ESCAPE



THIRD ISSUE
Summer 1986
part 1

THE CBUG ESCAPE is a 4 times a year publication of the Chicago B128 User's Group - International (CBUG), an international membership organization in support of applications and usage of the Commodore B128 Computer.

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Publishing address: CBUG, Inc., c/o Norman Deltzke, 4102 N. Odell, Norridge, Il. 60634 USA.

Cover price: \$3.00. 1986 subscription rate: \$10.00 (US, Canada & Mexico) \$16.00 elsewhere

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AUGUST 1986 CHICAGO AREA MEETING ANNOUNCEMENTS

CBUG WEST HAPPENINGS:

IMPORTANT VOTING MEETING

At the upcoming August 11 1986 meeting of CBUG WEST, to be held in West Dundee, we'll be discussing proposed locations and agendas for future meetings. This is one of the steps toward revamping these meetings. Here's what we will be discussing to plan for a super future:

1. With our own meeting location we'll be able to better control the starting time (& thus stopping time) of the meetings. No more late nighters! (Unless you want to stay late.)

2. There'll be occasional lectures with well-qualified speakers. Topics will include such things as: "How to get the most out of ... (Superbase, the Accounting suites, Calc Result, you name it!)" ; updates on Commodore happenings; technical forums; availability of software & add-on hardware; plus whatever you are interested in.

3. Balanced against #2 will be "workshops" where you can bring your real-life computer problems - software or hardware - and we will work together on them, either as one big group or in smaller groups or whatever the situation calls for. Our new emphasis will be on these workshops, rather than dull one-sided monologs. You only stand to benefit!

These are your meetings. With your help, we intend to make it more than worth while for you. The drive will be worth it, and we'll be meeting from 7:30 until about 9:30 on the second Monday of each month, even if we move. Be sure and attend the next CBUG West meetings to voice your opinion. Help us make CBUG west a major help to your B-128 usage.

The Aug. 11 meeting will feature constructing an elaborate invoicing template in Calc Result, a specific project need of one of the attending members last meeting.

CBUG EAST AUG. 24 MEETING RELOCATED

CHICAGOLAND COMMODORE COMPUTERFEST

SUNDAY Aug. 24, 1986

8 am to 4 pm

Kane Co. Fairgrounds
St. Charles Il.

This all-day Commodore fest features --

- *** HUGE 15,000 sq. ft. computer vendor shopping area featuring local and national companies
- *** All day raffles, 1st prize an Amiga system
- *** Interesting forums by speakers from Commodore
- *** Seminars by well-known experts all day long (including Jim Butterfield)
- *** Free parking
- *** Flea market in AM
- *** Amiga demonstrations
- *** Contests, food & more

For advance tickets and information, contact Bob Carpenter at 898 3298 or Frank Christensen at 898 2779.

CBUG will have TWO tables all day at this Fest. Come one, come all. See the rest of the Commodore world -- and help CBUG show its best face! We need booth staff. Contact Norm Deltzke if you can help out. 312 456 8720 7 pm to 10 pm.

The Kane County Fair Grounds are located on Randall Rd., between Rts 64 and 38, which is on the west edge of St. Charles, Il.

From the North, head south on either 25 or 31 to 64, west about 3 miles to Randall Rd., South on Randall.

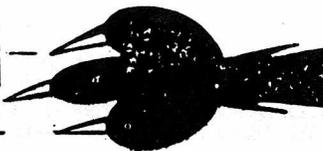
From the South, head north on 25 or 31 to 38. West about 3 miles.

From the City and near suburbs, take East West Toll, exit 31 north to 38 etc.

\$5.00 gate admission, includes 1 chance at raffle (Amiga Computer 1st prize, C128 2nd prize, and others).

CBUG

SCRATCH PAD



THE CHICAGO B128 USERS GROUP - INTERNATIONAL
4102 N. Odell, Norridge, Il. U.S.A. 60634

By: Norman Deltzke
July 1, 1986

----- HAPPY BIRTHDAY TO CBUG

WE ARE ONE YEAR OLD

(Please Note -- There are two volumes of the CBUG ESCAPE for summer 1986! See below)

On July 1, 1985, a certain phone conversation triggered the beginning of CBUG. With this CBUG ESCAPE, we are proud to celebrate our numerous sustaining members. "Fortunately" there are so many that we can not print them all in one book. Remember, if you will, those first faithful who launched us from a need, an idea, to reality. Liz Deal, Warren Swan, Warren Kernaghan, Angel Matos, Roy Sherman, John Wolfram, Jim White, Mark Schwarzbauer, the brothers Lemkelde, Marilyn Gardner, Fred Lovejoy, and too many more to mention.

I've been privileged to talk to many of the members in the course of compiling the CBUG ESCAPE. I hope everyone recognizes just how much these, and other dedicated, members have contributed to make the CBUG of today.

We are the world's second largest's Commodore user's group. Let us continue to prove to the world that we deserve that title. Not just in numbers, but in 1st quality service. CBUG is doing a great job. Let's hear it for our contributing and helping members!

Truly, we can celebrate. CBUG's effort to make your B128 the best computer investment has been greatly enhanced by the recent generosity of CBM. While you sit back and enjoy, remember this is YOUR group. Contribute any way you can. Participate, learn, perfect your knowledge. By all means stick with it. You will be the winner. This is a once in a lifetime opportunity. Take advantage of it.

Read this issue carefully, articles, ads, library and the Project Registrar's report. The dedicated membership of CBUG will be rewarded! Our technical members and programers will soon be providing advanced applications for use by the majority of our laymen users. The information you see here is but a small token of what I hear about nearly every day.

----- THE ESCAPE IS TOO BIG THIS TIME

Only two months ago I was wondering whether some of the material from the Winter Spring ESCAPE should have been held back for the Summer issue. Such a worry I should have not entertained for, in the last few weeks, my mail has runneth over with articles. So many first class materials have come in there are TWO huge Summer volumes. The second volume will hit the mails late in August. If you do not find everything mentioned here in this section, just wait a month for the rest of it. There is just too much to write about even in the Scratch Pad for one issue. New developments are coming so fast that I'm just plain dizzy. You know, being an orphan is not so bad after all -- lots of folk do their best to help the "disadvantaged" to become the most advantaged!

I've received a number of complaints about the difficulty in reading our printing format. For this I apologize. Unfortunately both time and funds are limited. Over the next few publications I'm going to experiment with different type fonts, type sizes, columns, etc. If you have any comments on the results, let us know. The bulk of the issues will continue to be set using a 15 pitch format on a Daisywriter 2000. Consideration is being given to photo-typesetting, however economics, even after the increased packing density of photo-typesetting remain doubtful. I have invested in a much better grade of printers negatives for this issue. Hope it helps.

Lastly, the realities of economics. The flow of articles have so far exceeded my wildest expectations, that we have had to re-allocate our publication budget rather than to edit or not print articles. Therefore, this and future issues this year will be sent by bulk mail so the money can be spent on printing and paper. If your future copies do not arrive within 8 weeks of the anticipated publishing date as stated in the last publication (allowing that CBUG as well as the Post Office may be tardy), please send us a note. There will be no response, but if the mailing is out over a month we will send a duplicate.

We will announce next years subscription fee rates in the next publication.

----- THANK YOU COMMODORE!!

We love Commodore! Last issue the back cover of the ESCAPE reproduced a release letter signed by the V.P. General Counsel of Commodore Business Machines. This was predicate to the nearly 1200 pages of documentation now available on CBUG Archive microfiche. Since then, CBUG has requested and received more than 4 (FOUR) additional releases and permissions. Having written 5 thank you letters in one sitting, it seemed that CBUG ought to offer an appropriate gesture of thanks. Therefore CBUG Librarian, Rev. Mark Schwarzbauer was requested to write a prayer of thanksgiving. Ah, but fate, the first version was not what was expected. But such a work of art it was, that member James Beggs of Las Vegas volunteered to provide several copies, in calligraphic style. Those originals, framed of course, are being presented to several of the Commodore personnel who have spent so much time helping us. You will find this reproduced inside the back cover. On the back cover, is a more appropriate letter of appreciation with which I'm sure all of our members concur.

Why has Commodore become so helpful? It has become evident that CBUG takes care of its own. As an organization, our many stronger members have provided a level of assistance to other members never before recorded in consumer computer history. Most notably, the members of the Yell for Help effort have accomplished miracles. This has been a blessing for

SCRATCH PAD

Commodore as they no longer have anyone on staff who has intimate knowledge of the B128 family. Nor can they spare staff at this critical time in their corporate history to support a zero-profit former product. The bottom line is that in saving CBM the time of supporting something they no longer understand, they have been able to allocate precious resources to providing to CBUG critical tools that are needed to build the finest support and product enhancement network ever built.

The various agreements have opened up untold doors for B128 owners participating in CBUG.

See the announcement section regarding backup and upgrade copy availability for the CABS accounting suite for example.

Info Designs, the publisher of CABS (upon reviewing the CBM/CBUG releases) has entered into an agreement with CBUG member Joe Rotello. They have provided Joe with the source code for the CABS suite so that he can repair the bugs so typical of a project of the magnitude of CABS (1.8 million bytes of compiled code). Member Bob Loeffler has volunteered to act as the clearing house for all CABS improvement information to insure that Joe's time is best spent doing the work. Send data regarding CABS defects and difficulties to Bob Loeffler, c/o Greenlake Hardware, 511 Mill St., Greenlake, Wi. 54941. Be sure to make it legible and carefully organized. Always put your name, address and phone number on each document. One subject per page, please.

CBUG has received written permission to obtain any and all B128 information from virtually any source whatsoever for dissemination within the CBUG organization without fee or reporting. Parties so providing are assured in writing by CBM that there will be no consequent legal action by CBM for their providing CBUG and/or CBUG members with this help. (I have located many of the engineers and programmers who worked on the B128 development, and most have in turn assured me of their future assistance).

CBUG has been granted a no cost license to copy and distribute, in any manner convenient, the ROM codes of any B128 family computer we can find, and, permission to modify and adapt them. This opens Pandora's box for such things as Ram Disk, instantly switching a machine from B256 Roms to B128, B700, and any of the several variants we have located, DMA's (Direct Memory Access for disk drives to increase disk speed), and much more no doubt.

All of these permissions are applicable ONLY to CBUG and members of CBUG!

Ah, but the fabled 8088 coprocessor everyone begged for but it "did not exist" (vaporware as these things are known). Out of the depths of a CBM warehouse (thanks to the help of several former CBM employees who told us where to look -- so we could tell those still there), some 40 8088 boards have been located. A few are now in the hands of CBUG members to ascertain their operability and useful value. CBUG has already obtained permission to manufacture additional coprocessor boards should there be a demand. In the FALL 1986 ESCAPE we expect to have reports on the 8088 project. The 8088 coprocessor is expected to allow operation of a good portion of MSDOS software (generic, remember it is pre IBM), but it is also concurrent CPM (CCPM 86). It has provision for the 8087 math coprocessor (a \$130 chip) which turns the 8088 into an ultra powerful math cruncher.

Gary Anderson is investigating a redesign of the co-processor to use the newer V20 chip in place of the 8088 which will support both 8088 code and Z80 code. Then we can have MSDOS, CCPM 86, and CPM etc. all in one processor, in addition to the powerful B128's native 6509 processor. The schematics for the CBM 8088 board, the interprocessor communication code, and the necessary MSDOS code are in the CBUG Archives as archive #001, order #12370, \$25.00. You must have a signed non-disclosure agreement on file or with the order to obtain archive materials. That agreement was on the back cover of the Winter/Spring 1986 ESCAPE, and at the rear of the library section this issue.

There are members investigating how to hook other drives into the B128. Some members have reported some success too! Anyone working on drive interfacing should immediately register with the CBUG project registrar, Marilyn Gardner, 1630 Madison St., Evanston, Il. 60202. Even if you have communicated with me you still must register with Marilyn. This work is now going to be critically important as other disk formats will be needed to import data and programs into the B128. Has anyone worked on tying two SFD 1001's together to appear as an 8250?

Member Anthony Goceliak has developed a number of utilities available in the library this issue; things no one ever dreamed possible. He will soon offer a program which allows one drive of the 8050 to believe it is a 1541 or 4040 drive. With that program you can easily duplicate 1541/4040 disks onto our standard 8050 disks -- or the reverse! Better yet, he believes he has devised a method of making one drive of the 8050 read CPM for copy purposes only.

Memory expansion is almost becoming old hat! Fred King has been doing 1Meg upgrades to the computer for several months now. I have one and love the additional capacity for heavy Superscript editing and huge spread sheets. Gary Anderson is advertising his multi-featured 1 Meg add on memory expansion board in this publication. Another member has designed and may offer as soon as the next CBUG publication, an external static memory addition. Static? WHAT!? ZAPI! A static memory uses memory chips which save data on a permanent cell by cell storage scheme. Those in the B128, King's and Anderson's devices, like most computers, are Dynamic RAMS (DRAMs). DRAMs move the information around much like a carousel, picking off and inserting needed data each time the carousel rotates. Dynamic RAMs require quite a bit of power to maintain memory, whereas certain types of static rams can be maintained on nearly nothing for indefinite periods of time; such as the calculators which remember everything even when turned off. Unfortunately, static RAMs are rather expensive, over \$1.00 per Kbyte, so one Meg of chips alone would well exceed \$1000. BUT, for the small portion of memory you want to access instantly upon power up, or protect from power failures, this will be quite a boon.

Soon, there will be a small circuit board you can insert into your B128 which plugs into the sockets where the Kernal ROMs are located. You then put the those ROMs into new sockets on the added board. This new board contains a small amount of static RAM into which you can load any of the known B128 operating systems from disk. Then you can switch the machine between the two at will!

Let's hear several rounds of applause for our technical wizards!

----- THE PRECISION/PROGRESSIVE CONNECTION + SUPERBASE REPORT

During the first week of June, I had the pleasure of some 7 hours of meetings with Mr. John Tranmer, Chairman of Precision Software, London England (brother of Simon Tranmer of Superscript and Superbase fame). Sitting in on those meetings were various staff members from Progressive Peripherals of Denver Co. For a the final meeting, the President of

SCRATCH PAD

Progressive, Steve Spring. In spite of the delays in releasing the upgraded Superbase and the new Superscript, John and Steve have assured me of their intentions to fully support the B128 community to the hilt. This is why the delay in SS3 and SB2 availability as they insisted that the programs be as perfect as possible for release. Meanwhile, I strongly advise you to make backups of whatever disks you send in for exchange (Use Knight's Utility) -- and DO NOT send anything until there is a new announcement of availability. Noteworthy among the utilities on the new Superbase disk is one that will fix most of the vexing data field mismatch and other similar errors.

Progressive is the exclusive distributor for Precision Software in the US --except-- for the soon to be released B128 hard drive versions which will be available thru CSI of Melbourne Fla.

Member Doyle Horine, the B128 Superbase SIG director (Kokomo Indiana) has undertaken to be the second CBUG SYSOP on the Delphi Network. Progressive and Deb Christensen (head of the Flagship Commodore area on Delphi) are setting up a special area just for Superbase users. Doyle will be one of the experts there. Since very similar versions of Superbase are available for the C128, there will be a great deal of valuable exchange and assistance there every day. Information and discoveries regarding Superbase should be sent directly to Doyle Horine, 3594 S. 350 E., Kokomo, Indiana, 46902

----- SUPERBASE/SUPERSCRIPT HOT LINE!

Progressive has set up a hot line support desk for both Superscript and Superbase. They have several expert programmers on duty each afternoon to handle support of these programs. It's great to see this happening! Thank you all, the people at Progressive and Precision. AND, CBUG members, remember to support the vendors that are making it happen for us. Give them some room, for they are only human too. Let them know that they are appreciated, even if you don't need anything they have for sale atleast say thank you in a note. If a question is not delt with to your satisfaction, set problems down precisely in writing and send a copy to CBUG, as well. Read this article carefully and you will find the names of the Chief Executive Officers of the companies.

Last issue, we released the Northrup/Leighfield disk (CBUG #13 #12787 \$9.00). The Leighfield section is some 60 pages of important Superbase hints and additional instructions. This disk is in Superscript form for you to print out as a standard SS2 file. If you execute the print command as a linked file command, you can print the entire works in one pass (ESC O C L P RETURN). At the prompt, enter the first file name, 'labels' RETURN. Clyde Northorp's portion is documented extensively in the help files on the disk. The help files can be read either from Superscript, or directly in Superbase. Always remember to read and snoop thru all files on a disk! Everything you may need is somewhere on the disk. Our contributors are becoming ever more comprehensive in their efforts to help you!

John Tranmer also provided CBUG with about 120 more pages of critical additional information on Superbase. About half of these are Hints and Tips documents by Precision. The balance are articles published by the ICPUG (Independent Commodore Pet User's Group) of England. Mr. Paul Mock, a member of the Fox Valley Commodore Users Group (where the CBUG Chicago local west meeting is held concurrently), has undertaken to type the entire works onto disk. Why on disk, wouldn't it be easier to print? Since the text will be in Superscript you can do full text searches with your computer to find any answer you want. This is impossible on paper. We are going to list this work in the library; but be prepared for backorders, it may not be available till late August. That's an huge amount of typing!

This information, from Precision, is all in addition to "Superbase, The Book" published by Precision and distributed by Progressive. "Superbase, The Book" is a must buy if you are serious about Superbase. The Book is NOT redundant to the instruction manual, but rather an important complement to the instructions. If you have not used Superbase, you ought to give it a try. It is simply one of the finest database programs for any computer. It is particularly easy to use as compared to most better databases for other machines. BUT, read and understand Superscript first. There are many assumptions in the Superbase manual which you need to know first from SuperScript.

Advertised, in this issue, is a top flight heavy weight business inventory program from member Bruce Faierson (available from N.W. Music & Computer), which operates in Superbase. You have never seen a computer dance so elegantly. While the program elements are written in Superbase Basic, Superbase implements nearly all the operations in high speed machine code. So, this is truly one fast program. It is without the shortcomings of the CABS inventory. If you need a free standing inventory program -- such things as an "on screen calculator", parts numbers styled as you elect, etc; this may be the inventory program everyone has been begging for! Bruce has been at this program for well over six months almost as an obsession. And all that, just to help out those B128 owners in need. His price probably will not pay for his electric bill to run his computer room all those hours. This is another example of the fine programming that can be done within Superbase; and of member dedication to the CBUG cause.

There is a second inventory program available from CBUG in this issue. This one is from member Les Coombs. The program is entirely in basic. Les's article, in this issue, tells a bit about it. A great idea for less elaborate projects -- or as foundation to write your own database program.

Those of you with Superbase programming expertise are invited to send in your applications, even the simple ones. Most of us simply do not have the experience or patience even to write simple output programs. We are most grateful to members such as Dr. Griffin (CBUG #14) who contribute such huge undertakings to the CBUG Library. His medical accounting and insurance administration suite for plural practice boggles the mind! Not to forget Clyde Northrup and his extensive work teaching us how to use Superbase.

----- WARREN KERNAGHAN

Hats off to this man. He gives us some of the best documented library materials anyone has ever sent in. And he now improves yet on that. I really believe Warren has figured out how to work atleast 73 hours a day! In this publication is a work of true love: The CBUG archive microfiche were put into production so fast that there were many organizational flaws. We simply did not know what we had. But we knew too many people were waiting for the information to hold it back for rework. The Great Kernaghan has made a complete index, which is proudly printed herein in full. If you find any of these useful, do something nice for Warren.

----- BACKUP and DEPROTECTION

SCRATCH PAD

Member Jack Casey has in this issue of the library one of the most interesting and useful programs I've seen. It is totally menu driven and excepting typing 'dload"ss" RETURN' twice during the program, answering three questions "Y/N", all you do is press return, when told to do so! What does it do? It makes a completely deprotected copy of Superscript, with Liz Deal's fix incorporated, and a copy of Superbase, all on one disk. You must already have the original programs. No head banging. And, it cuts loading time 50%. You can even list Superscript to paper, study or modify it! The deprotected program can then be loaded from either drive 0 or drive 1. This is invaluable if you have a bad drive 0.

CAUTION! CAUTION!! CAUTION!!! Some members have attempted to modify their Superscript program on the original disks without having backups. DON'T ever, ever, attempt to modify an only program disk. Always do surgery on duplicate (backups) ONLY. In the case of Superscript II, and Superbase I, you must use Jesse's copy utility to make such duplicates. Remember though, that Jesse's program runs only on 8050's that have the latest operating system installed: "DOS 2.7". To find out what your drive's DOS is, upon cold start (power up), type ' ?ds\$ RETURN '. Nearly all of the 8050's sold recently were of the 2.7 versions. However, there were a few earlier versions with Dos 2.5 still being sold.

Take it from me, a very heavy user of Superscript, the deprotected version is far more convenient to use. And I don't have to worry about the program kicking my drive to death, (especially if you have an SFD 1001). The Superscript and Superbase developed by Jack's program will work on any 8050 compatible drive. P.S. Jack's program will work only on an 8050 (-- maybe an 8250 too?), though.

I sincerely hope Jack's program sets an example of "translation" programs. We need programs which can automatically adapt software written for other CBM, and maybe even non-CBM computers to produce a B128 version. To make an adapted copy yourself is fully within the US copyright law's fair use doctrine, and is far more convenient than locating someone who has the necessary equipment and talent to do it for you. Even if these translation programs are specific to a certain needed program, they will be of great value.

Last issue, I pointed out that the CABS/Info Design program disks can be backed up using any method of backup EXCEPT to attempt to do so from within the CABS programs themselves. ALWAYS put a write protect tab on the original before duplicating. The programs on some versions will self destruct if you do not do this. I suggest you make a copy and put the original in a safe place never to be touched again. Then make your working copies from those 1st copies.

For those of you with an SFD 1001 drive, (which is a single drive for the rest of you folks), you've well learned to miss the backup and duplicate commands enjoyed in a dual drive. Superbase has a backup program for use with single drives which works. Infact it even works on the 8050 if you have one dead drive! Caution though, the program seems to abort after every chunk of data transferred. But, it does not. Just keep pushing the program on. This type of program loads the computer full of data from the source disk. Then, you switch disks in the drive. And, it writes that chunk to the destination disk. After repeating this process about 10 times, you have a copy. With Superbase and some other program's data disks including Mr. Goceliak's utility disk, some materials are stored in random files which are not on the directory. Copy-all type programs will work only with files that are on the directory, and sometimes not all of those. Superbase bails us out again! I've not tried this on an SFD 1001, though it works fine on an 8050 commanded as a single drive. Tony Goceliak has some copy programs on his disk this issue for these needs as well.

He who does not keep backups is truly looking for trouble. Someday every machine breaks, or its operator goofs. Backups may be more important than insurance or copies of your tax returns. Failure to backup is guaranteed suicide. CAUTION, if you distrust your machine after a disk is damaged, don't go right ahead and put the back up in unless you have several more. Make sure your machine is working before jumping into the pot a second time.

One or two members have developed an interesting "avocation" of repairing crashed data disks. But, I don't think they would enjoy a greater flow of requests. A business loosing its entire accounts history is just too sad to comprehend. If you need that type of service, give CBUG a call and we will refer you on.

Another comment on disk problems. Drives do go out of alignment. The 8050 in particular is subject to speed problems. To continue using a drive just because "it seems to work" is as bad as driving your car without a tune up or changing oil. One day it WILL get back at you by trashing a disk, a few days later another, until you catch on. Get your copy of Physical Exam. Get the zener or precision reference diodes AND PUT THEM IN. Or better yet, go the whole 9 yards and put Jerry Mill's phase lock servo addition into your drive. By comparison, it just ain't worth the effort or cost to reconstruct even one disk.

----- THE LIBRARY

There are several new offerings in the library of considerable merit. While I'm pleased to hear so many favorable reports about the usefulness of CBUG disks, I'm quite amazed by the large number of members who have not availed themselves of this great resource. We are rapidly building one of the finest libraries available for any computer. Even more disappointing is to learn that a fair number of members have called asking questions or looking for help that was readily available in the CBUG library or in THE ESCAPE.

----- READ ME, READ ME NOT

The notice on the front of this issue is deadly serious. Yes, maybe our publication is sometimes lengthy. Sometimes over some members heads. Sometimes redundant as to what more experienced members think they already know. But, please try to absorb what we publish. As we go on, the future material will build on what has already been. What you know for sure you will never need, will become a critical requirement next month, or even tomorrow. Don't short change yourself. Try to stay with us. Let us know how we are doing. Answer the questionnaires. Write to us! CBUG, and each of our contributors, is anxious to help everyone at all levels of expertise and need. If appropriate, write to our authors asking for elaboration. Most will write you back. Or the information you request will appear in a future article. Help us all by speaking out! Help yourself by keeping up through reading.

----- NEW PROGRAMMING SECTION

SCRATCH PAD

CBUG is pleased to announce that Warren Swan has offered to undertake a high tech programming forum as a portion of the CBUG ESCAPE. This is to be a separate editorial/article area for those members who are more than beginning programmers. Though this may appear to be over kill, and well beyond many of us, I respectfully suggest that we all read the new section carefully, even if it is over our heads. We only need to remember that the rudiments that we use every day were but two years ago totally mysterious to most all of us. Articles related to intermediate or advanced programming not should be sent to CBUG, but directly to Warren Swan, at Prairie Maples, 1 N. 114 Woods Ave., Wheaton, IL. 60187

----- MOVING AND THE MAIL

A few members have moved and not sent us change of address notices. Our last issue was sent first class to members with a request of the post office for forwarding address information. Please keep us informed. Each one we have to process with inadequate data takes well over a half hour to bird dog. Often considerable expense such as phone calls, letters to the next resident, etc. have to be done to track down a missing member. We at CBUG take your membership seriously, and know your need for the information!

PLEASE SEND change of address notices or notes. When doing so, indicate your old address so we can properly update our files.

There is alot more, but, I'm all talked out. Stay tuned next time!!

----- A BIG THANK YOU

I wish to thank the many members who have made financial contributions to CBUG. These funds are life savers since CBUG publishing and interorganization activities have far exceeded my wildest expectations. With luck, this publication will be in your hands before the end of July. The second half of this issue should be in the mail the later part of August 1986. Our next issue is the Fall 86 ESCAPE with a tentative closing date of September 15 for a late October mailing.

Being that this issue is overflowing, the usual credits and boiler plate have been omitted.

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CBUG ANNOUNCEMENTS

For lack of space and time, the entirety of the Summer Announcements as well as Hints and Tips, will appear in the second half of the Summer issue, CBUG ESCAPE Vol. 5.

ARTICLE/DISK CONTRIBUTION PROTOCOLS & COMPENSATION POLICY

Articles must be provided on Superscript II disk (we've not yet evaluated SS3 for this application). Please do NOT specify margin settings in the body of the text unless absolutely necessary. Leave the file in edit mode format -- RETURNS only at the end of paragraphs and on blank lines, etc. We set up margins and spacings to meet the needs of our printers. Only use the Printer Control Characters listed on page 129 of the Superscript II manual for "Letter Quality" printers. Always include your full name, address and phone number at the head of the file. Preceed your address and phone number lines with *nb: if you do not wish them printed. If you want your address and/or phone printed also include a nb line confirming same. We can accept disks on 8050, SFD1001, and 4040 (1541) format but strongly prefer 8050. Articles can also be transmitted via Delphi to user name CBUG. If you do this, you must first generate a background print file of no more than 78 characters right margin setting. NB lines will have to have a simple asterisk to be transmitted.

If submitting materials for the library, please include a note in the contents file of the disk that all materials are believed to be public domain, etc or of your authorship. If you are claiming copyright state this on each file on the disk as well. Please provide an anotated directory in the manner of Kernaghan and others with a line length NOT TO EXCEED 70 characters (so we can double column). Again, I will do the formatting and double column moves. Kindly also provide a "blurb" to go on top of the library listing for your disk in the spirit of brevity. Members contributing entire disks to the library, in the manner of Liz Deal, Warren Kernaghan, Anthony Goceliak, etc. are requested to be sure and provide an adequate "blurb" as well as appropriate article materials.

All disk MUST have the author's name, address, phone, and brief title labeled on the face of the disk. There is little need of sending printouts though directories are nice. If there is an article or blurb you believe we should look at right away, or to be sure to publish, enclose a brief note as to which file to look at.

A nice touch. Readers appreciate knowing who their fellow members and writers are. A brief biographical note at the end of your article is always appreciated!

I've heard rumors that some of our authors are compensated. Not true. Everyone appearing in print or on non-royalty disk thru the CBUG effort is without payment, other than our policy of sending our benefactors a free bag of OPUS premium disks to replace their disk and expense. In the future we will be providing "chits" good for library disks and/or blank disks as the contributor may elect. The coupons will be mailed usually within 30 days after publication of an article or disk.

DUES, MAILING LABEL CODES, ETC.

Check your mailing address label on this copy carefully and report any errors in writing. Please note the codes after the Zip code. If the zip is followed first by a capitol letter, then you are on CBUG's member registration list. If

that is followed by a number, you have paid the subscription fee thru the date shown (YYMM - 8612 for example). If your dues are paid but not shown, TELL US QUICKLY, for we have to stop mailing unpaid members. Any label not exhibiting the above suffix letter and subscription fee date will not receive further copies of THE CBUG ESCAPE!



by: Elizabeth Deal

MORE ABOUT VERSIONS OF B-COMPUTERS

It's becoming increasingly obvious that there were several B128 versions released. The latest version is the one most people have. That includes England and the people who wrote Superscript (when the issue of keybounce came around, Precision asked to check what ROMs we have, they wanted to see version 1). Via the grapevine I'm learning that in B computers previous to version 1 the SYS command didn't work if the routine was in a non-system bank. Recently I've learned from one of the B users that on his B machine BLOAD is different and BASIC ROM code doesn't match what most people have. Paddress is mandatory, whereas it's optional on the current Bs. Four people I know of have trouble running a lot of software. At first we Norman and I suspected bad disk duplication, but we are pretty sure now that ROM versions can well play a part. So I've looked at some dumps people sent in and I think that the version number (that's what I call it) in byte \$fff9 can be relied on. I've isolated these values from the dumps:

v#	irq	
ffff8 60 aa 77 fb ea f9 13 fc		-old b500
ffff8 60 00 3d fb 9e f9 e5 fb		-old b128??
ffff8 60 01 31 fb 97 f9 d6 fb		<-- common b128/256

BANK 15:PRINT PEEK(65529) tells the version. \$AA (170) was likely an early system, un-numbered. Then the zero version and finally the current, most common version 1. The current B256 machines are identical to B128, both are version 1 as far as the KERNEL routines go. Basics differ, but we know where. Many programs which run on the B128 also run on B256 unless their machine code uses a lot of fixed position BASIC routines. I know that of my programs KEYTRIX and SUPERMON run in B256 v1, but COPY ALL does not (due to their variables scattered in 3 banks!). Others may also work, I haven't tried them, I don't have a B256 computer.

In any case, if your peeking the version byte does not return #1, you're in a soup. It borders on economic foolishness to program anything for the B machine. It would be an economic suicide to program anything for the few orphans of the B family. I think that the only solution is that suggested by our leader (that name is beginning to stick, eh?) - ROM replacement. Norman has a permission from CBM to burn ROMs. If you'd rather do it yourself, one of my previous disks contained B128 and B256 dumps. Those dumps were short by one byte (one at \$ffff doesn't save) so you'll have to append it: it's the last byte you see in the table above, \$FB. The last pair of bytes in the machine is the IRQ vector, it's \$FBD6 in version 1 machines.

Precision Software has another test: if the Machine Language Monitor returns eight two-character values across the screen when you display memory, you've got a wrong version. Try it: BANK 15:POKE 6,0:SYS 6 <return>, then: M 8000 and count how many bytes are there, eight or sixteen. As far as I can tell, the machines which return 16 values also are of type 1 as returned by the PEEK above.

As you can see, we now know of 3 machines. If your value at 65529 is not any of 0, 1, 170, or if it is 1 but programs don't run the way they should, send us the dumps as per instructions on page 12 in the winter/spring ESCAPE.

PRE-SUPERSCRIPT

As originally submitted, this program uses a bit of machine code to change things so that the keys don't bounce. It then prints a line on the screen. The line contains a superscript loading command. There are reasons why I did not chose to make it a load-and-run command and why you have to press RETURN when that line appears on the screen:

1. RUN key forces a drive 0 load. If you want to ignore the "place superscript in drive 0" instructions and load the rest of superscript from drive 1, you can do it in direct mode by editing the line that my program prints. Otherwise you're stuck with drive 0.

2. Superscript permits modifying printer modules and function keys. So if you do just that, you need to load all your private things before Superscript is loaded. My setup permits you to do this easily: load and run the fix program, then your things, then Superscript. You can, but do not have to use my pre-printed line.

3. I didn't want any commands or program lines in that area of computer's memory into which Superscript loads, for those commands could get overwritten by the Superscript program if Basic is not in a normal place or if the loader gets too long. Direct mode commands are processed in the input buffer so we're safe.

Unfortunately when this program got to Marlin's group in California they changed it. They made you press lots more keys than just one RETURN and they made it a load-and-run type of thing. So some people have an inflexible system. Other people have modified the version that CBUG distributes, with the same result - lack of flexibility. Joe Rotello brought this to my attention in his note about printer setup in the winter/spring ESCAPE on page 20 where intercepting a load-and-run system is discussed. If you leave the program intact, if you have a legitimate copy from CBUG, you should have no problems loading and running anything you wish between the keybounce fix and the big Superscript program.

This note is NOT meant to discourage anybody from changing things anyway they please, honest. But cosmetic changes sometimes can create problems which then seem rough to fix.

MAKE USE OF DUAL DRIVE

8050 is a dual drive, a marvellous invention. It can be used to backup floppies quickly and for zillion other things. I don't see how any serious program, especially business kind, can run on single drive systems. But unfortunately

CBM did funny things which make it a bit difficult to use dual drives to their full potential. For instance, the RUN key (shift-STOP) automatically is translated to LOAD"0:*" but when the disk isn't in drive zero the system never tries to read drive 1. To me it's a pest.

Many programs default to drive 0, and they also do not check drive 1. So if you run a program that loads some modules, you'll have to change the loader to use drive 1. That's not so bad: loaders are usually short things and you can easily find DLOAD and BLOAD instructions and change them accordingly (LOAD will search both drives, so it can be substituted for DLOAD, but BLOAD is drive 0 oriented). Things become a bit rougher when a module loads still another module - suddenly you have to learn the whole structure of a program to learn what loads what and you have to make lots of changes. Not fun. Especially when a program is protected and/or in machine code!

The best thing would be to let the user decide which drive to use. If that's not a good idea (bit tedious to code and use), a TRAP statement can be used to advantage. TRAP the disk error and try the other drive. Declare a real error when the second step fails.

If the user is allowed to enter filenames, the simplest thing is to either specifically ask for drive number, or, simpler still - allow the user to specify drive number as part of the file name as in "1:somefile" (you may have already seen this type of thing in the: TELETERM80, BTERM and SUPERSCRIP programs, it's nicely done in machine code). The difficulty in BASIC is that the colon stops all input, but you can force a quote into the input stream, or the user can do it, though it's not really fun. In any case, using dual drives in programs can make them much friendlier. And if one drive is out of action - it makes a difference between having a program that runs or not having one at all.

MINI-WORDPROCESSOR

When I use DELPHI I often like to write a small message off-line. Using Superscript under those circumstances is an overkill. Normally messages run a dozen or so lines. So I now have a tiny NOTEMAKER program. I've placed in the public domain. Anyone using DELPHI is welcome to it. Just leave me a MAIL message and I'll send it to you.

The program allows you to design your note or a message in direct mode on the screen. Seventeen lines is the limit, but if you need more, you can concatenate the files later, or use the ",A" at the end of filename. After you've written a note, one function-key push later it's all on disk in form of a sequential file compatible with Superscript, BeeLine, Bterm, whatever.

When you get Notemaker from DELPHI it will be in a form of a listing (just as on the printer). Likely, it will be a part of other transmission. You have to isolate the program part. Do not allow any extra lines to be saved, save just the listing. The listing is small 20-25 lines. Later on, off-line you will have to make a program from it. It's simple if you use Keytrix: the GETL command will grab a program listing from the disk and convert it to a program:

```
Load and run KEYTRIX, type NEW, and tell Keytrix to:  
GETL"0:NOTEMAKER,S"
```

After all the disk activity you'll have a program in memory you can save, load and run in the future.

MACHINE CODE

Some machine code KERNEL routines in the B computer differ from the PETs and the C64 in various ways. The largest differences are in READST, CLALL, CLOSE, OPEN, LOAD - fairly important stuff. B computer also has some routines other computers do not. To supplement, and, hopefully correct, the listing in the Protecto Guide, I've put together a thing of my own. It's in the TRANSACTOR magazine, vol.7, issue #1, p.44. Boy, it's hard to believe this is TRANSACTOR's seventh birthday!! I think we should have a party.

SCREEN INPUT

Art Klinger in the last ESCAPE (winter/spring '86) has a neat routine to permit screen input. His routine combines screen and keyboard input using CMD. I, too, was frustrated by the bugs in the INPUT routine. But I needed a real screen input (without the keyboard part), which often was used in programs on the Pet computer. Those programs assume that some information is already on the screen and when the time comes, grab it by looking at the screen. A slightly different goal, hence a different solution.

Details: the solution is based on couple tricks: (1) TRAP traps the error, (2) we fool the B into thinking that the strings live in the input buffer, (3) but then we move the "inputted" string into its normal location in the variables' bank by simple assignment v\$=v\$. (4) Get i\$ code is pure magic! Believe it or not, after all that work, at the end of a program the B would still report 'string too long error'. Get i\$ kills that message.

Anyway, to use the trap, set it up before input, and kill it afterwards. Your code can do the usual open-input-close sequence as shown inside the loop. The demo program up top simply prints something on the top of the screen, inputs it, and prints it in reverse (as a length test). Note that commas and colons come in just fine, and that only plain letters and characters should be used (i.e. stuff in reverse will never work). Also note that the routine as written will not handle folded (double, wrapped) lines, but the recoding to permit those should be trivial. Bank 2 in line 960 may need to be changed in B256 computers.

Incidentally, the Notemaker program mentioned above, uses just this kind of a routine to grab what you wrote on the screen for saving in a disk file.

```
100 REM DSAVE UB,DO,"SCRN INPUT B128":REM LIZ DEAL  
101 REM ----- SAMPLE DEMO TO SCREEN INPUT 2 SCREEN LINES  
110 V$="":H$=CHR$(19):RV$=CHR$(18):E$=CHR$(27):E$=E$+E$  
120 PRINT H$"TRY THIS: ONE, TWO, THREE - ,:ARE OK"  
130 PRINT"SINGLE LINES ONLY, NO WRAP.":PRINTH$;  
160 FOR J=1 TO 2:TRAP 900  
170 OPEN 3,3:INPUT#3,V$:CLOSE 3: REM <--- THAT'S IT!  
180 TRAP:V$(J)=V$:NEXT J  
210 FOR J=1 TO 2:PRINT RV$:V$(J):NEXT J:END  
899 REM ----- HERE IS TRAP WORK  
900 IF ER<>33 THEN PRINT"??"ERR$(ER)" IN"EL:END  
950 BANK 15:G1=PEEK(49)+256*PEEK(50):G2=PEEK(136)  
960 G3=PEEK(137):PRINT E$"K":;G5=POS(0)+1:BANK 2 <---see note  
970 POKE G1+2,G5:POKE G1+3,G2:POKE G1+4,G3:POKE G1+5,1
```

980 V\$=V\$:GET I\$:PRINT:RESUME NEXT :REM AT CLOSE 3.

Note: Don't know if this will run in B256. Try changing the BANK 2 command to something like VB=PEEK(83):BANK(VB). The point is to send the string data to the bank where simple variables are.

THE SID-SINGING B128

Converting music programs from C64 to the B needs to be handled with care. Several pointers:

1. TI on all computers except the B is reserved variable. It counts time in jiffies, intervals of 1/60th-second. So if you see code such as 10 IF TI<TX+DR GOTO 10 you can translate it as delay until TI reaches a value TX+DR. B machine has no TI. We have a real, on-the-chip clock which returns TI\$. TI\$ is seven digits long. Last digit is 1/10-th of a second. Conversions can be made once you know that. All C64 music needs to be slowed down on the B.

2. Pitch table: C64 programs often contain DATA lines with note values for the SID chip. These values are wrong for the B machine because B runs at 2 megahertz instead of 0.92 of the C64 rate. All pitch values need to be converted. Protecto Guide has a good table of correct pitches. If you'd rather calculate your own things, use the formula which is in the SID chip specs in the C64 Programmers' Reference Guide, but substitute the correct system clock rate, 2e6 or 2 million.

3. It's unwise, in my opinion, to do any additional calculations over what the C64 program had. They normally slow things down, but, and this is the worst problem of all: extra calculations can change the beat so badly that songs become unrecognizable. The best way to handle SID chip in BASIC is by using lots of lookup tables and minimum of calculations while the notes are being scanned. If you must run extra calculations, make sure that even if a voice doesn't need one, things must balance out - stick in some dummy delays to keep things even for each note and each voice.

NON-SINGING B128

SID chip doesn't shut up correctly in some programs such as Superscript. When I use the video-output option, the SID whines at a very annoying high pitch while the program waits for a key. Simple solution: plug it up. Any mini-plug (1/8th inch from Radio Shack) disconnects the internal speaker. To me that's simpler than constantly struggling with some control keys to turn off the sound, and anyway SID doesn't turn off in many programs which only rely on setting the volume register to zero.

REVIEW OF ANDERSON'S MEMORY CARTRIDGE

B128 computers are short of memory in Bank 15. Consequently, many machine code programs or routines need to be coded the hard way - in banks other than 15. To remedy that situation, one can expand the memory in Bank 15. You can do it yourself if you have a Calc Result cartridge (see w.exp15 on cbug#17 floppy).

If you'd rather not, Gary Anderson has built a cartridge, ready to go. It has more memory than can be put in the Calc Result cartridge, but it has no RAM/ROM switch. The memory goes from hex \$2000 to \$7fff for 24K expansion. You can plug in either RAM (read and write) or ROM (read only) chips, but you cannot lock what's in RAM to behave as if it were ROM.

The cartridge shell is much better than the Calc Result version - it doesn't wobble and is unlikely to come loose. I'm not too knowledgeable about the electronics part of it, but a friend who is, is very impressed with how the cartridge is built. Not only is the expansion done correctly but all the nitty gritty resistors and things are designed just right, the way it should be.

Needless to say, the extra memory is just fine. I've ran a thorough RAM test on it several times, and it never fails. Having extra memory in the B machine's Bank 15 is a time saver. I recommend it highly.

There is a version of the cartridge that you can put together yourself. I haven't seen it, but the instructions look very good. In fact the instructions about using the cartridge and/or assembling it are well done, most educational to people like me and seem quite correct.

The ready to plug in cartridge sells for \$40, the unassembled version sells for \$15 and the shipping charge is \$2. It's all available from:

Gary L. Anderson
Anderson Communications
1528 34th St. SE.
Cedar Rapids, IA 52403

REVIEW OF BEELINE

Beeline is a terminal program for the B128. It was written by John and Ken Lemkelde of Dover, Pa. I've used it now for about three months on DELPHI and like it for the most part. Beeline captures the incoming and outgoing communications into a huge, two-bank buffer or a disk file. In both cases, unlike BTERM, the text is clean, i.e. stripped of all the garbage DELPHI sends, such as line feed characters (j), deletes (h) and the binary zeros (@). When read into Superscript, Beeline's files are clean and easily manageable.

Beeline is able to send information typed at the keyboard in real time. It sends control characters and whatever is necessary for the networks such as Delphi. Beeline can also send a text file directly from disk but not in the same way as you may have learned in BTERM - follow you Bulleting Board's instructions.

I haven't had much luck with function key definitions. I went through the motions of defining function keys as per instructions. They looked OK, they listed OK, they saved OK. But when it came time to actually use them on DELPHI, all I got was garbage on the screen.

I can save all or any part of the buffer to disk or print portions of the contents on the printer. It all works like a charm! One poorly documented section caused me lots of problems at the beginning: once a block, a section of a buffer is defined, you cannot GO outside of that block until you return to the menu, which in turn may set the block to be the whole text - so don't think you've lost data if you can't seem to get to it!

One thing I don't like about Beeline is how the buffer is displayed. It is byte-number oriented and it can only print text in the forward direction. No back and forth scrolling as you know from BTERM. All the necessary tools for

manipulating the buffer are there, and in a long text you can get places faster than in BTERM; still it's not the same thing.

I have not tried sending PRG files. I do not think DELPHI has any protocols able to do it (BeeLine supports XON/XOFF protocol).

Buffer can be used for transmitting. You can load a file to the buffer and send it. However, be careful NOT to VIEW the buffer if it contains PRG file, as it cannot list using just ASCII characters. BeeLine tries to list such a file, and when it encounters bytes it can't deal with, funny screen things happen - windows set and so on. The best way would be to load a buffer with PRG file, send it across without looking at the buffer, then erase the buffer for use by normal text. Incidentally, no harm is done if funny screen things happen; one of the things I treasure most about BeeLine is that STOP key has NOT been disabled. If you mess up, you can clean up the screen and CONT from that point on!

BeeLine is menu driven. There are two main menus and lots of subsidiary screens with questions to answer. While you can print the hefty documentation (15 beautifully laid out pages), you can live without it - the program is so friendly, at all times, that using it is a snap (for the most part, I've had my share of troubles as a newcomer to tele-computing). You can set RS232 values at any time, you can change them when you wish, you can define keys, you can do ALL the needed disk maintenance - it all works like a dream. In the disk department I find a bit too many prompts, and the necessity of a quote is a bit nasty, still, having ALL the disk functions at your disposal in a telecommunications program is vital, and BeeLine has them.

BeeLine is unprotected. So you can change small items if you wish. You can make a copy for yourself, it loads fast, it doesn't ruin your drive or your nerves. BeeLine is supported by the writers. Recently several small changes were announced on the DELPHI, and since disk is not locked up by protection users can easily change 2-3 lines of code! The writers welcome comments and suggestions.

Lack of protection is an act of faith on the writers' part; let's hope piracy doesn't kill them. BeeLine starts up and exits neatly. If the machine was configured differently from what BeeLine needs, it tells you about it (many other programs crash!). One severe exception is that BeeLine insists on using drive 0 for loading all its modules. It is quite complicated to ask it to work from drive 1, it is NOT a simple matter of changing the drive number in one program. So if your drive zero dies, as mine did recently, you cannot easily use BeeLine. I'm sure the writers can change this feature in a jiffy.

Exit from BeeLine is nicely done; there are instructions how you can either re-enter BeeLine, or how to reset cleanly. A nice touch as are many other BeeLine's features.

John Lemkelde uses DELPHI, so it's possible to ask him questions and you really do get the answers back. Occasional easy-fix updates also go on DELPHI, so you can have instant access to them. Most valuable. BeeLine has many, many more features, too numerous to describe, and a bit too difficult for me since I'm a newcomer to the telecommunications procedures.

BeeLine costs \$35 and is available from CBUG.

SUPERSCRIP III

((I have a testing version of Superscript III which Norman asked me to review. I have NO INSTRUCTIONS. It's unfair to review a program as vast as Superscript without any instructions. Hence, take what follows with a grain of salt - I'm learning how to use it by experimenting and lots of brute force. The more I play with it the more I like it, I think we have a winner!))

Superscript III is similar to Superscript that I saw running on C128 and the C64. It is menu driven (tiny little boxes type of menu, really cute!). It has all the old features plus lots more new ones and major improvements of several old commands. Transfer command is fixed. Erase commands are better, you can now erase letters, words, sentences and paragraphs and close up the gap. It's about time! There are "soft keys" or "macros" and "instant phrases", an "extra-text" area, printer and disk defaults (I only use CBM dot-matrix printer, know nothing of the others), default key definitions you can expand and resave, fancier and easier to use disk commands and other features. Lets look at some of the new features:

The menus are elegant. The screen doesn't clear, since the menus are on top (you lose 2 lines of text). They consist of neat looking, little boxes you move the cursor over to pick what you want to do. Some menus have two or more levels of submenus. All are one word hints, the first letter gives each item a unique function. The menus are neat, but get to be a pain to use if needed several times in succession. But ... You don't have to use the menu - you can redefine keys to mimic going through the levels of menus. Let me illustrate: to toggle insert mode (esc-i in SS II) you can push F1 to get into menus, then S for set, then I for insert on/off. Seems like a lot of work, doesn't it? Ok, now define a key instead: let's make it "i". The definition will be "/si", as it has to do SET and INSERT. So now, everytime I push esc-i the insert mode toggles. Similarly, I've defined shift-i as "/ai" (AREA INSERT) as an "insert a blank line command" (esc-INS in SS II). Slash must indicate menu items (I snooped the DEFAULTS file to get the syntax). Non-menu items can also be defined, for instance to put the rvs-* in the text, you can define any key as esc-RVS.

Menu substitution isn't the only use for soft-keys. You can now, WORDPRO-fashion, define any key at any time (not just at startup) to print anything. For instance, for writing this mini-review, I've defined shift-S to stand for "SUPERSCRIP III". Here defining is simpler. You type shift-s, then "SUPERSCRIP III" and from now until the definition is changed, every time esc-shift-s is typed, SUPERSCRIP III comes out instead. I've missed this feature terribly in SUPERSCRIP II; I'm delighted to see it in this version.

Things I don't like: all "instant phrases" print slowly and I don't know why. The same was true if you defined a function-key in SUPERSCRIP II to print a phrase. And I can't seem to be able to define a key to use cursor controls, for instance, cursor right.

Old Superscript files are compatible. They load just fine. You can use any data disk you wish, you do not have to format a special data disk, as the initial menu would imply. The only quirk is that when you say "existing disk" there's a disk error. Far as I can tell, ignoring it is OK and I'm sure there is a more elegant way to start up, but it's a guessing game at this point. SUPERSCRIP III files move nicely to the SUPERSCRIP II program. All you have to do is erase last two lines after the text loads, those lines contain something specific to SUPERSCRIP III, a secret message...

SUPERSCRIP III has a larger capacity. 815 lines, 100 more than before. I am not sure if text can go to more banks than one, so this version might not use all the extra memory in the expanded machines. There is an extra text area which you can use for all sorts of things. Outlines, disk directories, phrases you may wish to move to the main text and so on. Without instructions I do not see whether the relative sizes of two areas can be changed, I hope they can. Extra text area is another feature I missed in SUPERSCRIP II - once you get hooked on having a scratch pad area, it's rough to be without it.

Some of the in-text comands are slightly different, but most of the old ones work all right. Putting in-text commands is a bit difficult from the menu, as you have to go through the menu a lot - instant keys to the rescue!

Visually the text looks better. It is now easier to spot in-text commands (rvs *) because carriage returns now print as a backarrow, and not rvs >. I like that a lot. Don't worry though, each version of SUPERSCRIPT understands the other with the exception of jst few commands (commas in hd, pd command).

Transfer command (old esc-x) has been fixed! It can move a paragraph correctly without insisting there's a cursor-in-range error (unless, of course the cursor is in range). Still, transfers are as slow as before.

There is no keybounce. It seems that the entire key getting routine has been re-written. There is a big difference in the visual display. First of all the cursor is slow. Secondly, VIDEO output seems to swim - it doesn't scroll smoothly, Commodore fashion. Instead it looks like scrolling non-CBM computers offer - perhaps the lines are reprinted, I don't know. Some other PRINT routine seems to have been used, since the Commodore-Logo key no longer pauses the display, making this part of SS totally incompatible with the B machine itself. Thirdly, the cursor disappears for several moments as it travels across the screen (not down) in the same fashion as I've seen on a B256 with the attached video-display. It's a nuisance; it could be related to US vs UK versions, I don't know.

The cursor also vanishes from sight when you go to menus. I don't like that, because I'm not always sure where I left it and whether it's safe for transfers, erasing and the like. I don't know if it's a bug or a feature. I hope it's a bug that will get fixed. Last item in the visuals department - shift RETURN key is disabled. Horrors! I cannot figure out how to go to next line shift-RETURN fashion; I hope it's not a menu item. But then, there is a new feature most people will love, I think: striking RETURN over a line full of text does not erase the text beyond the cursor position.

Menus now contain items which previously you'd type in. Things such as drive number. You can set defaults. You can also substitute menus for some of the file works. For instance, to append to an existing file you had to type something like file "1:name,a". Now there is a menu item APPEND. Linking files is child's play, as are all the disk-related functions. You can use the old wedge commands if you wish, or you can use the plain English words (scratch, backup etc) from the menu - nice for people who haven't learned DOS via the wedge, as is the case with many B users. Time will tell if this sort of thing is useful, or just a cosmetic nuisance, but it seems friendly enough and the choice how to speak to Superscript is yours. It will be great for beginners I am sure, they will never have to flip pages and pages of instructions.

The loading is nice and smooth. The disk seems protected; blocks are missing as before, but it doesn't cause those horrible screeching drive noises people hate so much. What a break.

Couple problems: Exit to Basic seems to be a problem (it could be related to it being a temporary version for testing). The computer reports Syntax error. Ignore it (it has to do with Superscript data you type overwriting BASIC program space to which the machine code program returns, if you must know). Type BANK1:POKE3,0:NEW and BASIC should work afterwards. Another problem is moving text from the other text area - it's mandatory that a block be defined in the other area before the move; my version crashes if it is not. There might be some printer problems with the CBM dot matrix 4023. Lack of instructions is a bad thing here. Sample printer test text isn't printing correctly - line spacing other than 6/10th doesn't happen, and something is wrong in the emphasized mode (normal printing as we're used to in SS II is just fine). Finally, after using any file from the disk I got, the red file light stays on. It seems to cause no harm, it could be related to the missing blocks, or a slightly mangled block-map, it could be a bad copy. My copy of that copy (NOT duplicate, but a copy made via the COPY ALL program) behaves just fine.

Undoubtedly all these troubles will be fixed in the final version, and I expect a super-duper book in the best Superscript tradition.

Should you get SUPERSCRIPT III? I think so. It looks like a superb program, it has new features, and new approaches to incorporate the features. It is possible to put it to a LIMITED use without instructions (but I wish I had them to know what's available), should be great for newcomers, and it is up to the latest standards of the C128. What more can we ask? I feel like sending a thank you note to Precision, thanking them for writing a program for my orphan-machine. Nobody else bothers.

Should you dump your old Superscript? I don't think so. Hold on to what's familiar to you. Make a backup using Knight's utility or whatever means you can think of, and send away the original. I understand that you will get your original back; the only reason to send it in is for registration purposes and cheaper price. I may be wrong, but that bit of info came to me via the grapevine from Precision.



A MEMBER'S LETTER

Private Bag T-5399
Bulawayo, Zimbabwe
Africa
18 May 1986

Mr. Norman Deltzke
B128-B700 User's Group
4102 North Odell
Norridge, Illinois
USA 60634

Dear Norman,

Thanks for your reply. The disks have all arrived and going through them has been a little like Christmas. I really appreciate the work you-all have put into getting the disks together. After using the B-128 for about a year and always having to scratch to get things working, I am glad to get some off-the-shelf programming. One financial utility alone was worth the price.

I am enclosing the currency sorting program you were interested in, although it is probably a bit esoteric. You are getting the un-integrated version...when I get around to it I hope to use it with my superbase payroll program. All I need is about thirty years to do it.

As for an article about our b-128 uses, I'll give it a try. I have about as much writing talent as a pineapple, but for the cause of enlightenment, why not?

Out Of Africa...A B-128 Epic

While most B-128's will live to a ripe old age in the comfort of air-conditioned/offices, a few will swelter it out under the burning African sun. Every volt they draw must pass thru an old 220v-110v transformer and there is always the danger of a lightning strike that will jump right out of the outlet. (What's a lightning protector? We just unplug and don't use during the rainy season.) These are a special breed, the B-128s of Solusi College in western Zimbabwe.

The story began when the academic dean at Solusi saw the Protecto ad (what a deal!) last year and several of us on the college staff decided that it would be just thing. We now count as many as seven B-128s in Zimbabwe which are used in applications as varied as computer-science instruction, payrolls, registrar's records, letters to the folks back home, fun and games, and just about anything else that needs to be done.

Since I am head of the building program on campus, I have enough work to keep my machine pretty busy, especially for payrolls. Superbase does the figuring, I just tell it names (like Nxumalo, Gxube, and Ndlovhu!), payrates, and hour. All the workers receive their pay in cash and the B-128 even tells me how many of each type of coin and currency I will need. I also keep material lists, tool inventories, equipment maintenance schedules, and budget records on Superbase. In fact, I am beginning to worry that this machine will soon take over my job...

Perhaps the most interesting aspect of using the B-123 here has been the reaction of some of the people who have never seen a computer. The old fellow who works as my foreman has taken it all in stride, though. He wanted to look at the machine, so I asked him if he had ever seen a computer before. Well, he had heard of them, but by the end of the evening, he was beating mine at tic tac toe and several other games. It was quite an adventure for one evening, especially for a "madala", a "white-haired one", and I think I created the first video game junky west of the Gwaai River, but it was all in a day's work for the intrepid B-128!

There you have it and Shakespeare it ain't. Thanks again for the disks and the good service.

Randy Purviance

KANSAS CITY CHAPTER REPORT

By: Warren A. Kernaghan

On the 19th. of April, 9 owners of B128s in the Kansas City metro area thought enough of the opportunity to get hands-on instruction on Superbase to lug their systems down to a basement room of a Savings & Loan building in Kansas. One owner drove 100 miles from Worth, MO to attend. Though the event was arranged through the local KC Commodore User's Group, no C-64s showed up. Beverly Rumsower, CBUG member, was the organizer. The instructor, Mike Strong, brought his C-128, and one other C-128 was brought by Rick Hanson, who also brought his B128. With a total of 11 students, the B128 people were definitely in control for a change. Perhaps we should call it the first CBUG chapter meeting for the KC area.



Notes From The Underground

by Angel M. Matos
(c) Angel M. Matos

Hello out there in Little Orphan Annie Land, again thank you for your kind letters, phone calls, and communications on CompuServe <<Angel is now on Delphi, user name AMATOS>>. Your questions provide me with some great puzzles, keep 'em coming. A note to those of you that may have recently tried to contact me by phone, my answering machine failed on three occasions during a six week period. If you have called me and not heard from me within a reasonable time period (a week), it's probably due to the fact that the machine accepted your message but did not pass it on to me. From two messages that where partially recovered, I know that a gent from Texas and a Latin gent from Florida have tried to reach me. Please try again if you still are in need of assistance. Sorry, the problems have been corrected.

CURRENT COMPUTER MAGAZINES THAT MAY BE OF INTEREST -- CONTINUED

From the USA--- This listing will include Commodore specific, Commodore included, and general computer magazines. The reviews will be very brief since these magazines are usually easily available through magazine stands and/or computer stores. It should be noted that all Commodore specific rags usually included from five to ten type in programs, and for the lazy, most offer programs on a disk services.

***AHOY/monthly (\$2.75)--- Commodore specific, no coverage of the B-128. This rag is C64 rich, if you also run a C64 you should subscribe. Earlier issue did the VIC20 justice and you'll still find something occasionally. Ahoy has not become C128 or Amiga intensive at this point. The hardware reviews offered here are superiour to those found in most rags.

***AMIGA WORLD/bi-monthly (\$3.95)--- This is the basic Amiga rag, at this point it been nothing more than a forum for Amiga artists and advertisers of vaporware. There are a whole lot of pretty pictures but solid articles are few. Granted, that it is difficult to review vaporware (of both the hard and soft variety) and that the rag provides some really excellent prints. But the bottom line is that at this point, it doesn't even provide a good forum for someone who is still contemplating the purchase of an Amiga.

***BUSINESS SOFTWARE/monthly (\$2.95)--- This one is geared toward better productivity, and of course it is 95% IBM & compatibles orientated. However the concepts discussed, how to get the most out of certain types of software, are easily adapted to any system. Its availability in the NYC area has been intermittent lately, the Jan, Feb, & March '86 issues were not to be found, it reappeared here with the April issue.

***BYTE/monthly (\$3.50)--- If you like computers, then this one is a must. BYTE calls itself "the small systems

journal", but most folk simply call it "the bible", this relates to both the wide variety of topics and systems given coverage, and equally to its average of 450 pages a month. In the last months it has provided some of the best discussions regarding the 68000 machines: Amiga, Mac, and ST. Some good liquidator and heavy discounter ads in the back pages. Yes I'm biased, I love Byte.

***COMMODORE MAGAZINE/monthly (\$2.50)--- Currently this magazine is published as Commodore Microcomputers and Commodore Power/Play on alternate months, it will officially go to Commodore Magazine monthly effective with the Jan '87 issue. These are Commodore's own publications and once had different areas of emphasis, but in the last 12 to 18 months the differences are less and less noticeable. The B-128 has no coverage these days, neither do the PETS. The focus is now on: <1> Pushing the C128; <2> Pushing the reborn C64, the old veteran now has a C128 style case and is called the C64C; and an independent company (with Commodore encouragement and support) has introduced a new C64 operating system *GEOS* which offers a MacIntosh-like working environment (note: GEOS operates on all C64's); and <3> on offering as much support as possible to the now dead C16 and Plus4 series. Interestingly the Amiga though consistently hyped is not truly supported, probably for the same reasons mentioned under Amiga World.

***COMPUTE!/monthly (\$2.95)--- This is one of the older generic rags that offers monthly Commodore coverage. It covers a good number of computer systems and therefore the type-in programs offered are given in various Basics when differences are extensive, or "changes" are provided for the various types when the differences are slight. ML programs are given on a machine specific basis over a couple of months period.

***COMPUTE!'s GAZETTE/monthly (\$2.95)--- Commodore specific, no B-128 coverage. Strong coverage of C64 & C128, with some VIC20/C16/Plus4 articles and programs. Good coverage of ML. Lots of bits and pieces.

***COMPUTER BUYER'S GUIDE AND HANDBOOK/bi-monthly (\$3.95)--- This rag is exactly what the title states. It offers a guide to most of the business systems currently on the market. Usually provides product round-up on both hardware and software categories, e.g. Plotters, Printers, Modems, Graphics software, Accounting packages, Add-on boards, etc. No real Commodore coverage except for Amiga (as a business machine) as of late. Nice.

***COMPUTER SHOPPER/monthly (\$2.25)--- I mentioned this publication briefly last month. It is another of my favorites. This rag is the computer bargain shopper heaven. From low-overhead suppliers to liquidators, retail to wholesale, disk to complete systems, it's all here. Disk drives, power supplies, terminals, printers, modems, software, etc. There are articles spread throughout the publication which cover: existing machines (including cbm), survival columns on "dead" machines (Timex-Sinclair, TI's 99'er, etc.), experimenter/builder, >>AND<< due to its newspaper format it usually breaks information on new products before the magazines do. For those of you that are not aware, magazines need three to four months lead time, from the point an issue is officially ready and the point it actually reaches a news stand or your mail box. While Computer Shopper's articles keep you abreast of the latest "ins", its ads tell you about the latest "outs". As of late it has been averaging 275 to 325 pages.

***FAMILY COMPUTING/monthly (\$2.75)--- This one does exactly what it says, it cover computing in a very straight forward manner that should be quite clear for anyone beginning in the 'world of computers'. Covers a number of popular systems, including Commodore (no B-128). The perfect rag for bridging the gap that exist in most families where the kids are already little wizards while the parents are "illiterates". Also, the perfect introductory rag for the new or soon to be computerist. Programs are published in generic Basic so that many machines can use the programs (see comment under COMPUTE!'s Basic Programs).

***HOME COMPUTER MAGAZINE/10 times a year (\$3.50)--- Mentioned briefly last month, the most interesting aspect of this rag is that it's always full of type-in programs in many Basics, including Commodore (not B-128). This rag started out as 99'er, dedicated to the Texas Instruments machines. The last issue I found in the NYC area was Aug '85, nothing since, therefore I'm not really sure that this rag is still being published. Another interesting aspect about this rag, is that it carries NO advertising.

***INFO (once known as INFO64)/bi-monthly (\$3.00)--- They say it's a bi-monthly, but this publication is the most irregular rags I know of. The issues are usually re-dated so that they are correct as of time of publication, instead of the original due date. The last two issue were #9/Dec 85-Jan 86 followed by #10/May-June 86 (as I stated before, this is average). This is a Commodore specific (no B-128), rag which originally was 64 specific, but now also covers the C128 and the Amiga. The reviews are usually very hard hitting and there is light advertising. Reviews cover both hardware and software.

***INFO WORLD/weekly (\$1.75)--- This is "the newspaper". The latest in the world of business and personal computing. Columns, software reviews and hardware reviews. Each issue usually has one or two "features" on pressing microcomputing topics: networking, laptops, desk-top publishing, etc. All things being equal, this rag has never been very kind to Commodore products, but sometimes I'm not sure they should be. One of the nicer touches in this publication, is the fact that readers and product vendors alike, can comment on the reviews.

***PERSONAL COMPUTING/monthly (\$3.00)--- This is the last of the generic computer magazines (Creative Computing and Popular Computing having both folded in 1985). Each month it usually concentrates on a couple of "feature topics". It covers computers in many application situations from business to leisure. Includes regular columns and reviews. Nice.

***PICO's JOURNAL/monthly (\$3.50)--- As implied by the title, this rag concentrates on on laptop/briefcase computers (NOT transportables) like those from TANDY (100 & 200), NEC, Grid, Olivetti, Zenith, Bondwell, etc. The articles are geared to inform on new laptops, or on improving the performance of current and now discontinued laptops. Topics cover battery/power sources, new screens, portable printers, modems, software, etc.

***RUN/monthly (\$2.95)--- Another Commodore specific (no B-128) rag. This was the last of the Commodore specific mags to start up and it is one of the more successful. One of the most popular columns is "MAGIC" which offers so many bits and pieces of Commodore information, that it alone, makes the rag worth its price. One criticism, some of the articles that appear are so damn pro-Commodore that you think the rag was owned and published by Commodore, it ain't though. In its effort to be very supportive of Commodore products, it can develop some nasty blind spots and occasionally glosses over the short comings of Commodore products and of Commodore as a company.

Of course there are also many other computer magazines and computer Newsletters, with the IBM/compatibles having the lion's share of the market. However, there are publications that specialize their coverage for: Apple, Epson, Tandy Portables, Zenith, Wang, DEC, etc., and this still doesn't even begin to scratch the surface. There are countless publications that come from National and Local User Groups, and then you have the speciality publications: Computers as applied in -- Astrology, Communications, Research, Oceanography, etc., and whom knows what else. The number of topics discussed in conjunction with computers is endless. "SEEK, and YE SHALL FIND.

*****IN DEFENSE OF SUPERScript II*****

There are many of you that own a B/machine and who feel that you made a poor investment because there is a shortage of software. I'm going to address the issue of WORD-PROCESSING. As most of you are aware, there are two 'Main' Word Processor packages available to the B' user: SuperScript II from Precision and WordResult from Handic. There are a

couple of other simpler programs available in CBUG's Library and at least one that's available commercially. These will not be considered here. This discussion will center on SuperScript II. I cannot discuss WordResult because due to the high, "I want to purchase demand" that Handic has received, it has been impossible to secure a Review Copy. For those of you that feel that SuperScript II is limited, I must assume that your Word Processor experience is limited. All things being equal, SuperScript II is actually one of the most powerful Word Processor packages available for any machine. Many of the deluxe features found in SuperScript II cannot be found in IBM packages that list for up to \$500.00, and some of the features found on those super-deluxe jobs can be improvised in SuperScript II with a little work. In order for this to make sense, to those of you who are unfamiliar with other systems (IBM), I'll provide some background first.

First there was nothing, then came "CP/M". Today most folk explain CP/M as Control Program for Microcomputers; it is said that it originally stood for Control Program/Monitor. When CP/M was put together, it was designed to operate with the 8080 chip, later the Z80 chip was introduced adding some new operation (op) codes while being 8080-compatible. CP/M however, did not originally include cursor key control. In order to get the cursor movements and such things as delete prior or next character, you had to generate "CONTROL" (or "CTRL") characters, e.g. CTRL S, CTRL Q, etc., very similar to Commodore's use of the "ESC" key. This was in turn, a carry over from Mainframe technology. When business and personal microcomputers started to become a reality, Word Processing was implemented on CP/M-based systems (best typified by the Word Processor package, WordStar), they maintained the CTRL character concept. Eventually, a modified version of CP/M appeared for the 8088 chip (NOT by Digital Research, the originators of CP/M), called QDOS which became MS-DOS, which became PC-DOS. Therefore, many programs that were translated over to MS/PC-DOS from CP/M continued to use the CTRL character concept. And most Word Processor packages that were introduced for both CP/M and MS/PC-DOS, after WordStar had established itself as the "De Facto" standard, followed the CTRL character norm. The competing companies felt that the only way to entice a WordStar user, was to keep the CTRL characters norm's that WordStar had established. This allowed a user to switch, without having to learn a new command structure. Believe me if you're use to SuperScript II, it would be a major pain learning this CTRL character dependent system. How does this make SuperScript II powerful, you say? Well, the Commodore Operating System (OS) allows for a 'live' cursor. This feature in turn allows SuperScript II, to allow you to press the "Insert On/Off (F2)", insert anything you want to, close your insertion, and continue on your merry way. On a WordStar-type system you'd have to: initially insert space (take a guess at how much space you'll need), go back and type in your text, if you blocked in to much space you'll now have to delete it or if you didn't block in enough space, you'll have to go back in and insert more space and then finish your text. Believe me, its as much a pain to do as it is to explain. Of course if you started out on a Mainframe's Text Editor or on a CP/M-based system, it second nature and you no longer realize what a pain it is. I have many friend that use Mainframes on a regular basis, they would never consider using a Word Processor that did not support the CTRL character norm. I've only given this one example, because I think from that this basic concept, you can imagine how many of the instant task SuperScript II handles, are actually complex, multi-step procedures on the other-systems, including "the system" (IBM).

Many of the features that SuperScript II offers are not really explained clearly enough for the novice, and some are so obliquely inferred that many of us SuperScript II old timers have not discovered them until the twentieth reading of the manual. For example, SuperScript II uses most of the Commodore DOS features, but many novices don't really know how to maximize this. The "*" and "?" wild card characters used in Commodore DOS (borrowed from CP/M) encourage you to structure your "File" names in ways that will allow future File searches to be much quicker. Below I give an example of my SuperScript II "File" naming code structure, once you understand the basic concept you can design a system that best suits your needs.

Commodore's DOS allows one to use a maximum of 16 characters ("1234567890123456") in order to name a "File", my system takes advantage of all these 16 spaces. I allot the first five spaces to a one letter file topic code and the next four for the document's date in a -mmdd- format (this mean I only keep one year's correspondence on each disk). Therefore the first five characters ("xxxxx67890123456") in my SuperScript II files could look like this: n0513, p0210, c0423, o0328, etc. In these example the first five characters tell me the following: letter to n(orman) on May 13th, a letter dealing with a p(ersonal matter) on February 10th, a letter to c(ustomer service) on the April 23rd, an o(der placed) on march 28th, respectively. The remaining eleven characters are use to tell me to whom the correspondence was addressed, e.g.: "n0513cbug bus" or "c0423amexp" which mean to me "CBUG Business" and "American Express", respectively. Next, we'll see how such a code can be used to our advantage. With my system, if I want to find 'All' letters generated in May, I'd type >>\$0:05*<<; if I was interested in all orders I've placed, I'd type >>\$0:o*<<; if my interest was a personal letter generated to Bob or Bobby, after the 20th of April, I'd type >>\$0:p04??Bo*<<. To try and illustrate this better, here are two actual DIRectory searches of a coded "File" naming structure, employing the "*" and "?" Commodore wildcard DOS characters.

Example 1:
Find all/only correspondence
to n(orman)= \$0:n*

```
0 "01/86 Work Disk " W1 2c
21 "n0127various" seq
4 "n0310various" seq
4 "n0420various" seq
6 "n0520various" seq
1062 blocks free.
```

Example 2:
Find all/only March correspondence
to mag(azine) mark(et)= \$0:03??mag m*

```
0 "01/86 Work Disk " W1 2c
8 "c0309mag mark/rs" seq
7 "c0331mag mark/rs" seq
1062 blocks free.
```

This type of system allows you to do specific DIRectory searches instead of having to scan the entire DIRectory. The possibilities are there, you just have to design a code system that meets your needs.

In writing/structuring the above directory examples, three other features of SuperScript II were put to use. 1>> The ability to insert text, 2>> the ability to do a Directory search and insert/load the results into the document, and 3>> the ability to shift Columns around. I'm sure some of you do not realize how powerful this "column move" feature is in the Word Processor world. Also, there is the "Output To Screen" feature, which allows you to Preview you final document, before printing to paper, as well as the Headers, Footers, Auto-paging, Mail-Merge, Spell-Checker, etc. features. You may think that these are "standard" features on most Word Processor packages; Well they AIN'T !!!

There are some other thing that SuperScript II allows you to do, which may not have occurred to you. <<1>> Printer Drivers: though the original SuperScript II set-up menu allows you a limited number of Printer Options (and even these

"printer drivers" do not always implement the all the feature of these printers, like proportional spacing and/or microjustification). Well, these special feature can be controlled from within SuperScript II, by using its ability to handle both specially defined characters, as well as printer ESC codes. The "insert mode" offers the other two possible, special uses of SuperScript II, <<2>> As a "Thought OutLiner", you can basically set up you "OutLine" and add, delete, and modify with no major problems; as a matter of fact you can Dsave your original "OutLine" and the proceed to insert you text within the "OutLine's" headings and end up with your finished document. <<3>> Our third option allows insertion of 'footnotes' using SuperScript II's "insert mode", along with the "block movement", "output to screen", and "re-output to screen" commands. While the method is not an automatic function, it can be pulled off. This method requires that you establish all you "Page Format Codes" from the very beginning. The steps are as follows:

- 1 -- Set Page Format Codes, including Headers and Footers, if any.
- 2 -- Type the first 'Heading' for you document.
- 3 -- Go 2/3's down the screen (say line 18 or so) and type 'FootNotes'.
- 4 -- Return to the first or second line under the 'Heading', hit F2 to toggle on the "Insert Mode". Now you can type your document under the heading section of the screen, and cursor down to the footnotes section and enter them as necessary, with no fear of over-running the footnotes with the document's text.
- 5 -- By using the "Output to Screen (F1)" you can keep an eye as to when the combination of Document and FootNotes have filled you predefined page.
- 6 -- When you're ready to start the next page, cursor down screen beyond the prior footnote section and, like on the prior page, again subdivide the screen into Document and FootNote sections. Etc., Etc., Etc. This method only has difficulties when you make a major text change (document or footnotes, insertion or deletion) since in all probability these changes will alter all those page breaks you've been monitoring through the use of "Output to Screen". This however can be corrected by the manipulation of text via the "block movement" command in conjunction with "Output to..." and "Re-Output to Screen" commands, which will allow you to see if the pages are properly formatted. This method described here is the only method available in most Word Processor packages, and it is easier implementing it in SuperScript II due to it superiour "insert mode". There are few Word Processor packages that support true Auto-FootNoting, and then they average a list price of \$500-\$700. Another <<4>> nice feature in SuperScript II is its variable line spacing command. This is great for proof-reading on the screen. Before going to "Output to Screen", temporarily insert the print command "*sp1" and your original single spaced text will be double spaced on the screen, which makes proof-reading much, much easier.

NOTE: When inserting text always insert text in front of a "return/paragraph ('<') marker", since this will allow the "insert mode" to move down the screen one line at a time, instead of every single character moving on screen with each insertion or deletion. I usually pop in an odd character like "*" or "#" to sit the cursor on, just before the return (<) marker, this way I'm not looking for the "<" only, of which the screen usually has many. This means that if I were inserting the word 'cat', the screen would look like this in five steps: "²<, c²<, ca²<, cat²<, and cat ²<.

WARNING: When you experiment, always make sure that you have Dsaved a File with you're document BEFORE you start to 'monkey around'. This is a precaution you should take even when you know what you are doing. One of the features SuperScript II does not have is an "oops" buffer, which allows you to reverse your last command and return to the point before you messed things up.

I hope the above the above discussion give you ideas on how to get the most out of SuperScript II, and also to realize that it is a hell of a lot better program than you may have thought.

*****Telecommunication*****

There are two basic realities to telecommunication: one, it can be a little scary getting started, and two, once you get comfortable, it can become very, very addictive. The Chicago B-128 User Group International is currently represented on two national Telecommunication networks: We can be found on the Delphi Network under the Flagship Commodore banner, and on the CompuServe(CIS) Network we can be found in the Commodore area under CBMPRG. Currently a good number of the folk writing for the CBUG Escape can also be found on either or both networks. You'll find Norman, Liz Deal, Joe Rotello, John & Ken Lemkelde, and yours truly, to mention a few. Why telecommunicate? Because it is fun and very informative. Even if you limit you use of the networks to B-128 business you will find it to be a most rewarding experience. What can you do? Well, you can ask a question; you can leave an answer; you can make a statement; fill us in on your latest discovery; sell or buy equipment; or just say hello. Once you get hooked on Telecommunicating, you'll find it very difficult to give up the habit. The things you can do and explore on a Telecommunication Network are only limited by your own imagination. How to telecommunicate: the basic thing to remember is that Telecommunication networks are NOT sensitive to computer types (CBM vs. IBM). They are sensitive to what is called 'Protocol'. Nothing to worry about, both the Networks and your Telecommunication software allow enough flexibility to allow you to telecommunicate. Currently there are two Telecommunication packages available for the B' machines. B-Term, an original product of Commodore (1983), and BeeLine1.4 by John & Ken Lemkelde (1986). Both programs are available through CBUG, at \$12 and \$35, respectively. Both programs are very simple to use since they are MENU based. The two program have many similarities, but BeeLine (being the newer product) is superiour. It takes better advantage of the B's strengths. I'd hoped to include a full review of the two programs, but it will have to wait till next issue since the "ESCAPE's" deadline is two close.

The other basic item you'll need is a MODEM. Modems are currently a bargain, if you search a bit. The original Mura MM-100 (300 Baud), which many of us paid Protecto \$80 for, are currently available through Discounters/Liquidators for \$25-\$35. There are many 1200 Baud Modems available (from the same sources) for \$100-\$150. Currently available: Avatex 1200/\$100, Novation SuperCat 1200/\$130, SmarTeam 1200 (Taiwan Hayes-Clone) at \$110 as a Kit & \$140 Built, just to name a few. The best sources for these "el cheapo" specials are Computer Shopper and BYTE magazines, as mentioned above.

*****B-Term to ML Monitor "SAVER"*****

The following information is provided for those that use B-Term, or may use it in the future, and end up confronting the following problem.

The problem, as I posted it on DELPHI's B-128 Forum, was:

At times when using B-Term, a "glitch" will disconnect me from a telecommunications service and leave me with the "."

prompt from the B's built in ML Monitor. The "glitch" may be caused by something coming from the service, local electrical interference, or telephone line interference. There is no way of knowing. The basic question is, Can the B-Term Buffer be salvaged or does one lose the data?

Liz Deal was kind enough to supply a possible solution, I haven't had the need to test it yet (Thank God!). Below is the, slightly edited, response she provided on DELPHI --

12356 26-MAY 22:17 B-128 National Group
RE: Hello (Re: Msg 12312)
From: LIZD To: AMATOS (NR)

Hello, Hello to you - what a pleasure! Bterm wipes out memory if you push the reset button. I plan to work that problem out in a couple of days and will report here. Saving the buffer is simple IF MEMORY WASN't WIPED OUT, when you land in the monitor (at the "." prompt), type:

S"d:filename",08,020100,02xxxx and push return. (d:stands for drive#).

Fill in xxxx as the final saving address - it's hard to figure out, but if buffer is fairly full (i.e. 64000), type 02fc00, if half full (i.e. 32000), type 028000. Just ballpark figures. Now, when you load it into Superscript, there will be 2 extra bytes up front which will mess up your format. Deal with it somehow - at least you've got the buffer saved. Liz

12367 27-MAY 23:30 B-128 National Group
RE: Hello (Re: Msg 12312)
From: LIZD To: AMATOS (NR)

BTERM BUFFER CAN BE RESCUED, but I'm puzzled why you land in the monitor. Something must be wrong. So I can't be sure how this will work for you. For me, Bterm just crashes sometimes for no apparent reason. Reset button resets just fine, but Bterm, in a rather nasty manner wipes out itself and the buffer. So here is the fix I promised, which should allow you to at least save the buffer contents. As I mentioned previously, two extra bytes up front will tag along, and you'll have to delete them in Superscript.

Load Bterm into a freshly reset machine. List it. There is a line 50 in my version which says BANK 15. Next line says SYS 512. Sandwich a new line of code, say 55:

55 FOR J=515 TO 517:POKE J,234:POKE J+234,234:NEXT J

... that's it!! Now DSAVE"BTERM" on whatever drive you used. Next time you land in the monitor or need to use the little RESET button, it will not destroy the buffer. If you're not in the monitor, go there:

BANK 1:POKE 6,0:SYS 6 does the job. Now save the buffer (estimate hex final address by dividing buffer-used-bytes by 254 and save that many pages, speaking in hex; don't be afraid to overshoot):

.S"D:RESCUED",08,020100,028000 (\$8000 is half full buffer +/-).

Hope this is of some use to YOU and other people who read this ... Liz Deal.

I have no time to stick this into next ESCAPE. You'd do me a favor if you would.

Also, please note the following information, it is of general interest, to ALL owners of B-128's.

12286 21-MAY 00:26 B-128 National Group
RE: superscriptII (Re: Msg 12266)
From: LIZD To: CBUG

Obscure orphan machines. All B-128 computers are orphans. But we're OK. Most people have identical ROMs so they can run Superscript, utilities and so on. Many programs even work on B256. But there are beginning to come out of the woodwork orphan's orphans. B machines of early vintage. Few programs will run in them. Details will go into your upcoming issue of the CBUG ESCAPE, but this one piece of info is now definitive: if BANK 15:PRINT PEEK(65529) is not 1 (one), you've got a lonely orphan. Time to burn new ROMs. B256 machines of our vintage also have 1 there. Only their Basic interpreter differs - most programs will run in those computers.

*****BeeLine1.4 Update*****

The following was extracted from the B-128 Forum on DELPHI, we print it here for your convenience. This re-print also includes a correction which was communicated in a latter Forum message:

12249 18-MAY 10:13 B-128 National Group
BeeLine Changes
From: JOHNLEMKELDE To: ALL BEELINE (NR)

Attention All BeeLine V1.4 Users May 18, 1986

The following information is being distributed to solve the problems our customers have experienced with BeeLine V1.4 when used with certain B128s & modems. All users can make these changes without regard to their equipment configuration although we suggest you DO NOT make these changes if you have NOT been experiencing any problems.

BEELINE V1.4-001 - This change is for those having problems with their modem not responding to the auto-dial part of the phone directory.

After power-up, enter the command: dload"beeline1.4.basic".

List line 327. It should look like this: 327 print#2,chr\$(0);:fory=1to100:nexty:t\$=pf\$+ph\$(dg+t,2)+cr\$

Next, change line 327 to look like this: 327 get#2,t\$:t\$=pf\$+ph\$(dg+t,1)+cr\$

List line 1076. It should look like this: 1076 print#(rs),chr\$(0);:get#(rs),t\$

Next, change line 1076 to look like this: 1076 get#2,t\$

Enter the command: run50000, this resaves the program to disk.

BEELINE V1.4-002 - This change is for those having problems with multiple returns for each input into BeeLine.

After power-up, enter the command: dload"beeline1.4.loadr".

List line 113. It should look like this: 113 bank15:poke136,093:poke137,137:bank1:poke92+175*256,137

Next, change line 113 to look like this: 113 bank15:poke136,093:poke137,137:bank1:poke92+137*256,131

Enter the command: run50000, this resaves the program to disk.

You should make these changes to your working copies of BeeLine. If you attempt to modify the original disk, please, be very, very careful.

These changes are only to be made if you are experiencing problems, because you have an equipment configuration that is different then most users of BeeLine Terminal Program.

We have been very responsive to customer inquiries and will continue to provide support to every BeeLine user who has a question. Please send in your Support/Registration cards: LemData Software, P.O. Box 175, Dover, PA 17315. On Delphi contact 'JOHNLEMKELDE' or 'KENLEMKELDE'

Well that does it for this round. Keep on Truckin'. /30/



ASSEMBLER 5.5 PACKAGE

A NEW HIGHLY FLEXIBLE ASSEMBLER.

by Howard Harrison, Philadelphia, PA.

Assembler 5.5 consists of three parts, EDITOR, ASSEMBLER and BIRQ (tiny debug utility). The editor & assembler are in 8k of memory, but Birq must live in 1K elsewhere. Assembler 5.5, Birq, Supermon (or other monitor) & BASIC may co-exist without interference. The EDITOR can create tokenized or ASCII files for use with SUPERSCRIP or another assembler. The entire package can be configured to run on VIC-20 or Commodore-64, but BIRQ is only for the B-128. Assembler 5.5 can assemble source files from the CBM assembler with little modification.

The package is flexible - you can configure it as you wish inside your machine. You can set up default devices or drives, where it resides in memory and you can change the configurations any time.

The editor and assembler reside in memory at the same time. There is no need to load and re-load pieces. Both are easily connected and disconnected, hence going in and out of BASIC is simple without the need for turning off the computer. Source files are best written and edited in the EDITOR, but can also be written using SUPERSCRIP and tokenized as they enter the EDITOR. The choice is yours.

Both the source and the disposition of the listing and the object code is under your control - memory, disk, or printer. Assembler supports program relocation and the BIRQ utility can display any memory in hex or ascii on the screen or printer as the program runs - so you can watch the sensitive locations in action.

The package includes extensive documentation, but to give you an idea of what is provided, here is a partial list of the commands.

EDITOR COMMAND SUMMARY

Assemble source in memory
Set block
Delete/insert lines
Set end of block
Hunt/rehunt text
Load/insert source file

Scroll by lines or screens
Change default drive/device
Un-new source file
Exit editor (optional save)
Switch to alternate text back.
Switch banks

Tokenize ascii file
Delete block.
Toggle between ascii/crunched mode
Go to start/end of file, or to label
Save source file
Print source or any block
DOS-wedge (slightly changed)

* THE CBUG LIBRARY *

The First Half of the Summer 86 CBUG Library releases are some of the most exciting things yet seen for the B128! There are TWO methods of merging Liz's fix into Superscript II, and a program for removing all protection from Superscript for those of you who want to go in and customize it, etc. (Liz /w Goceliak & Casey)

Anthony Goceliak has offered up the fruits of his continuing research efforts -- a whole prodigious disk chock to nearly the last byte. Articles and utilities. This is the beginning of disk hospital; anyone previously claiming to be a disk doctor must have been a quack! If nothing else get Tony's disk for the articles on it. You will enjoy Tony's light style -- never know it is a technical subject!

THE FIRST ASSEMBLER for the B128, and better yet written by a CBUG member FOR the B128! Howard Harrison, another luminary of the CBUG B128 experts.

There are upgrades for the Medical Accounting Suite and Kernaghan's Utilities. The latest public domain materials from the Toronto Pet Users Group, an extensive file of hints, tips and important insights into Superbase from the ICPUG of London, and from Precision Software. Les Coombs is commercially offering a new database program via CBUG. Though this is NOT part of the CBUG library, we have included the information in this section for our convenience.

MORE, MORE, & MORE! The second half of the Summer 1986 ESCAPE will have a huge collection of additional materials from numerous authors. Extensive educational materials as well as a complete potpourri of utilities, programs, and more. Even a complete disk of printer utilities and programs -- lots of useful things you can do with the printers such as signs, greeting cards, graphics, etc. If you've not paid your dues, now is the time, else you won't get the second half of the Summer issue!

DEFECTIVE COPIES. This last few months we experienced a couple problems in getting library disks out correctly. There are a few inoperable disks out there due to the failure of one of our 6 8050's used for duplication. The failure mode was rather unusual as it elected to both introduce errors and to verify the errors as good data. In at least one instance, it did unto one of 3 duplication masters for CBUG #19. (defective files: kernal-bl28.1; kernal-bl28.5; bl28.defs; bl28.linput; terminal; address 128; change disk; check disk; key; bug1/6/010; bug1/6/016; bug 1/6/018). There have also been a few instances of wrong labels on disks. Should you receive any defective disks from CBUG, return them for prompt replacement. Please briefly note the defect or mislabeling, etc.

Since we have not offered dozens of new disks to choose from, there is no baker's, butcher's, or candelstick maker's half dozen this time. Instead, we are going to give a 10% discount on CBUG offerings (using the front order form) by Sept. 10, 1986. This includes blank disks, commercial disks, CBUG Library disks, archive materials, even the upgrades. BUT come Sept. 10 the glass slipper disappears!

Liz Deal's brief review of the disk produced a description of a real goldmine. Take a look at Tony's article to get an inkling of what he is up to. There are at least 60 pages of articles on this disk, only a few of which will be in THE ESCAPE over the next several issues. Tony has exhibited some of the new types of files -- not just the usual prg and seq files, but prg<, rg?, del, and usr< on this disk. Without a doubt this will be one of the most valuable disks ever released by any users group.

```

"goceliak's patch" x3 2c
shift/run" gives option of reading 'instructions' w/out SS
-8050 utilities-"
disk rx" all basic disk examine & modify pgm. No m/l
8050 copy 0 to 1" what's in a title?
copy disk job q" can bypass one source of error that stops above.
copy id<>id1" change visible AND format disk ID#'s while copying
fdc zpage displa lets you watch 8050 FDC RAM work w / address titles
move block 8050" shuffle disk 1 sector at a time. Very handy!
change bytes t/s" Install basic data statement m/l onto disk for b-e
change bytes hex" ditto, but handles hexadecimal opcodes for 8050
seek" move your 8050 read/write head via job queue.
blinky #3" fantastic light show from your 8050
test" examine your 8050's RAM and see what it does
b-e 1-2" Execute the m/l routine on tk#1 sector#2!!
manual copier" I made this disk using this dinky program.
disk t&s dump" wanna see what's on a disk?
20 error" Create your own disk errors. Unrecoverable version
24 error" Create your own disk errors, but still find block
8050 rapid off" The world's SHORTEST disk program. My 8050 ran
longer after it was done than during. No more!
move head" by direct intervention with this pgm. (92 tracks!)
ds$ experiment" type in a number, get out a message!
--discourse on--" < Note the "<" It means 'locked file'
----the 8050----" <
investigations#1" Rummaging through the 8050 yields some goodies!
investigations2a" Want to learn to write on the back side of disks?
mpi8050 drv swap" Drive 0 down? can't load SS? Do this and you can.
85 track 8050" 85 tracks. No fooling!
--90track test--"
superseek test90" A 90 track demo to convince you that 85 works fine!
---real stuff---" <
85 track mode" This pgm expands your 8050 to 85 track operation!!
--8050 charts---"
8050 direct tabl" Master your disk drive with this map.
8050 page $10XX" The 8050's command page revealed.
fdc ram page 0" That's right! RAM of the 2nd computer in the 8050
8050 ip page $00" Zero page map of the 1st computer in the 8050!!
8050 riot adres" Manipulate your drive at will with this info.
--disassembly--"
fdc $05 start up" Commented disassembly of how the fdc wakes up.
fdc assy file+" Commented disassembly of the entire fdc ROM!!
fdc assy file" For those who prefer their disassembly straight.
----dumps to----"
--bank 15 cart--"
fdc rom (-32768)" Entire FDC ROM dump
8050rom(-32768)+" Entire IP ROM dump (incl all address anomalies)
---customized---"
--disassemblers--"
8050 rom dis" If you own a bank 15 cart bloads dump and does dis
fdc rom dis" Ditto for fdc. Both have custom zero page names.
my dis no zpage" Dumbo disassembler for guys like me
8050 rom dumper" If you don't own bank 15 cart, make your own dump
----8050 ip ----"
quicklook 8050ip" I have concentrated on the fdc but here a bit of ip
--secure files--"
security lock" <SCRATCH-PROOF Your files! A SOFTWARE write-protect
file type change" <Make your own eq? files
drink of lethe" <Scratching a file isnt enough. This OBLITERATES it.
lock disk" <Still use rnd files? m/l for b-e? protect em here
disksave protect" <Create a TOM disk
disksave unlock" <Un-TOM your disk. Not 100% certain, but best shot.
---encrypted ---"
----files ----"
decrypt" <Use this program to read files scrambled by encrypt
encrypted msg100" <A demonstration file. Use #100 to decode it.
no key crypt" <You tell me what number I used and win a prize.
encrypt" <Create scrambled files readable only by auth. pers.
---8050 disks---"
---on the sfd---"
convert disk.ing" My first efforts into disk compatability problems
--b-128 forms--"
esc key list" You can't tell the commands without a scorecard
superchart" I love it. m/l, hex, decimal, #bytes all in one.
+++++++<
----freebie ----" <
+++++++<
<You probably already own over 180 programs that
create a disk" <you don't know about. A few minutes & you will!!
--expense calc--"
auto v1" A FAST, comprehensive analysis of every penny you
spend on your car. Includes demo files as well.
rattletrap #1"
rattletrap #1+"
----utility-----"
----don't run----"
--these alone--"
print screen" Basic loader for following m/l pgm.
m/l print screen" Puts what is on screen out to printer.
gotcha" get got good
track1-sector2"
track1-sector3"
--more utility--"
---ok to run---"
basic print scrn" You can do it with basic if you try.
read error test" Find those nasty head bumping sectors on your disks
basic time demo" More than one way to skin a cat. Some take longer.
-----"
--del file demo--"
-----"
Archive developmental pgms ON DISK. Won't load
duplicate disk" unless you know how!
-----"
---duplicate ---" <
-file name demo-" <
-----"
goceliak" <
goceliak" <Now where have I seen that name before?
-----"
----sound &----"
modem tones" Send yourself standard tones and align your modem
tone generator" Send almost ANY tone as long (or short) as wanted
morse tutor" A tough way to learn, but you'll be a master
happy birthday &" Convinced my wife the Computer was worth it!
--patched games--"
20 bumps"
labyrinth"
lunar lander"
super lander"
beethoven 1.4"
dominoes"
----wordpro3----"
wordpro3" I found a pgm wordpro2. Nothing worked. This does.
--instructions--"
instructions" Words, words,...
instructions #2" and more words. Who reads the instructions?
ins #3"
---seq reader---"
seq read/print" How you read the instructions without SS
----patched ----"
--disk pgms----"
disk doctor" All these had flaws as far as b-128 is concerned.
disk doctor dr 1" "
superdirectory" "
sfd view bam" " Just stop pgm after track 77 (or 90) for 8050
rename disk" " Runs fine on b-128 with sfd or 8050
display t&s" " See what's on your disk, 1 block at a time.
1 drv copy files" " Copy files using only one drive,sfd or sick 8050
disk logger" "
basic cross ref" but not any more.
----tests----"
sfd perf chk" Read the instructions. I'm very tired of typing.
sfd also chk"
printer demo" Especially for what I think of 'test'
printer test"
sfd auto test" programs!
search disk"
--demo cartoon--"
disk demo" dload & run this pgm for entertainment.
disk display"
disk comm"

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zero page blank" Just fill in the blanks and you become a guru
 -----"
 hide frm ms.deal"
 -----"
 b function keys" Don't let on. We are using the function keys.
 --printer cmds--"
 8023 sa" Too many to remember? Print this chart.
 4023 sa" A few less, but still can be confusing w/o help.

disk comm2"
 disk comm3"
 disk write"
 disk read"
 disk overlays"
 disk dir"
 data file"
 test file" but list them all to gain programming knowledge.
 --descriptions--" I have NO IDEA what this file is. Some number fewer
 than 380 blocks free. (Considering the lead programs on this disk, do I have to hit you over the head?
 322 blocks free.

Any Cryptanalysts out there who dare to challenge my file 'no key crypt'?

CASEY'S SCRUBBER v1.0

CBUG #28

NEW RELEASE

12504

This is the disk that makes it possible for us to gain access to both Superscript and Superbase code so that we can make corrections and/or add improvements. It also allows us to make unprotected disks of these programs in a manner that makes loading both easier and faster. With this disk and the talents of many of our members, we should end up with word processor and database programs second to none.

As the first entry of what I would call a translator program, Mr. Casey has set an important example. This program is able to copy and translate another program without this program itself containing any infringing code. You have to have the first legitimate copy, and any you make for your own use, even if altered (translated) are permissible under the "fair use doctrine" of the US Copyright code. By nature this type of program must be machine specific, but even then, they are well worth the effort for important materials. The next step is translators that will shift code from one machine format to another; but then we can dream, can't we?

1 "ss2 & sb7 access" jc 2c	6 "superbase 7" prg	Copies Superbase copyable files.
3 "notice" prg	1 "sb" prg	Copies Superbase program code.
8 "frame" prg	12 "format" prg	Creates new program disk.
8 "frame2" prg	23 "notes" prg	Access and operational instructions.
8 "frame7" prg	1 "ss2" prg	Loads new Superscript program.
12 "intro" prg	1 "load ss2" prg	Load transfer program for data disk.
8 "superscript II" prg	1 "sb7" prg	Loads new Superbase program.
1 "ss" prg	1 "load sb7" prg	Load transfer program for data disk.
	1 "notes.s" seq	Notes as a Superscript file.

CBUG/TPUG (B) P1 & P2

CBUG #29

NEW RELEASE

12519

The TORONTO PET USERS GROUP, which is the World's largest Commodore Users Group (providing information for the entire line of past and present commodore computers released its first collections of 8128 programs - aptly described by them as a potpourri! A number of titles look familiar, but that does not necessarily mean the programs are the same as elsewhere available. Congratulations to TPUG and their 8128 librarian Paul Aitchison for a fine product.

1 "b128potpourri1&2" bp 2c	17 "math" E" prg	20 "lotto results" A" prg	19 "n.s. counties" E" prg	1 "trcounter" seq
26 "list-me (b)p1" L" prg	38 "star bas pr" E" prg	8 "countries" E" prg	17 "days of r life" E" prg	14 "block modifier" U" prg
18 "high-q" G" prg	97 "french verbs" E" prg	4 "math tutor" E" prg	30 "stock exchange" G" prg	3 "load address" U" prg
4 "bird of death" G" prg	25 "diskalc" B" prg	2 "gb to usa" A" prg	14 "cinquian" E" prg	5 "christmas" D" prg
13 "resistor/cap" A" prg	11 "baby care" G" prg	49 "shears scoring" A" prg	26 "drill er/ir/ur" E" prg	5 "square root" E" prg
82 "logic simulatorA" prg	32 "forest walk" G" prg	1 "<<<<<<---->>-->>" prg	16 "drill ei/ei" E" prg	7 "disk tidier" U" prg
32 "basic logic simA" prg	14 "word test" E" prg	25 "list-me (b)p2" L" prg	18 "drill ou/ow" E" prg	9 "lemonade" G" prg
3 "jk flip-flop" seq	2 "body parts" seq	35 "frosty" S" prg	61 "jesu" S" prg	12 "banker" C" prg
1 "and" seq	7 "million" G" prg	47 "bible clues" E" prg	26 "address book" B" prg	29 "bach invent" S" prg
1 "or" seq	6 "autoline print" U" prg	58 "quiet afternoonD" prg	8 "tokenizer" U" prg	2 "anagram helper" U" prg
2 "full adder" seq	14 "computers" D" prg	19 "cnd prov caps" E" prg	33 "mail" B" prg	8 "b128potpourri1&2" seq
34 "ideal mass" E" prg	42 "the bus barns" E" prg	25 "early set1" E" prg	68 "checkbook" B" prg	720 blocks free.
33 "elect srvc calcA" prg	26 "enclosures" A" prg	27 "n.s. cities" E" prg	1 "balance" seq	

HARRISON'S ASSEMBLER v5.5

CBUG #30

NEW RELEASE

12519

ASSEMBLER 5.5 --- AN EDITOR/ASSEMBLER PACKAGE for the B-128

You are now just starting to see what a good user's group can do for its members. Howard is a professional programmer and computer hardware man as well. He programs directly in assembly language, having bypassed basic at the beginning. Of course to use his beloved B128 he needed an assembler. None available? No problem, write one. I've been told by parties that have studied Howards effort that it is a top flight program.

EDITOR FEATURES:

Full screen scrolling editor with single keystroke commands.
 Built in DOS wedge with 4-column disk directory.
 Multiple drive/device support.
 Easy exit & re-entry that does not interfere with BASIC or SUPERMON
 ASCII source can easily be converted from other assemblers (like CBM asm).

ASSEMBLER FEATURES:

Extremely fast assembly time
 Generates relocatable object code.
 Assembly options include listing, debug, symbol table & more
 Assembler directives include LIB, OPT, ORG, REL, AS@ & more
 Can assemble from editor or disk file

ALSO INCLUDES:

A symbolic Tracer program
 A resident 2-key screen dump
 A resident memory "window" program.

COMING SOON: debug 5.5

An interactive assembly language debugger for Assembler 5.5 users.

1 "assembler 5.5" " 06 2c	4 "reload" prg	102 "asm 5.5doc.src" prg	12 "birqdoc.src" prg	1844 blocks free.
6 "b128load" prg	2 "reload.rel" usr	6 "backup" prg	3 "example.src" prg	

```

33 "assembler5.5" prg 2 "kernal.lib" prg 4 "birq" prg 9 "asm 5.5.edv" seq
7 "assembler5.5.rel" usr 10 "config.src" prg 2 "birq.rel" usr 6 "article.txt" seq

```

SUPERBASE CORNER & HINTS

CBUG #31

NEW RELEASE

12538

Precision Software last spring provided CBUG with a huge collection of various important information regarding Superbase. Part was from the ICPUG, a London based CBM user's group with the indication that we could reproduce so long as credit was given to the source. Mr Hugh Granville, editor of the Superbase Corner column in the ICPUG journal has compiled a great deal of extraordinary material. Solutions to seeming applications restrictions many members have been asking about. Also to be on this disk, but still in transcription, are some 60 pages of Hints and Tips which Precision themselves wrote. There are numerous program examples and program routines in these new texts. This material is all in addition to the 60 pages previously found on CBUG #13 under the by line of Brian Leighfield of Precision (the Leighfield files are repeated on CBUG 31 for your convenience.

The new materials, ICPUG and Hints have all been hand transcribed by Mr. Paul Moch, of the FVCUG (Fox Valley Commodore Users Group) using a C128 running a similar version of Superscript. We most gratefully thank Paul for this incredible effort.

```

1 "superbase corner" sc 2c 32 "supbase corner3" seq 4 "-- CBUG MEMO --" seq 8 "filedefcorrupt" seq 27 "!!--NOTICE--!!!" seq
13 "defaults" seq 65 "supbase corner4" seq 101 "labels" seq 47 "duplicate keys" seq
1317 blocks free. 95 "supbase corner5" seq 84 "reports" seq 17 "keys" seq +++ HINTS & TIPS STILL IN
99 "supbase corner" seq 30 "supbase corner6" seq 63 "progs&menus" seq 98 "drives/filecopies" seq TRANSCRIPTION ++++
79 "supbase corner1" seq 4 "supbase corner1b1" prg 20 "fields&calcs" seq 41 "superofficing" seq
83 "supbase corner2" seq 1552 blocks free. 60 "command tricks" seq 13 "S&R Instructions" seq

```

LIZ'S UTILITIES v1.2a

CBUG #17a

UPGRADE

12999a/13009

This is essentially Liz's v1.2, BUT BUT BUT, a file by Mr. Gociliak has been added (the last file on the disk). With it you may incorporate Liz's Superscript Fix into you existing SUPERScript duplicate disk. DO NOT ATTEMPT TO MODIFY your only original -- get Jessie Knight's Copy Utility and do all alterations on duplicates. Handy way to avoid having to use two disks to load the fixed Superscript. This upgrade is the last to be made to Liz's first disk. Because for some people it is an upgrade of an upgrade, we are making a special price concession for those who purchased CBUG #17 as an upgrade under order number 12999. You may upgrade your copy of CBUG #17 for just \$6.00 rather than the listed upgrade price applicable to those upgrading from either the very first offering of Liz's utilities by CBUG last summer, or those who purchased CBUG #2 who must pay the \$8.00 upgrade price.

For more information about the contents of this disk, study Liz's article earlier in this publication.

All w. files are ASCII format, they can be read with Superscript or the Keytrix 'text command. All +files are machine code or data used by other program. All other programs can be loaded and run unless a note says to just list. All programs by Jim Butterfield have JB initials shown in comments. ML stands for machine language or machine code. The .b128 addition is not consistent in my files. All programs on this disk run in B128 (except those in the 8432 section), some also run in the B256 and some run in all CBM machines (most of JB programs, and most of my non-utility programs).

```

1 "liz utility1.2 2/86" 86 2C
34 "w.contents" seq -what you're now reading.
6 "pre-superscript" prg -(v3)run before loading SS. Fixes bounce.
15 "b128 irq rate" prg - explains via disassembly: load, list.
1 "+ta irq.400" prg object code of a similar version
7 "spool b128" prg -disk to printer seq files. load, run, sys.
10 "w.b128 spool" seq explains more.
1 "<---- a ---->" prg
21 "dcl b128.pal" prg -for ML people -B definitions
2 "+btxfef.fe48" prg -transfer sequences, must be used with all ML.
1 "+xcall.fe00" prg -allows calling non-kernal rom routines.
6 "xcall" prg source code, load and list.
80 "w.b128 xcalls" seq long winded explanation, updated.
1 "<---- h ---->" prg
5 "supermonb v7" prg -ML better monitor for b128/256. Load,run, it
16 "+smb v7.0400" prg loads one of the +files. If you have memory
16 "+smb v7.e000" prg in the cartridge one of +file+ or +file++
16 "+smb v7.0400+" prg is loaded.
16 "+smb v7.e000+" prg
16 "+smb v7.0400++" prg
16 "+smb v7.e000++" prg
46 "supermonb v7.ins" prg supermon instructions. load,run.
1 "<---- b ---->" prg
4 "keytrix v7" prg -Basic utilities. Load, run, it loads needed
15 "+b1 kxb128.v7" prg +files. If you have memory in the cartridge,
15 "+b1 kxb256.v7" prg one of the +file+ or +file++ loads.
2 "+b15kxb128.v7" prg
2 "+b15kxb256.v7" prg
2 "+b15kxb128.v7+" prg
2 "+b15kxb256.v7+" prg
2 "+b15kxb128.v7++" prg
2 "+b15kxb256.v7++" prg
47 "keytrix v7.ins" prg keytrix instructions: load,run.
1 "<---- c ---->" prg
4 "change dev#" prg -JB disk device soft change
23 "copy-all b128.4" prg -JB copies files across drives or devices.
2 "+copy-a.21c3c" prg Allows rearranging. Load/run. +file loads.
8 "disk view.b128" prg -JB disk utilities. Load, run.
11 "disk logger.b128" prg view shows track/sector contents, log logs
1 "+disklog.400" prg directory + header address + length, mod
7 "disk mod.b128" prg , allows rewriting using screen input.
4 "big rel file" prg -switches 8050 to hold more than 700 records
1 "configure b128" prg -if you don't use Supermon/Keytrix, use this.
2 "mykeys" prg -my key definitions. load/list/edit/run.
2 "datamaker" prg -makes DATA lines from ML code, primitive.
4 "verifierb128" prg -might end up at Transactor.
5 "stringthing b128" prg -JB original, LINE INPUT simulation.
4 "qplot.b128" prg -building blocks for 160x50 plots
3 "primes" prg -a neat way to work prime numbers
11 "squares" prg -two player game, no frills
16 "rotate" prg -a puzzle
5 "tab" prg -tabs data into intervals - demo
4 "sm sort" prg -pointer sort demo
3 "waitline" prg -waiting in line - simulation, JB.
8 "words match" prg -template teachers can use
27 "w.exp15" seq -how to expand B128 in the cartridge
1 "<---- e ---->" prg-----
22 "list all/jim b" prg -JB LISTS programs from all computers
4 "cross.b128-1.1" prg -JB crossreferences basic programs FAST.
5 "+cross.b128" prg this gets loaded by cross*
12 "twin bagels" prg -JB two computer vs human 'mastermind'
23 "grungy towers" prg -JB you gotta solve a murder story
2 "impossible" prg -JB this is a weird program
15 "diary" prg -JB builds, uses, remembers a calendar
2 "events" seq this file is used by diary prg.
1 "<--8432 ut1-->" prg-----
3 "Start8432.21" prg -THE 8432 system is an 80-col Pet emulator,
2 "t1" prg but it is better than the PET in that it's
2 "td.alt" prg faster! Many 80-col Pet programs even inclu-
2 "t2" prg ding some machine code programs do run on
2 "td" prg the B machine. Load and run "Start" after
81 "8432.21" prg loading and running the instructions file.
4 "bank F.20 '1024" prg it will load the other files.
5 "instructions8432" prg explained
9 "supermon4.rel" prg -just load and run. X exits the monitor.
5 "aid4.6b00" prg -Basic utilities: load, sys6*4096+11*256, new.
5 "aid4.7b00" prg - " : " sys7*4096+11*256, new.
use $6b00 version if you loaded supermon.
6 "cross" prg -cross-references basic programs
1 "<---- i ---->" prg-----
6 "peeker 80 col" prg -Gerry Neufeld's disk utilities - including
5 "errors 8050" prg - backup for some protected programs. to
10 "backup 8050" prg - backup - use a newly formatted disk.
5 "seek id's 8050" prg -

```



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#####

If you want the most extensive terminal program for the B-128 then make a beeline to get BeeLine. LemData Software has created BeeLine specifically for your B-128 with some of the best options you could want. With two high level menus, BeeLine options are easily accessed by both beginner and expert alike.

You may choose to store your ONLINE data in the RAM buffers which will hold approximately 200K bytes or in a sequential disk file, up to about 520K with an 8050 disk drive. Any data you've captured into RAM, or loaded there from disk, can be viewed using our extensive command set. Data can be BLOCKED into smaller segments to be sent to your printer or saved to your disk drive.

You can create many Phone Directories, each with 20 entries, for auto-dialling your important ONLINE databases. You can use the B-128 Programmable Function Keys while in BeeLine for easily keying frequently used data or for programming frequently used options. BeeLine also uses an RS232 Convert Table to filter the incoming and outgoing data.

BeeLine can transmit a data file from your disk while ONLINE. This will allow you to write your electronic mail OFFLINE and transmit it at the appropriate point during your ONLINE session. You may choose to send the data constantly or one line at a time.

BeeLine will allow a Baud Rate between 300 and 9600 BPS, with 7 or 8 data bits, Even, Odd, Mark, Space, or No Parity. You may also use a local echo, remote echo, or both when needed.

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USA. If you do not have the original carton with foam inserts which is essential to protect your drive in transit, we will send a shipping carton for an additional \$15. Please include a check for the full amount with unit or request for carton. Be sure to include your name, shipping street address (P.O. Box # cannot be used for UPS), and serial # of the unit on a note packed **inside** with the unit. When shipping drives to us, be sure to **insure** the unit for **\$1500** as the unit is in **your** care until it arrives safely at our door. We urge shippers to use UPS and **not** to use U.S. Mail! We are also now in a position to service other 8050 problems including component level repair of the digital control board—call or write us.

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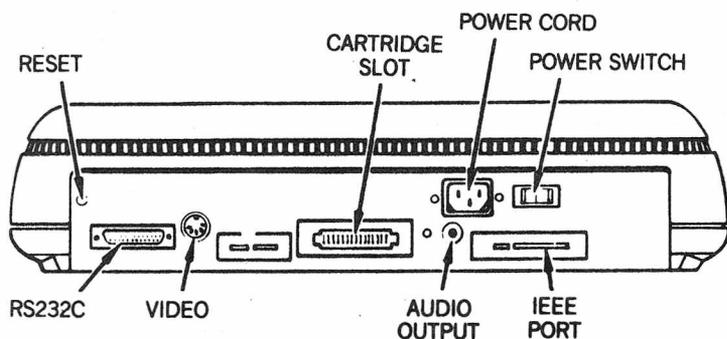
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CBM 128 LO PROFILE

We have just received another shipment of B-128 lo profile computers. There are not very many of these computers left in the United States. These are expected to run out before the end of the year. If you would like to have a backup computer for your system, it is suggested that you do not wait too long ! It is certainly less expensive to have a backup computer than sending it out to be repaired and paying for parts.

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Commodore 6400

CBM 6400 DAISY WHEEL PRINTER

Believe it or not, there was a daisy wheel printer that CBM had intended for use with their business computers. Until recently most of us were not aware they were still available. Since CBM has been doing some spring cleaning they have found a small stockpile of 6400 printers, alias C-ITOH Starwriter. These printers originally sold for more than \$1800 and dealers paid over \$1,000 for them.

A major mail order company is selling the C-Itoh Starwriter for over \$850 !



CBM 6400 SPECS

- * 40 cps
- * 136 column
- * uses standard ribbons
- * uses standard print wheels
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- * two copies

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CBM 128 HI PROFILE

Yes, after much intensive work we have unearthed a small number of CBM 128 computers. This machine was to be the flagship of the CBM Business line and listed in the high \$2,000 price range. The computers were made in West Germany for Commodore. I do not think that anything has to be said about the quality control there.

CBM 128 features:

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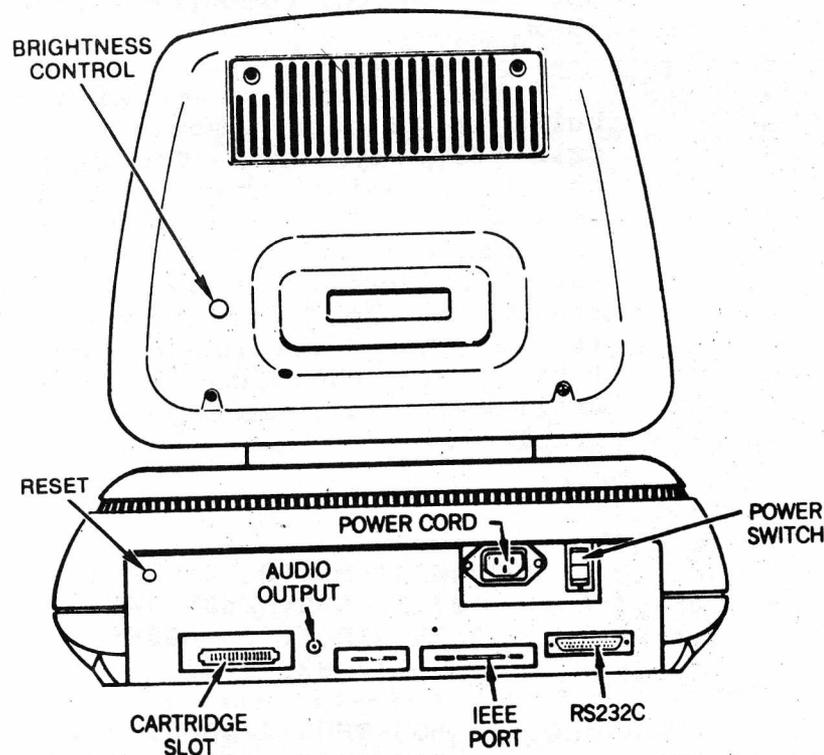
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You really have to see the green phosphor display to believe it. This model has at least as good a display as the other company with those three big letters.

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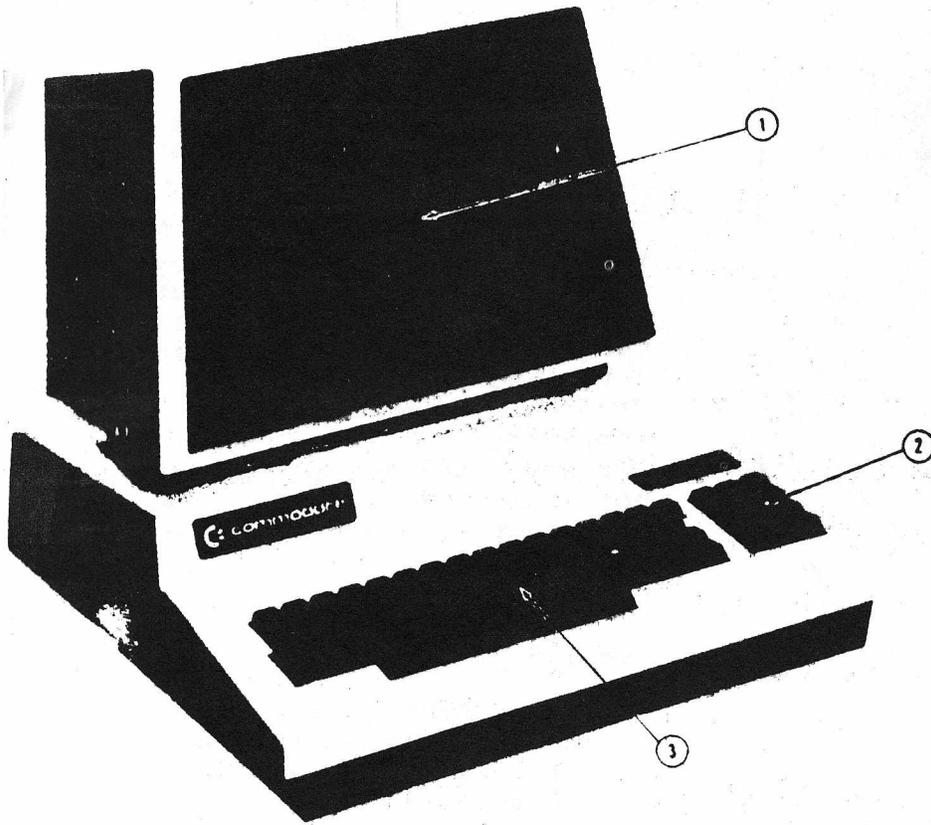


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Perhaps not ! CBM and Waterloo University developed such a computer in 1981. This computer was called a Superpet. The Superpet has two built in operating modes. The first is a stock 8032 computer and the second is a 6809 based computer with the above language interpreters, editor, standard ascii output, rs-232 port, iee port , 96k ram and much, much more ! TPUG recently supported the development of the OS-9 operating system for the SuperPet.



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What does a computer like this cost? Well if you shop around for these languages for other computers you might spend thousands just for the programs! This of course doesn't cover the cost of the computer to run them.

The Superpet comes with a built in 80 column monitor and full 8032 keyboard. The price on these while they last is only \$495. This includes all the language manuals which sold for \$70. Some of these systems are minus the Cobol manual as it was not developed until later. At the time of this writing we only have 60 units available.

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<p>HANDIC SOFTWARE -----</p> <p>Calc Result \$89.95</p> <p>THE WORLD REKNOWNED SPREDSHEET</p> <p>Word Result \$89.95</p> <p>CAN BE RUN INTEGRATED WITH CALC RESULT W/256K MACHINE.</p> <p>ALSO RUNS IN A 128K AS A STAND ALONE PROGRAM.</p>	*	<p>NWM ACCOUNTING -----</p> <p>FOR ALL OF YOU WHO HAVE BEEN WAITING FOR THE INVENTORY CONTROL SYSTEM WE APOLOGIZE ! THE PROGRAM IS FINISHED AND WE ARE WAITING FOR THE MANUAL TO BE PRINTED.</p> <p>DELIVERY BEFORE AUGUST 15TH</p> <p>FOR THE C-128 or B-128 requires SUPERBASE FEATURES: only \$49.95</p>	*
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<p>B-128 GOODIES</p> <p>1) P-I \$25</p> <p>2) I-I \$29.95</p> <p>3) X-Tron Monitors \$79.95</p> <p>4) Mura Modems 300 bd \$39.95</p> <p>5) Avatex 300-1200 \$105.00</p> <p>6) 6400 printers \$350-\$395</p> <p>7) Pet Switch \$199.00</p> <p>8) Pet daughters \$105.00</p> <p>9) 4023 rehabs \$99.00</p> <p>10) 8050 rehabs from \$250-400</p> <p>11) 8250 rehabs from \$400-495</p> <p>C-128 rehabs \$199</p>	*	<p>1) On screen pop up calculator</p> <p>2) Calc allows on screen field changes.</p> <p>3) Use alpha/numeric part id</p> <p>4) Programs load 8 sec or less with Superbase II</p> <p>5) 3 ways to print the same report for faster output. User select best method !</p> <p>6) Unlimited match selections possible for report types !</p> <p>7) Built in export program for B-128 users to use after deleting records. !</p>	*
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 * HOURS - MONDAY THRU THURSDAY 2:30-8:30 SATURDAY 9:00-4:00 *
 * ***** *

Prices subject to change without notice, FOB Park Ridge, plus applicable taxes.

FOR SALE: 8 - 8032's, \$289.00 each; 3 - 8050 drives, \$300.00 each; 2 - CBM 8300P printers (55 cps Diablo 630's) with tractors & CMC ADA 1450, 55 cpi daisy wheel printer, *\$600.00 each; 1- 8023P printer, \$125.00; 1 - Super Pet, \$479.00; 6 - WordPro 4+ programs, \$35.95 each; 1 - Proctor Program, \$15.00.

All are in excellent condition. You pay all shipping charges. I will accept your personal check.

*** NOTE:** The 8300 printers were CBM's top-of-the-line professional word processing printers. They were about twice the price of the CBM 6400 daisy wheel. Very, very heavy duty with superb print quality. These sold new for over \$2,000.

Contact: Jim White, S & W Supply Company, 5308 Timberline Trail
Rapid City, SD 57702 - (605) 348-3696 - NO COLLECT calls



Service Center:

TYCOM, Inc.
112 Elm St.
Pittsfield, MA 01201
(413) 442-9771

Authorized Commodore Service Center. Rates are \$50.00/hr (but we work fast) plus parts & shipping. 30 day warranty. Experts on 8050/8250 repairs & alignments. We still have a few 8023 and 6400 printers in stock at \$395 and \$595, respectively.



WANT ADS, FOR SALE

- 1.) B-128, 8050, 4023, C-64 to IEEE interface, Programmer Ref. Manual. All like new new. B/O over \$600. 412 222 5849 Edward Easterday, c/o Olympic Enterprise, P.O. Box 983, McMurray, Pa. 15317
- 2.) B-128, Protecto Package + some extra software. \$500 for all. 619 698 1030 Paul Franc, 4350 Palm Ave. #2, LaMesa, Ca. 92041
- 3.) B128 system in perfect condition. Few miles. Best reasonable offer. 813 474 0659 Toddington S. Tracy. Florida.
- 4.) B-128 Protecto Package. Child not interested in the computer \$750. 312 628 7729 Barbara Middleton, 825 Holiday Dr., Greentown In. 46936
- 5.) 5 Complete Protecto B128 Systems with Superscript/base, Order Entry, A/R, General Ledger, and a lot of public domain software. Accepting reasonable offers. 607 775 5196 John Dundon, Bpx 1280, R.D.#1, Windsor, N.Y. 13865
- 6.) B128, 4023, amber monitor, 8050, Superscript II, Superbase, all cables for same. All Mint Condition. \$700. 312 960 3202 John Duslak, 3140 Saratoga, Downers Grove, Il. 60515
- 7.) B-128, Protecto Package plus Superscript & Superbase. Prefer buyer within driving range of San Diego. Best Offer over \$600. 619 273 5438 B. Prouty, 3532 Don Lorenzo Drive, San Diego, Ca. 92117.
- 8.) B-128 system, never used. 1 4040 drive - little use. 313 782 2379 Robert Taepke, P.O. Box 296, New Boston, Mi. 48164
- 9.) 3 B128 complete systems surplus to our needs: Sys 1 - B + 4023 + 8050 + Extron Mon + Modem, Calre, SS2, SB, All 7. acc pkg units, .Bterm, Knight's copy disk. \$800, U Ship; Sys 2 & 3 - B + 4023 + 8050 + Mon, SS2, SB. \$500/ea, U Ship. 305 784 5312 6pm to 10pm EST ONLY. Space Coast CBM Users Group, 19 Fairway Drive, Cocoa Beach, Fl. 32931.
- 10.) B-128, 8050, 4023, Amber Mon, SScript, SBbase, G/L, A/P, A/R, Payroll, Teleterm, The Package, PR 1+2. 501 624 1891. Dr. Frank J. Kirksey, 1605 Central Ave., Hot Springs, Ar. 71901
- 11.) B-128, Protecto Package, SS, SB1, complete CABS accounting suite, terminal software. All works fine except drive 1 needs service. Best reasonable offer -- by letter only. W.D. Hinton, 3116 Girard Ave. So., Suite 308, Minneapolis, Mn. 55408.

WANT AD RATES: \$10.00 per line of 110 characters, payment with copy, please.

PHYSICAL EXAM — THE DISK ALIGNMENT PROGRAM

By now you've seen several articles and ads dealing with the speed instability problems of the 8050 drives. This problem also applies to the 8250 and most other CBM drives. Physical Exam is a superior in-computer measuring tool for seeing the speed of a drive on you monitor with great accuracy. The drive must be between 299 and 301 rpm to work properly. P.E. gives about 1 reading per second, leaving about 15 on the screen as they scroll. The accuracy is to two decimal places, 299.35 for example. You then simply turn the control on the inside to the drive is on speed. If you are going to add the new reference diodes you must have a way to reset the speed adjustments. You can easily and quickly check your drives as often as you like to insure that you will not have read or write problems, or worse yet trash a disk or write bad files within a large data base. A second section of the disk displays the mechanical alignment of the head tracking so this also can be adjusted when the occasion demands.

CBUG is now stocking P.E. for the 8050, 4040, 1541 and 1571. Though the 8050 version will not "officially" operate on a SFD 1001 or an 8250, you can load the program from an 8050 then switch drives without turning the computer off. You switch the drives after you have passed the first menu. By doing this you avoid the section of program which asked the drive what it is.

* * * * *

BETTER ZENERS and REFERENCE DIODES

Finding parts is not always easy, so CBUG has purchased a supply of both replacement close tolerance zeners of the type recommended by Mr. Kernaghan, and a far superior reference diode. We are offering these, albeit at a modest markup, along with copies of the circuit board component location charts, with schematics and brief instructions. KNOW WHAT YOU'RE DOING OR GET SOMEONE WHO DOES TO HELP!

Zener Diode: ECG 5014A is also known as a SK6A8 under the RCA numbering system. In reality it is a relabeled 1N5235B. These diodes can simply be swapped for the two located on the analogue board, one for each drive (0 and 1) They are about 4 times better than the original part ratings. These parts are rated at .05% per degree C drift. Two are provided in a package. CBUG order #11330, \$6.00.

Precision Reference: LM329 is a tight tolerance near zero drift reference diode from National Semiconductor. It sports a .0015% per degree C drift -- 33 times better than the zener diode. However, a bias resistor must also be changed, so 4 parts need to be substituted. Make twice as sure you are capable of this before attempting. Two LM329's and 2 2.7K resistors in a package. CBUG order #11344, \$8.50.

* * * * *

INTERNAL IEEE CONVERTERS FOR THE 6400 PRINTER

If you are about to or have purchased a CBM 6400 printer from most any source, it likely will come with a Centronics Parallel (industry standard) connector. To use this interface system you must provide an IEEE to Centronics converter. CBUG has brought in a quantity of the original internally installed converters for the 6400 printers. It takes but a few minutes and only one small phillips screw driver to install. This is a Commodore interface and performs far better than the outboard devices with respect to many of the instruction codes. It is equipped with adjustable device number jumpers. We provide them with complete instructions and schematics. CBUG order #11221 #35.00. Incidentally, there are two sets of dip switches on the back side of the control panel of the 6400. Their proper settings for B128 use is: 00010000 0110100100. When using Superscript with the 6400 printer, at the opening menu select option 3, Diablo!

This page printed on a CBM 6400 with a 10 pitch Courier wheel using 12 pitch spacing.

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+++++
+
+ THE COLOR BOX - A new peripheral for the B128 Computer. From: Special Illumination Systems, Inc.
+ P.O. Box 501
+ Dayton, OH 45409
+
+ What the Color Box is - The Color Box is a small plastic box, about 2X4X1 inches. It has 4 connectors
+ on one end, two push buttons on the other end, and a short power connector which
+ allows it to draw a small amount of current from the B128's cassette port.
+
+ What the Color Box does - The color box accepts the Key, Horizontal, and Vertical signals from the
+ video connector of the B128 and generates a RGBI color monitor signal so that
+ the B128 can be operated with a color monitor such as the Commodore Model 1902.
+ The Color Box connects to the Red, Black, and Yellow connectors on the
+ ordinary type of Commodore 4-wire audio/video cable. A monochrome monitor
+ may be simultaneously used with the Color Box since the box does not use
+ the composite video signal from the B128. A cable with DB9 connectors on each
+ end (normally comes with the monitor) connects the Color Box to the color
+ monitor. The character and background colors of the monitor may be changed
+ by depressing the two switches. The characters and the background are each
+ separately adjusted by means of their corresponding switches. All 16 of the
+ standard Commodore colors (white, lt. gray, dark gray, black, lt. red, red,
+ lt. blue, blue, lt. green, green, lt. magenta, magenta, lt. yellow, yellow,
+ lt cyan, and cyan can be independently assigned to the character or background.
+
+ We find that the use of a color monitor, even in applications where a monochrome monitor would seem to be
+ more than adequate, is very pleasing. (Our favorite combination is light yellow letters on a dark blue
+ background.) This is because a better character/background contrast is achieved with colors and because
+ the characters themselves are larger on a 14" colored monitor than on 12" monochrome one.
+
+ The Color Box is warranted against defects in workmanship and parts for a period of 90 days from the date
+ of purchase. If dissatisfied for any reason, it may be returned within 15 days for a complete refund.
+ The price for the Color Box is $59.95 (USA). The color Box includes an audio cable which plugs into the
+ back of the B128 and connects to the audio input jack (RCA type) on the RGBI monitor. Most B128/RGBI
+ owners will already have all the other necessary cables. However, the four conductor audio/video cable
+ is available for $11.95 and the RGBI cable with a male DB9 connector on one end and a female on the other
+ is available for $12.95. Send check or money order to Lee Cross at the above address. (Include $1.50 for
+ postage and handling.) Allow 2 weeks for delivery. (4 weeks if paid by personal check.)
+
+++++

```

A HIGH-RESOLUTION BOARD is available FOR THE B128

The board allows bit-mapped graphics. The HR pictures can coexist with the normal text screen. The resolution is 1024 across by 512 down; to that area the B's screen is a window. Any size window for HR graphics can be created, and it can be moved independently of the text screen. The board includes 64K of RAM to support the bit graphics. Installation is simple: a six by five inch board goes inside the B, and one line needs to be cut. The board was designed in cooperation with the people who are building lmeg expansion, in order to be compatible with that project.

Software is in Basic at the present time. Machine code routines will be developed as an independent project, as soon as possible.

HI RES TECHNOLOGIES
 16 English Ivy Way
 Toronto Ontario M2H 3M4
 phone: (416) 497-6493
 The price is \$199 U.S.

THE BEST DEAL
The Best Quality!
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WHAT A DEAL! No kidding, we know from you, our members, and members of many other user's groups and commercial customers that the OPUS quality disks can not be surpassed by any other manufacturer. In the course of our duplication on the 8050 drives, which write 502K per side rather than the usual 170K for conventional Double Sided usage, our disk reject rate has been less than .1% — one part per thousand. Phenominal!

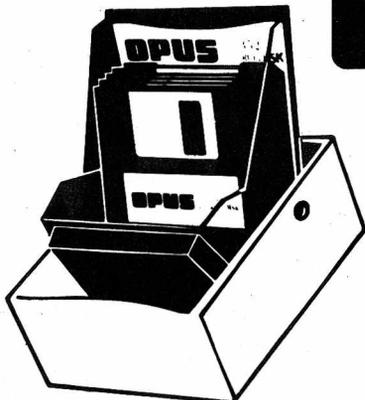
Most of the major brands I've tried have reject rates in the order of 3% to 5%!

* 100% Certified

- | | |
|---|--|
| <ul style="list-style-type: none"> * 100% Manufacturer & CBUG Warrantee * Proprietary high output oxide formula * Highly polished surface * Highest saturation figures * Special heavy duty binder | <ul style="list-style-type: none"> * Heavyweight jackets * 14,000 wear life * Antistatic liner * Lubricated liner * Hub rings |
|---|--|

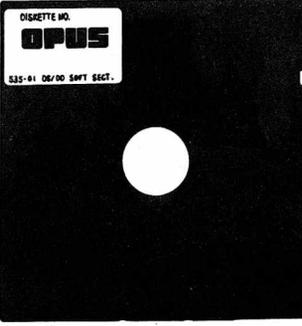
Why is OPUS so good? Opus is one of the very few "manufacturers" of disks which makes the entire product. Infact, OPUS is primarily a manufacturer of computer and military critical use instrumentation tape; they've taken the technology used in making those far more critical products and applied it to produce the finest disk in the business. But they are not just satisfied to make it right, they then check every single piece they manufacture — a necessity in the world of critical data applications. Opus is one of the largest disk manufacturers in the US, but generally caters to the ultra critical duplicator market, hence few individuals know the brand.

We stock the complete line of OPUS disks: SS and DS, Quad and IBM AT Disks; 3.5" 5.25" and 8"; retail packaged thru duplicator no label bulk packaged. Inquire for volume pricing.



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"NO BAD MEMORIES"



CBUG
THE CHICAGO B128
Users Group
4102 N. Odell
Norridge, Il. 60634 USA

* * * * *

KNIGHT'S COPY UTILITY

With the advent of programs to upgrade Superscript and Superbase, if you have not bought this most important utility, now is the time. Never ever do surgery on an only copy. Knight's copy utility will copy Superscript and Superbase easy as can be. All you need is an 8050 drive with DOS 2.7. To find out if your drive is DOS 2.5 or 2.7, type as follows upon first turning on your computer and drive: ' ?ds\$ RETURN '. The screen will then show drive and DOS type.

Running Knight's Copy Utility is very simple. Just load the program in the usual manner, remove the program disk and insert the original to be copied (must have a write protect tab on it), then insert a blank disk in drive 1: Ten minutes later you have a complete copy. The indicators on the drive flash at the end of the cycle if the copy is good. You can continue inserting blank disks as long as you want for additional copies!

Don't risk ruining your Superscript or Superbase disks. Order from CBUG, #12204 only \$20.00 ea.

B-1024 1 MEGABYTE MEMORY EXPANSION CIRCUIT BOARD

A HARDWARE ENHANCEMENT PRODUCT FOR THE LOW PROFILE B-128

* A fully assembled and tested memory expansion circuit board with double sided plated through holes and solder mask that plugs in internally onto pin fields P6, P7, and P9 of the low profile B-128. You can install in just 5 minutes at your site resulting in minimum down time!

* Implements banks 0 through 14 with 256K by 1, 150ns socketed dynamic RAM. The 6509 can not get to bank 15 DRAM because that is where the 6509's operating system and I/O reside.

* Includes pin fields that are electrical extentions of P7 and P9 on the main circuit board with an identical mechanical footprint of same. Any future I/O boards developed by Anderson Communications Engineering will be able to plug onto either the pin fields in a stock B-128 or a 1 MEG B-1024.

* Resistive termination is provided for the DRAM data bus. Address multiplexers for refresh, row, column, and co-processor addresses are provided on the expansion board. The PLA on the main board that generates RAS (row address select) and CAS (column address select) is removed and is implemented on the expansion board with "S" series TTL. Main board 64K by 1 DRAM is deselected with a dip plug in the PLA socket.

* A 28 pin socket is included for static RAM (provided) or ROM to implement \$0800-\$1FFF (6K) in bank 15 below the cartridge port. \$1000-\$1FFF is defined as a disk rom area on B-128 documentation and is not implemented on the main board. A moveable jumper is provided to deselect \$0800-\$0FFF (2K external buffer) when using a possible future co-processor as this memory area would also be included on the co-processor board.

* +5V current from the existing power supply increases from a nominal 2.52A in a B-128 to 3.13A in a B-1024. There is plenty of +5V current for future expansion on the provided pin fields. The power supply can provide 5.5A.

* The original configuration of a stock B-128 can be restored at any time by simply removing the B-1024 1 MEGABYTE MEMORY EXPANSION CIRCUIT BOARD and reinstalling the main board PLA. This is a non-destructive upgrade!

* A machine language DRAM memory test utility is provided on 8050 diskette for testing banks 0 through 14 with a walking 1, walking 0, and for address interference. Displays pass/fail information for each bank. If a failure is discovered a code is displayed indicating if memory was detected, which bits don't respond, or if address interference occurred!

* Includes documentation for installation and schematic diagram. Anderson Communications Engineering will also provide on going service for this product should it ever be in need of it.

* Anderson	B-1024 1 MEGABYTE MEMORY EXPANSION BOARD	\$349.00
Communications	US Funds, Iowa add 4%, Shipping/Handling	\$ 10.00
Engineering		
1528 34th St. SE.	24K RAM/ROM CARTRIDGE with Case for the B-Series:	
Cedar Rapids, Ia.	Assembled+Tested (Socketed RAM Memory ICs)	\$39.95
52403	Bare Circuit Board and Case	\$14.95
	US Funds, Iowa add 4%, Shipping/Handling	\$ 3.00

Pricing and Specifications subject to change without notice

14	"reader/writer.3"	prg	-puts out contents of CABS files to screen	9	"vir dir 8050"	prg	- great directory reader
1	"<---- d ---->"	prg	or disk or printer	8	"confirm 8050"	prg	-
22	"b128<-->amiga.2"	prg	-RS232 file transfers for 8-people fooling	8	"8050 errors/2"	prg	- error maker
2	"+b128<>am.2"	prg	with Amigas! (subject to change if Amiga's	21	"clone 22 & 23"	prg	- (all prgs: load, run)
1	"<---- g --->"	prg	protocols change).	1	"<---- j ---->"	prg	-----
4	"picdesign"	prg	-very optional prg - draw in prg mode.	125	"w.bug2/86"	seq	- article for Winter/Spring ESCAPE
7	"4023 scr dump"	prg	-Exact screen dump to 4023 printer - load,run,	1	"<---- k ---->"	prg	-
8	"p.dump ins"	prg	this gets loaded as further instructions.	27	"!--NOTICE--!!!"	seq	- CBUG standard notice
4	"p.cats"	prg	so do 4 cats	9	"install pre-ss+"	prg	- Goceliak's Pre Superscript installer
1	"<---- f ---->"	prg					

KERNAGHAN'S REVISED v3

CBUG #32

UPGRADE

11536

2 June 1986

NOTE: This disk is subject to the CBUG upgrade program. If you have a earlier version, affix the label from it to the upgrade order form and pay half price.

Following is a list of the improvements represented in Kernaghan's Revised CBUG #32 since the first release of Kernaghan's Utilities, CBUG #4

Basic crs cmpld & b15 are added for fast cross checking.	Dsk hdr/id chg replaces two separate programs.
Chg addrv2.gb, w/b15, is compiled for fast operation.	Performance 1.0 is an added disk/drive checker.
Conv c64-b128 has some additions.	Pgm finder.ssdcc instructions are in a Superscript seq file.
Conv petcbm-b128 has some additions.	Prog adds.gb, w/15, are added to find loading and ending addresses.
Dir 2 col ptr v2 is improved.	Prog.printout.v2 is improved.
Disk check 2.0 replaces the previous 'disk check'.	Typist replaces 'typewriter' and is now correctable.
Disk doctor.b runs without 8432 emulator.	Checkers80.gb, w/b15, is compiled for a fast acting game.
Disk logger v2 runs without the 8432 emulator.	Labyrinth.v2 is improved.
	TV satellites.v2 has a few added satellites.

A few typos in the 'instruction' file have been corrected.

My thanks to those who have contacted me about the programs on the original disk, and to Anthony Goceliak for modifying Disk Doctor and Disk Logger to run without the 8432 emulator, also for improving Labyrinth.

Warren Kernaghan

UTILITIES

'Basic crs cmpld' & 'b15' prints a list of variables used and lines using them, also line numbers called by other lines.
 'Change 8050' changes the device number from 8 to 9 through 15.
 'Chg addrv2.gb' & 'b15' modify the load address of a program.
 'Compactor' will compact a program for faster running and less space.
 'Compactor.fast' does the same, faster. Uses 8432 Pet emulator.
 'Conv c64-b128' & 'conv petcbm-b128' are charts of memory addresses.
 'Copy' copies files from drive 0 to drive 1.
 'Copy 8/9 chg add' copies from device 8 to 9, while changing address.
 'Copy all mult' formats a disk and copies all programs.
 'Copy alpha v2' can format, copy all or selected files, and alphabetize.
 'Copy-sort' copies all files from 0 to 1 with optional alpha sorting.
 'Data writer' reads code in memory, then outputs it for data statements.
 'Dir 2 col ptr v2' prints a 2-column directory.
 'Dir printout' is an elegant little directory printer.
 'Disassem pet sym' disassembles from memory, to screen or printer.
 'Disassembler p' is a Butterfield disassembler for screen/printer.
 'Disassembler.n' works with the files on disk, for screen/printer.
 'Disinterpreter' converts code in memory to BASIC on screen.
 'Disk check 2.0' tests disks in device 8, drive 0 or 1.
 'Disk commands' allows loading, scratching, renaming, or copying.
 'Disk doctor.b' displays a sector of a specified track, allowing changes.
 'Disk logger v2' provides a deluxe directory, with T/S and loading addresses.
 'Disk maintenance' offers backup, copy, directory, new, rename, scratch,.
 'Disk manager' has formatting, single program copying, renaming, erasing.
 'Disk revival' is an unscratcher, to restore scratched files.
 'Disk T/S' displays any track/sector on screen/printer.
 'Disk tidier' helps delete unwanted files, using the directory.
 'Disk unscratch' is an excellent file restorer for scratched files.
 'Diskview' not only views, it can change what it shows you.
 'Dsk hdr/id chg' will change disk header and/or id characters.
 'Hex dump dos' is a hex dump of disk drive processor or IEEE processor.
 'Hex dumper 80' is a hex dumper from disk.
 'Load address is' displays the load address of any program file.
 'MSD purge.b' selectively scratches program files on an MSD drive.
 'Peek print' displays the results of a keypress at any address location.
 'Performance 1.0' is a disk and drive checker.
 'Pgm data.disk & pgm search.disk locate programs in your disk library.

'Perp calendar' will display a calendar accurate from 1582 on.

EDUCATIONAL

'Body weight' calculates more than you can believe about your body.
 'Brain balance' helps determine which side of your brain is most used.
 'Life expectancy' will estimate your total span of years.
 'Long division' drills students in progressively difficult problems.
 'Yellow light' is a reaction time evaluation.

ENTERTAINMENT

'Bioprinter' furnishes screen or hardcopy for biorythm plots.
 'Biorythm 2.5' displays the plots on screen only.

GAMES

'Afo/balloon' is a graphics game wherein the player tries to hit the AFO.
 'Blackjack' is the old standby, with graphics.
 'Blackjack-jb' takes place at the Butterfield Social & Recreational Club.
 'Bomber' is a graphics game, with the player trying to down the bomber.
 'Checkers80.gb' & 'b15' A wide screen checker game.
 'Dominoes.c' is an easy to play graphics game.
 'Hamurabi' Try your hand at governing Sumeria for a 10 year term.
 'Kingdom' is an improved version similar to hamurabi.
 'Labyrinth.v2' lets you specify a 3-D labyrinth, then try to get through.
 'Lunar lander' is learning to balance velocity, fuel and time.
 'Super lander' is an improved version of lunar lander.

GRAPHICS

'75 names' can be a grid filled with one character, or 80 columns repeating a name, phrase, or sentence.
 'ASCII screen' pokes the screen RAM with any ASCII code typed in.
 'Banner' outputs large characters or signs on the printer.
 'Bar chart' is a demonstration of graphics display.
 'Bar graph subtrn' is a demo intended to be interfaced with a program.
 'Bar grf' is a horizontal bar graph presentation to screen/printer.
 'Bargraph' is a comprehensive vertical bar auto-scaling printer.

'Prog adds.gb' & 'b15' display both loading and ending program addresses.
 'Prog print' allows easy printing of programs.
 'Prog.printout.v2' prints program listings.
 'Seq list' 'cbm/asc' reads seq files such as those on this disk.
 'Seq lister' quickly displays a sequential file to screen.
 'Seq prg-bas prg' tokenizes listings of basic programs.
 'Seq read/print' is a sequential file reader and printer.
 'Typist' uses computer and printer as a correctable typewriter.
 'Uncompactor' stretches those compacted or regular programs.
 'WP prg printout' is a good program for printing most wordpro files.
 'WP read/print' is good for displaying wp files, but prints slowly.

'Big letter ads' displays, on screen, moving messages of up to 20 lines.
 'Big letters' displays a brief message in 3-D characters.
 'Big time' displays a large running digital clock.
 'Pedigree charts' prints blank pedigree charts for geneologists.
 'Squiggle' displays entertaining designs.

SOUND

'Yesterday' from the same song. Just 'run'.

TECHNICAL

'555 timer' helps design a timer circuit, for electronics design.
 'Anglo-metric' is a conversion program, easy to use.
 'Lo-pass filter' helps design a low-pass active filter circuit.
 'Metric conw' is similar to 'anglo-metric'. Take your pick.
 'Reg ps design' helps design a complete DC power supply.
 'TV satellites.v2' calculates satellite positions.

CALENDARS

'Calendar printer' outputs any month to screen or printer.
 'Calendars screen' displays any month from 1904-2099.
 'Day of week' outputs the day of the week from day, month, and year.
 'Memory calendar' is an appointment record. (Uses 'March').

MEDICAL ACCOUNTING v2.0

CBUG #32

UPGRADE

11540

I have made several changes to the "set.up" program and wish to submit the new version to you and CBUG. This version includes a label printing routine controlled by the F7. Changing the disks with Superbase, of course, requires readdressing the disk index with each new disk inserted; this is done with the F10 button. Thank you for allowing me to share both my program and your organization's excitement with the B128!

Robert F. Lackey RTR,RTN,CNMT,RDMS 6/22/86

This is an upgrade of CBUG #14, a sophisticated Medical accounting practice for multiple practice and multiple provider numbers to accomplish insurance and patient billing, patient records, and office accounting. This is a Superbase application.

1 "AGdBase	" 1a 2c	4	"hexecute"	seq	3	"hmemo"	seq	1	"TRAINING"	seq	1	"setup.p"	seq	
6 "start.p"		seq	5	"hhhelp"	seq	7	"hmenu"	seq	1	"PT"files	seq	5	"singleps.p"	seq
4 "henter"		seq	5	"hfile"	seq	3	"hcommands"	seq	10	"pt acct"	seq	6	"hcfaps.p"	seq
5 "hselect"		seq	7	"hformat"	seq	3	"himport"	seq	4	"pt info"	seq	5	"singleer.p"	seq
8 "hfind"		seq	4	"hbatch"	seq	3	"hexport"	seq	1	"hlist"	seq	6	"hcfaper.p"	seq
5 "houtput"		seq	5	"hsort"	seq	7	"hlabels"	seq	1	"olist"	seq	8	"hcfa"	seq
5 "hcalc"		seq	4	"hprog"	seq	2	"cust.rec"	seq	1	"klist"	seq	3	"batchlabel.p"	seq
5 "hreport"		seq	4	"hmaintain"	seq	2	"cust.inv"	seq	2	"pt dx"	seq	3	"batchlabels.p"	seq

1612 blocks free.

COOMB'S INVENTORY +

COMMERCIAL PRODUCT AVAILABLE THRU CBUG

12646

For those of you that are having trouble keeping up with inventory, I think I may have created just the program with you in mind. I owned a Laundromat back in 1975 when Radio Shack came out with it's TRS-80. I bought a 4K which only had 2 strings, A\$ and B\$. Wow! I soon expanded to 16K and began to teach myself the workings of a computer programmer. I have a friend that has a masters in computer programming who has helped me a lot.

We soon had printouts that would let me keep up with inventory however, I was limited, as all that Radio Shack had at that time (that I could afford), was a screen printer. Well times change. I bought my B-128 from Protecto, in January of 1984, along with Superbase and Superscript. Since my TRS-80 was stored on tape I really found out what I was missing with the CBM-8050 dual diskdrive. Double Wow!

The Inventory "Control Program" that I have created is fully menu driven and is capable of handling <2> full disks of files at a time, for those of you that have dual drives. The program also allows you to Browse thru, Edit or Change, Delete a file plus Change a name or add to a file list. At the end of each entry or change an Alpha sort occurs, maintaining each list alphabetically. For data entry, the program will let you handle inventory entering with a simple update mode, you only need to enter two fields, (ordered and on hand) - the program does the rest and sends you into a print menu which will print A)-a low inventory list B)-Order sheet C)-inventory results (with totals of ordered and used inventory) D)-next inventory sheet.

There are two other print modes that will printout individual accounts of any number of special custom lists including 3 different fields to add and total each result. The program prints by touching the letter <P>. Most of the other functions may be preformed by a single key stroke, plus while in the editing mode, you may change a field by typing in the change and pressing the <Return> or leave it as it is and pressing the <Return>, as you step thru the fields.

What I like best, about the Inventory Control Program, is that it's Fast and Simple. Should you have an interest or need, of this type of program, I have asked CBUG to market it thru the CBUG user's group.

by: Les Combs, PO Box 391, Greenfield,IN 46140

As an added bonus, Mr. Coombs has added to the Inventory Disk, an upgraded version of an advanced checkbook program previously released thru the CBUG library.

"Easy Checkbook" and is self explanatory and is also menu driven with 12 selection fuctions.

The program is very easy to use and accounts can be printed out in several different ways. Please also notice that while either in <Edit/Display> or <Insert/Delete> modes, you may switch back n' forth between the two, by pressing <M>, without going thru the main menu.

The program is likewise well documented and anticipates all possible wants plus, checkbook balances, automatically recalculate with each change made on any account.

The #12 option of the menu you will notice, scratches an existing file on disk with little effort as you actually exit the program, scratch the file and reenter the program after the file has been scratched.

1 "INVENTORY	" 06 2c	2	"txram obj"	prg	10	"test3"	seq	4	"ck sys.boot"	prg	4	"test1"	seq	
3 "sys.boot"		prg	2	"test1"	seq	10	"test4"	seq	2	"bank.ram"	prg	8	"Easy Checkbk"	seq
80 "INVENTORY"		prg	2	"test2"	seq	12	"nozm-cbug"	seq	71	"easy.checkbk"	prg	1834	blocks free.	

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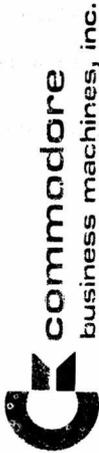
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HDS: 98/mdc

February 10, 1986

Chicago B128 Users Group-International
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CHICAGO B128 USERS GROUP-
INTERNATIONAL

COMMODORE BUSINESS MACHINES, INC.

BY: _____
Title: _____

BY: 
Title: Vice President

HDS: 97/mdc

ASSEMBLER DIRECTIVES:

as# set assembly address (other than "org")
bnk set object bank# & start new object block
byt store consecutive bytes in memory
equ set value of label
lib insert library file from disk
lst set listing device (may be file or any printer)
opt set asm options (#symbols/line, debug mode, listing enable)
org set start address of assembly
rel setup relocate list
res reserve bytes in ram like "*"= "*" in other assemblers

sav enable object file save after assembly
sym set symbol table output device (or file.)
txt store text with or without delimiters
wor store 16-bit words in memory in standard (lo/hi) order.

BIRQ PROGRAM FEATURES:

Screen dump can be done at user request
Display memory in hex or ascii
Function keys change address to be displayed
Screen display can scroll left or right
Display enable can be toggled while program runs



WHO SAID INTERFACING WAS AN ILLICIT ACT?

"Connecting the CSI IEEE Interface to a Radio Shack Daisy Wheel Printer"

With notes on sending Printer Escape Codes in Superscript

by: Mark E. Bishop

Can you imagine how I felt when my publisher requested that I begin to put the chapters of my book onto disk--IBM disk, that is. He was frustrated at the lilliputian print created by my 4023 printer. Even with a new ribbon it just still didn't come close in appearance to that of a daisy wheel printer. Needless to say, I finally saved one of those often sent advertisements for Radio Shack and took advantage of their discontinued DWP-220 printer; a bargain for under \$400.00. In addition to the attractive price-tag, I became energized after realizing that this printer also did such things as: underlining, bold printing, proportional spacing, multiple pitch settings, and many more wonderful things that I never experienced before with a printer. It was the beginning of a new and beautiful relationship, albeit some minor problems. Here's how I made it work for me.

Blowing the dust of my of my "CSI" IEEE interface package that I purchased from Protecto a month of Sundays ago, I proceeded to connect the interface to my computer. Since I'm an neophyte when it comes to anything that sounds computerish, I had my ten-year old niece read the instructions to me. This way I was sure I couldn't make too many mistakes. Yes, all the power was off and I plugged and pushed everything into place while making sure that my new additional printer was thoroughly grounded juxtaposed with my other peripherals. However, it was a different story when I loaded-up Superscript II and wanted to play "writer."

The first difficulty that I had to untangle was that the "instructions" written by CSI were not all that clear, at least not to me. My first step was to set correctly the four switches located on the interface cable. Correctly patterned for Superscript II in the following manner: 1--off, 2--on, 3--on, and 4--on. The instructions do explain the program setup when using the CSI interface with other basic programs. Furthermore, CSI tells the lucky owner of their cable that "some program changes are required to make the most effective use of your printer." I primarily concerned myself only with Superscript II, not with other programs or with Superbase.

The CSI cable also comes with an additional separate white wire connection that plugs into the B128's cassette port--it is needed only if your printer needs a power source for the interface (Alphacom, C.T.I., or Juki printers must connect this white wire to provide power to the interface). Radio Shack printers do not, I repeat do not, need any additional power source to the printer <<ALSO, Star NL-10, Daisywriter 2000, Centronics ported CBM 6400's (CITOH F10-40), and most other major professional Centronics parallel have the 5v supplied on the printer connector>>. Pin #18 provides +5 VDC to the Tandy Computer (less than 80 mA of current). The next step was to "fire it up," as my brother would often say in regard to his classic Volkswagen. With my printer "off," I then proceeded to load Superscript II into the computer; anxiously ready to see some daisy wheel creations. Only something happened that wasn't planned to happen.

After Superscript loaded into the computer, I then defaulted the text width to "80" columns and "d" for normal disk operation--the question then asked is "Printer type (0-4)?" Originally I typed number "4" in which, as we should all know by now, defaults to "other non-matrix printers." I only assumed that Radio Shack fell into that category--wrong! If you press 4 your type style will come out amazingly in Japanese, or perhaps it's Arabic? The correct choices in the starting session should be these:

```
80 columns
d for disk
1 for printer type (Epson or other Matrix)
FOLLOWING NEXT SCREEN
a for ascii
i for ieee
```

Your Radio Shack printer should now correctly print-out text as seen on your monitor. Capitals are now capitals and the foreign language course is no longer--it really works!

I was ready for action. The clock was striking midnight and I so wanted to print out something to show and impress my colleagues at school--I wanted to show them that even a Commodore can do underlining and bold print, but I soon realized that I couldn't get it to do any of the special commands like bold or underlining. I was dismayed--perhaps the computer world just might forever be held in the clutches of Apple "Image Writer" printers, etc., etc. I had to be the different guy at the office and own a "Commodore." I labored on.

The problem I figured out was when commanding Superscript to perform a certain printer function, my Radio Shack

printer would either reject the command and simply print the text or would print a strange symbol onto the paper. I soon realized that my DWP-220 printer only interpreted specific numbers according to what is known as ASCII (American Standard Code for Information Interchange--that has nothing to do with pesos and dollars). I was caught between two worlds: Commodore's printer codes and Radio Shack's control codes. What was I to do? Well I did it.

I quickly learned that it was necessary for me to send an escape code to my printer when, and only when, I decided to use "special" printer functions like those mentioned above, not for straight printing of text, that worked out fine. Below is a sample of my escape sequence which was placed in a command line (the Superscript reverse field asterisk '*'):

```
'*' 1=27:2=15:3=14:4=31:5=32:6=30:7=28
```

I added this command line underneath my regular margin settings; paper and page length commands. However, to successfully make your special print command function correctly, you must "escape" these numbers in a fashion that is compatible with the DWP-220. Below will be an example on how I would type (within the text not another command line) these codes into the text. Take special notice to the two letters 'EE' which follow my commands. These two letters are highlighted escape codes (these are 'ESC' shift 6, this is up arrow). Since I have two commands before my text ('1,4'), I must balance these with two additional escape figures. This holds true for the 'off' commands one must do after your text. All figures (numbers and letters) must be individually preceded with 'ESC.' As a result, all printer codes will be highlighted on you monitor--on output view, you will still see the numbers but not the effect of being highlighted. If these additional escape codes are not included with your printer commands then you will most certainly have some formatting problems when printing your document. See page 132 of your Superscript II Owner's Manual for a more complete explanation. Here's the example.

This type would result in a bold double-strike effect

In other words, the above line, in conjunction with the control codes for the DWP-220, would be interpreted as '1' equalling the DWP-220 manual code for the number 27--remember any Radio Shack printers recognize strictly the Ascii code as numbers. 27 in my R.S. manual is referred to as the escape code used in multiple-code sequences. The '4' represents the command for bold and the two letters, 'EE,' ('ESC' up arrow) balance the two control code numbers given. Again, if this compensation is not added to the text then you most certainly will have some formatting problems with Superscript if you should justify margins. I found no problems leaving these added escape codes out when not using justification. What will happen if additional escape codes ('EE') are not used will be an over extension of the right margin making justification for that sentence null and void. As a result of this possible dilemma, I found it wise to output to video to scrutinize your text and additional codes prior to outputting to print. Although I found some discrepancy from what my monitor said and what the actual print was, I still found it beneficial, and a good practice, to output to video just to take a second look.

Although the DWP-220 printer has internal dip switches, these switches can be safely let alone. They control the functions of baud rate; interface switch between Parallel or Serial; and self test switch. I found the self test switch to be a blessing considering I thought my difficulties lay inside the printer. Knowing that my printer was working correctly, I then armed myself with more motivation and continued until it all worked together nicely.

Radio Shack, from what I understand, still has some of these fine letter quality printers sitting around in their stores. Their company offers an outstanding warranty plus they stand behind discontinued products for, at least, five years with parts and expert repair service. Furthermore, the above procedure works the same for Radio Shack's DWP-510, a more elite printer model. Consequently, this procedure could suffice as well for any type of parallel printer interface. Again note: Makes sure your Radio Shack printer is thoroughly grounded in conjunction with your other peripherals. If you blow an internal fuse you then must have it taken in for repairs--the cost is \$50.00. Ouch!

On the whole of this project of interfacing, it was hell! It took hours upon hours of trial and error (more likely my errors in trial). Ironically, I did learn also how to print out a hard copy of Superscript II commands. Load Superscript II from basic and type: dload"ss2 ref card" You get three full pages of reference commands for your Superscript II. Leave the manual on the book shelf and paste-up your new quick reference command sheets. As Jackie Gleason would say, "How sweet it is!"

<<I've reworked the print commands on the print file version of this article to operate on the Daisywriter. Both this print file article and the original will be on the print file disk.>>



by: Neil Cumfer

SuperScript can indeed print graphic characters, including hearts, spades, diamonds, clubs, but only on the 4023 printer, not on the screen. A word of caution: this may not be worth the trouble, as the appearance of the text on the screen will be vastly different from what will be printed out.

There are at least two methods to print graphics. The first one is suitable when you want large areas of graphics/upper case characters. Lower case/upper case can also be used, but the two modes cannot be mixed on the same print line. The second method is suitable when you only want a small number of graphics, and it allows for graphics and lower case to coexist on the same line.

The first method is very easy. All you have to do is to select "1. Epson or Other matrix" from the start-up menu, instead of "0. CBM Matrix Printers." At the secondary menu which appears when you choose Epson, select options c (for cbm, not ASCII) and i (for IEEE).

When you choose CBM Matrix Printers, SuperScript will automatically supply a cursor-down to the printer at the start of each line, thus allowing only lower case/upper case to be printed. But when you choose Epson, the cursor-down is not inserted; thus the printer will operate in either graphics/upper case (its power-on default) or in lower case/upper

case, whichever mode it is in when SuperScript outputs text to the printer.

To change the print mode within SuperScript, use the secondary address command described on page 132 of the SuperScript manual. *sa8<return> will put the printer in graphics/upper case mode, while *sa7<return> will put it in lower case/upper case mode. Note that the secondary address command must be the last item on a line, like the right margin command, or on a line by itself, so that graphics cannot appear on the same line as lower case letters. Of course, a few graphics are always available--those that can be generated with the control key in conjunction with the non-alphabetic keys. Once a mode has been established, the printer will remain in that mode until the alternate secondary address command is encountered.

When the printer is in graphics/upper case, as it is when first turned on, all letters which are in lower case on the screen will be printed out in upper case, and all letters which are in upper case on the screen will print as the corresponding graphics on the keyboard. (But the graphics which normally print wrong, such as the right bracket, will still print wrong.) So it is best to begin with a secondary address and not leave things to chance, especially since SuperScript's normal operation conditions you to think the printer will start out in lower case.

The second method requires some advance preparation (once), and a different methods of loading SuperScript (each time). Insert the SuperScript disk in drive 0, and any other disk in drive 1. Load the basic program "ss2 maketables" into memory from the SuperScript disk with this command:

```
dload"ss2 maketables" <return>
```

List line 3030 with this command:

```
list 3030 <return>
```

It should appear as follows: 3030 data 0,0,0 . Change the screen to read

```
3030 data 17,0,0 (but read the last paragraph)
```

and push <return> while the cursor is somewhere on that line. (This last step will change the program in memory as well as on the screen.)

Then list line 3050 with this command:

```
list 3050 <return>
```

It should appear as follows; 3050 data 0,0 . Change the screen to read

```
3050 data 0,145
```

and again push <return> while the cursor is still on that line. Now, run the program in memory with this command:

```
run <return>
```

(type in the word "run"--do not use the <run> key!) What will happen is that the program will create a file on the disk you put in drive 1 earlier, named "ss2 tables". You might want to check the directory on drive 1 first to be sure you don't already have a file with that name there; if so it will be erased. This is a binary-type program file, not a BASIC program. The steps detailed above will only have to be done once, unless you subsequently erase the "ss2 tables" file.

Whenever you want to use the second method of generating graphics, you must have a disk in drive 1 with this "ss2 tables" program on it, and the SuperScript disk in drive 0 as usual. But do not use the usual method of loading SuperScript! (Do not press SHIFT/RUN.) Enter this command:

```
dload"ss2" <return>
```

When the "ready" message appears and the cursor returns, enter this command:

```
run <return>
```

(The BASIC program "ss2" already exists on the SuperScript disk.) When the start-up menu appears, choose "0. CBM Matrix Printers" as usual. Now refer to the SuperScript manual, page 129. The sequences ESC ; and ESC > which are listed as not applicable in the CBM Matrix column, are now available for you to use at any time. Recall that SuperScript will supply a cursor-down at the beginning of each line. Any time that you want graphics to appear on a printed line, just key in ESC > (using the <escape> key) and all subsequent characters on that same line will be printed out in graphics/upper case mode. That is, characters which are lower case on the screen will be upper case on the printer; and characters which are upper case on the screen will be graphics on the printer. To switch back to lower case again on the same line, just key in ESC ; which will show up on the screen as a graphic (ESC > will also show as a graphic). You can switch back and forth on the same line as many times as you like, but remember that each new line will start out in lower case.

A word of caution: Some of the control keys will print graphics on the screen, but these will not be output on the printer. Instead, they will activate special printer functions such as enhanced printing (double width). This is true for both methods of generating graphics. Be sure to experiment with the graphics you want to use before trying to create an important document with it. A report is being prepared for the fall issue outlining further changes in the "ss2 maketables" program that should eliminate this problem.

A further enhancement to the program used to set up the second method will allow access to the ESC ' function. If line 3030 is changed to read

instead of 3030 data 17,0,0 then the <escape> <apostrophe> sequence can be used to send a carriage return without a line feed to the printer. This capability could be useful in overprinting graphics on the same line, or in underlining. It is necessary to change the right margin at the end of the preceding line (double it) unless the line containing the text to be underlined or overprinted is very short, because a line-feed will be forced when the count of characters before and after the escape sequence combined, reaches the right margin number (usually 80). Then reset the right margin.

<<The second section of this fine work by Mr. Cumfer will of course appear in the second half of the Summer CBUG ESCAPE. Be sure your membership paid up to date!!>>



TELETERM80 BEGINNER'S MANUAL

by: Neil Cumfer

For a long time after I first got hold of Teleterm80, it sat in the box unused due to the skimpy instructions provided. Yet eventually I needed to use Xmodem. This led me to explore the program in action, learning as much about it as I could. This article was written to share the information thus gleaned with the CBUG membership. It is specifically meant for the beginner. You will need to print out this file and refer to it when you load Teleterm80 on your computer.

Have you installed Teleterm80 in your computer yet? There are two ways to do this.

(1) Put the disk in drive 0, hold down the <shift> key, and press the <run/stop> key at the same time. This method will work only with the special Teleterm80 disk. To use it with another disk, the first file on the disk must be "teleterm80" and another file, "o.teleterm.80", must also be on the same disk.

(2) This method will always work. Put the disk in drive 0 and key in these two lines:

```
dload"teleterm80"<return>
run<return>
```

After a few seconds, the Main Menu will appear on your screen. There are 5 options to choose from, labeled A-E. Option A is lit up when you begin. If you press <return> the program will turn your b-128 into a terminal instantly. But you're not ready to be a terminal yet!

So press the key. Watch option B light up on your screen. (You could have used <cursor-down> instead of). Before going into terminal mode, you need to examine the modem settings. That's what the Modem Settings menu is for. Now that Option B is lit, just press <return> and a new menu will appear on your screen.

The Modem Settings menu gives you 8 choices, labeled A-H. The default options shown here have been pre-selected for you, but you may want to change some of them. You don't have to know what any of the words mean--just be sure that the computer you want to talk to is using the same options. CompuServe expects all the data you send it to be coded as 7-bit words with even parity and 1 stop bit.

Option C is used to adjust the word length. Press the <c> key and you will see the option light up. Again, you could have used the <cursor-down> key here. Now press <return>. The word length will change to 5 bits. Press <return> again and the length will be set to 6. Press <return> yet again and at last the correct setting for CompuServe, 7, will appear.

Now it's time to change the parity. Press the <d> key, or <cursor-down>. When the parity option lights up, press <return> as many times as needed to call up "even" to the screen. If you go too far, just keep pressing <return> and the options will start over after the last one is displayed.

All of the options shown can be changed in this way, by toggling them with the return key until the appropriate settings are shown on the screen. When accessing CompuServe, make the two adjustments described above. All of the default settings are correct for Delphi, so this step can be omitted if you are going to be calling them first, and you are using a 300 baud modem.

When the options you want are on the screen, press <h> and "Return to Main Menu" will light up. Pressing <return> here will lock in the settings and bring back the main menu to the screen.

Wait a minute! Don't go into terminal mode just yet. Teleterm80 does not have a buffer to store the data CompuServe sends. If you want a copy of your communications, you have to prepare the disk drive or the printer in advance. That's what option C is for. So press <c> and Upload/Download will light up. Then press <return>.

Notice that the options on the Downloading menu are not lettered, unlike the other menus. You must use the cursor keys (up and down) to light up the option you want to use. If you want a printout of your on-line session, press <return> while the word "printer" is lit. Naturally your printer should be turned on before you do this. An asterisk will appear before the word *printer as long as this option is active. If the printer option is lit and it has the asterisk, then pressing <return> will write the last block of data to the printer and close the file. Don't forget to do this after you hang up, if you were using the printer.

You may want to store the data you will receive on a disk file instead of printing out a copy. Use the cursor key to light up the "disk drive" option. Be sure your disk drive is turned on, and you have a formatted, unprotected disk in one of the drives. Then press <return>. Notice the message that appears at the bottom of the screen. Teleterm80 is asking you for the name you want your file to have on the disk. Type 0:filename if the disk is in drive 0, or 1:filename if it is in drive 1. (Do not use the word "filename" but instead substitute the name you want the file to have.) When you press <return> the disk file will be opened, and the filename will disappear from the screen. This is the signal for you to continue. Notice that an asterisk now appears before the *disk drive option. This means that the file is open, and everything CompuServe sends to you will be stored there. Later, after hanging up, you should return to this menu and close the file by using the cursor to light up the "*disk drive" option and pressing <return>. To get out of the Downloading Menu, hit <cursor-down> until the "Return to Main Menu" message is lit up, then press <return>.

Choosing option D on the main menu will cause the directories of both disks to be displayed on the screen. If it scrolls to fast to read, just tap any key to freeze it. When you get to the end of the directories, tapping any key will return you to the main menu. Sometimes it is a good idea to check the directory before going to the Downloading menu. It is essential for every file on a disk to have a different name. If you want to store your on-line messages on your disk and you enter a filename in the Downloading menu which duplicates a name already on your disk, either your new messages will not be stored or your old file will be erased.

The final option, Exit, is used when you are completely finished using Teleterm80. Always remember and never forget that if you were storing data on the disk or typing it out on the printer, the final blocks will be lost unless

you close the files. So after logging off and hanging up, don't choose this option until you have checked the Downloading Menu and closed any files marked with an asterisk. Then press <e> to light up Exit and <return> to leave the program and get a "ready" prompt.

Now you can go to terminal mode. When the Main Menu is on the screen and option A is lit, just press return. Notice the status line at the bottom of the screen. The modem settings shown here should be the ones you chose earlier. You can change these at any time without going back to the modem setting menu. The first option shown, baud, is changed by pressing the F2 key. Keep on pressing it until the setting you want is shown. The second option is changed by pressing the F3 key, etc. The F1 key has a special use. It does not affect any of the options shown.

When you press F1 while in terminal mode, the Main Menu is returned to the screen, allowing you to change the modem settings, open or close a print or disk file, read the directory, or exit to BASIC.

When you're in terminal mode and try to type, the characters are not sent to the screen but to the modem. So you won't see what you have typed if you haven't dialed up another computer. CompuServe will echo back everything it receives through your modem, so it will appear on your screen when you're on-line. Each letter would appear twice if the program showed you what you typed, and CompuServe showed you what it received as well.

Once you get into terminal mode, and the modem settings are correct, and you have opened a file to store the data you will receive on-line, then you are ready to dial up CompuServe and start telecommunicating. Follow the instructions that came with your modem and the logon procedures issued by CompuServe. You will hear the disk drive turn on and off from time to time if you chose to store the data on a disk file, whenever the B128's input buffer fills up. This indicates the program is working properly.

Advanced features of Teleterm80, such as uploading and downloading with the Xmodem option, are covered in a separate article. For now, if you have read this far, you know more than enough to link up with another computer successfully. See you on-line!

<<Mr. Cumfer's advanced Teleterm article will appear in the second half of the Summer ESCAPE. Be sure you're registration and subscription fee are current!>>



SUPERSCRIP & SUPERBASE ACCESS

By: Jack Casey

Many software firms protect their disks against copying by normal copying means and virtually all disallow program access by disabling the keyboard except for special commands unique to their programs. In order to improve our software, we need to gain access to program code. Once access has been achieved, we can then either change code to correct errors and deficiencies or add new code to increase program capability. Access also provides us with the opportunity to create unprotected program disks in many convenient configurations.

Before we can gain access to program code, however, we must first control the keyboard. Most attempts at keyboard control, such as depressing the reset button, result in a machine crash which forces the operator to turn his computer off and then back on again thereby erasing the loaded program.

The purpose of the Superscript and Superbase Access disk is to provide owners of these programs not only a method of gaining access to code but to generate unprotected program disks with minimum effort on the part of the operator. The program contains instructions for all operator inputs which consist primarily of inserting disks into and removing disks from the drives. While making your new program disk, the Access program keeps you informed at all times as to the operation in progress.

A new program disk will be created for any combination of Superbase and/or Superscript (including Superspell) with or without Liz Deal's Superscript fix (Pre-superscript). When completed, the new program disk will reside in drive #1 and will load either program into your computer via a one-line transfer program on its associated data disk in drive #0. This will be accomplished by a simple SHIFT/RUN keystroke. No further disk manipulation will be necessary to use your Superscript since the dictionary normally resides in drive #1 with the data disk in drive #0. Similarly, Superbase normally has the HELP messages in drive #1 with the data disk in drive #0. However, all files on your new program disk will be individually copyable which allows you to tailor a disk to any configuration you desire. For instance, you may wish to have only one disk for both program and data to load from either drive. You could format Superscript + data for drive #0 and Superbase + data for drive #1. A memo created on Superbase could be loaded as a file into Superscript and vice versa without disturbing either disk. Many new configurations become possible.

Operational notes are included at the end of the program which makes a separate sheet of instructions unnecessary. They discuss how to access code in addition to general operating instructions. The notes may also be printed out in the form of a program listing or as a Superscript file.

Mr. Casey is a Senior Electrical Engineer with Rockwell International, Satellite Systems Division, specializing in space simulation and test instrumentation. He holds an advanced class amateur radio license as KD6KO.

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REVIEW OF ANDERSON'S EXPANSION BOARD FOR B MACHINES

by: C. A. McCarthy

Bank 15 cartridge board for B machines (24K, ram and/or rom), available from:	
Gary L. Anderson	Price (add \$2 shipping per order)
Anderson Communications Engineering	Bare board & case \$14.95
1528 34th St. SE	All parts kit 34.95
Cedar Rapids, IA 52403	Assembled & tested 39.95

In summary, this is a potentially useful product; it is well designed and of good quality, and the price is quite reasonable.

This board allows you to add up to three 8K memory chips, ram or rom as you wish, to bank 15 of your B. It is always good to have more ram, especially in bank 15, for bank 15 is the natural place for machine language programs to live. Machine language programs in other banks require intricate and time consuming transfer sequences to use the rom routines and to perform I/O; the 60 Hz. interrupt service that reads the keyboard also needs to go to bank 15 (unless you are VERY careful about how you service interrupts). Rom too is best placed in bank 15, because enhancements to the initialization sequence can be made automatic upon power-up since these memory locations are checked for startup code first. Thus the memory area serviced by this board is the right place to put enhancements to the operating system, extensions to Basic, decent monitors (Scott's, for example), or even whole stand-alone programs.

The circuit board itself is of high quality and the artwork is well done. The only (minor) lack is that the board is not solder masked, but on so small a board as this one is, it's hard to justify the added cost. In any case, I'd recommend for most people that they get the assembled board in which case the lack of a solder mask is irrelevant. (I was a cheapskate, bought only the bare board, and spent more in auto expenses chasing down the couple of parts I didn't have in stock than buying the assembled board would have come to. My excuse is that I didn't know at all what the board was like when I ordered it, and I knew that if I were going to have to rework the design, it would be easier on the bare board than on an assembled one.)

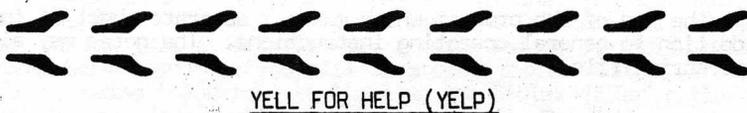
The circuit design, while fairly simple, shows that Mr. Anderson knows what he's doing. Good design requires that roms be disabled when you try to write to them. Otherwise, both the processor and the rom force their data onto the bus at the same time; this distresses the output transistors on the chips, and leads to their eventual failure. According to the schematics in the Protecto B128 book (I haven't actually checked out that the circuit board in my own B agrees with the schematics), Commodore's engineers overlooked this point with the Basic and Kernel roms. As a consequence, you should NOT poke to the B built-in roms. Never. Anderson did not fall into this trap; roms on his board are disabled on a write.

When I constructed this expansion board, I thought that it would be nice to add a 3-position dip switch for external selection of rom or ram, the rom position also effecting a write protect of ram. That proved moderately easy to do. But I haven't used it yet, so its absence from the original board seems not so important.

If there is any chance at all that you might someday want a memory expansion board such as this, even if the purpose isn't obvious at the moment, I'd urge that you get one now. Not only will you have it when you do need it, but you will be supporting someone who has earned and deserves the support of the B community.

For anyone who is interested in being VERY careful about servicing interrupts from some other bank than bank 15, here is the first pitfall; I suspect, but I'm not sure, that there are no more than this. After saving registers and discriminating between BRK and hardware interrupt, you read the Active Interrupt Register at DE07 to determine the source of the interrupt (this is done with a LDA absolute at FBED in my B128). You can do this perfectly well with an indirect load from any bank. But when you finish the interrupt service, the 6525 interface chip must be serviced with a write to DE07 to clear the interrupt (see pages 304-308 of Jim Butterfield's book on machine language for Commodore machines, especially the box at the bottom of page 308); there must be no other reads or writes to this address DE07 ever (this concluding write is done with a STA absolute at FC9F). Now look at the MOS programming manual, page 89 where (),Y addressing is discussed with example 6.12 and the paragraph following: STA (),Y reads data (and ignores it) on the cycle just before performing the store. Thus, if you set up an indirect address pointing to DE07, set .Y=0, indirect bank=F, and STA (),Y, the 6525 will get an extra read of DE07 which will confuse it. A solution is to set the indirect address to point to DDO8, and .Y=FF; in this case the unwanted load will be from DDO7 (before the carry from 08+FF has propagated to increment the DD to DE), and the 6525 will be untroubled. What side effect does the read of DDO7 have? Because of incomplete address decoding, the read is from DDO3 of the 6551 ACIA which is the ACIA control register, and the extra reads of this register appear to be harmless.

Reviewer: Charles A. McCarthy/ 1359 W. Idaho Ave./ St. Paul MN 55108



Coordinator: Fred Petersen
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Period covered: Startup thru May 1986.

Contributors for period: Michael Steinitz (5/12/86); Dan Gayman (5/14/86); Marilyn Gardner (5/16/86)

A. Questions raised:

1. The command "dclear". (a)When is it essential and (b)what does it do that is not done elsewhere?

Submitter: Michael Steinitz

Referrals:Liz Deal who has reportedly used this command in her Keytrix Loader program.

2. What is serial format of interface to disk, not in the disk? [the data and command format as defined in CBM IEEE bus (the one that connects disk, printer and other peripherals, as in C64 and C128 systems)- needed as part of CP/M project for B128]

Submitter: Marilyn Gardner

Referral:Marv Pinnick who is expert in interfacing and close geographically to Submitter.

3. Is there a service to do typesetting using Superscript II or file sent by modem using the B128? [this is available with IBM equipment] <<Yes, simply send files using modem and appropriate RS232 printer definition within Superscript, or send file(s) using terminal programs in the conventional manner. But you have to learn to imbed your typesetter's command structure in your text>>

Submitter: Marilyn Gardner

Referral:Roy Sherman who is expert in Superscript and close geographically to Submitter.

B. Questions raised and answered:

1. Type of 1200 baud modem for B128. Suggested Radio Shack. <<Best current deal is Avatex 1200, but most any RS232 modem will work>>

2. Problem with Response/Control keys on modem connection to Delphi. Problem is not easy to cure and is apparently universal from time to time. <<Usually due to network overload and very slow response times.>>

Note: Both of above were supplied by Dan Gayman who also said he had a call on Superscript and the "new version of same", but gave no further info.

c. Miscellaneous:

Michael Steinitz mentioned that in view of his lab instrumentation work, particularly with IEEE-488 devices, he could be considered 'expert' in this category. Records have been updated to show "L" after his name.

Mr. Steinitz also wonders if Commodore might be persuaded to re-introduce the B128 for the scientific market. He has seen GPIB programs on both Apple and IBM computers with GPIB interface cards use 6 or 7 lines of Basic to do what the B128 performs with one Input# statement. <<Very very doubtful CBM will ever re-introduce the B128. There are still a few units left, grab them while you can>>

<< Sorry Fred for the jump ins! Though it easier to answer at the point of question. Remember, the double brackets are Norm's id when butting into someone else's article. >>

<< The updated Yell for Help listing-will be in the second half of the Summer ESCAPE. Many thanks to Fred Peterson for taking on the job of Chief YELPER >>



HOW TO SPEED UP YOUR WORD PROCESSING

Many of us use our B's for serious word processing on a daily basis. However, some people don't realise that there are some ways to speed up your work. The following suggestions can help you tremendously:

1. Save a format file- instead of typing in your margins, justification, line feeds, and so forth, type out what you generally use and save it. To start work just load these lines of data and get on with your work.

example save the following under "format+" or just "f+":
(rvs)lm5:rm80:ju1:pl66:tl55:lf1(return)
(rvs)ft7:,page (esc)#,(return)

by saving and just loading this instead of typing
you save over 40 keystrokes!

2. Saving your tab settings- By typing a + sign after the file name you save all your tab settings too. So designate your tabs and save your format. To save time I also abreviate my format file with just "f+"

3. Save special commands If you use indented paragraphs in the body of your material you can save your extra margin commands to both set up and restore your format. For example, have a file "f1" with indented margins like lm25:rm60 and a file "f2" that restore back to your lm5:rm80. You can insert what you load without destroying the material that comes after it by turning the insert on first.

4. disk drive speed up- Joe Rotello wrote a super little speed up program for your 8050 drives. It bypasses some of the unnecessary dos commands and thereby speeds up access time. If you are manuvering files it is essential (thanks Joe). The program is as follows:

100 open 15,8,15

200 print#15,"m-w"chr\$(0)chr\$(16)chr\$(3)chr\$(6)chr\$(4)chr\$(250)
300 dclose

<<Test Joe's program extensively on your drive before running for real. On some of my MPI drives, the shorter rollup can cause index mis-matches on lengthy processing runs in Superbase and CABS/Info Designs accounting suite. If some of these disk operations are writes, there could be permanent damage to your data file. I suspect that this program is best used only on the earlier version of the Micropolis drives -- the ones that did NOT have the swinging doors as with the rest of the drives.>>

I have added these three program lines to Liz's pre-superscript so I boot them both at the same time.

5. Pre-booting and disk loading- Along with Superscript, you have your text or work disk. Save all of your special formats on your text disk, along with the revised speed up and pre-superscript (I save this combined program under the file name "ss"). There are several versions of Liz's program out there. Most prompt you to hit a key to continue. In combining the programs I also removed these prompts so that when I run the program it automatically loads superscript. Next, place your work disk in drive 1 and superscript in drive 0. Use the load command for drive 1 which is load"1:ss",8 and type in run. It will load the speed up, pre-superscript, and be ready with your work disk in drive 1. I leave my work disk in drive 1 so that I use both drives about equally. To file to drive 1 you must hit (shift)F3 then 1:your file name.

These tips will help you improve your word processing on your Baby B. If you have more tips in this area please let me know for future articles.

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by: Gary L. Anderson; 1528 34th St. SE.; Cedar Rapids, Ia. 52403

TODAY

POWER UP What happens when you flip the power switch on a 1 meg B? The first noticeable difference is the extra time required for the BASIC operating system prompt to appear. In a stock B-128 the monitor warm up time is a little longer than the time required for the operating system to test banks 1 and 2 consequently the prompt appears immediately upon warmup. In a B-256 one can begin to see the effects of more memory as usually the monitor has warmed up before the prompt has appeared and a bare cursor is displayed before banks 1 through 4 have been tested. In a B-1024 it takes approximately 28 seconds to test banks 1 through 14. It turns out that no power up test is made by the operating system for bank 0. One can easily find out which bank is the top bank by a "?PEEK(855)" or "?PEEK(861)".

MEMORY TEST After discovering the neglect to test for bank 0 I looked at how extensive a test was done on banks 1 through 14 by the operating system. The routine is a write then read \$55 and \$AA test that sets top of memory pointers accordingly when either bank F is reached or a location that doesn't compare is discovered. With the task of providing a quality memory expansion board (see ad elsewhere in this issue) for the group I decided that a more extensive test was needed for this added memory. I have written a program and am including with the expansion board a machine language DRAM test utility on 8050 diskette that includes testing bank 0, does a more extensive test on each byte by walking a logic 1 and logic 0 through every byte of every bank, tests for address interference, and displays pass/fail information for each bank on the screen. If a failure is discovered a code is displayed indicating if memory was detected, which data bits do not respond, or if address interference occurred. I define address interference as the altering of a memory location by another location's address.

APPLICATIONS The 8432 Emulator makes use of the expanded memory with slight modification to the basic loader, the first program on the disk. Load it in and list lines 120 and 130. Place a REM in these lines so as to appear as follows:

```
120 FORX=0TON:REMIFFRE(X)=0THEN122  
130 FORX=0TON:REMIFFRE(X)=0THEN140
```

The FRE(X) statement has been effectively removed. The FRE(X) statement will only respond with proper numbers for banks 1 and 2 as designed in the B-128 operating system ROMs. Some have stated that the 8432 Emulator works with up to bank 12 initialized and others have reported all 15 banks (0-14) operational so I don't know if it is software dependent or not. Using different programs with the emulator is quite a site to behold. Only one program is actually running at a time. You can change banks anytime during execution and it will perfectly pick up where it left off in the bank of your choice. Those of you from the Commodore PET era may have heard of the PETSPEED compiler. A compiled program from the PET will run on a B Series machine using the 8432 Emulator. PETSPEED itself will not run with the 8432 emulator on a B.

Superscript II allows the use of banks 2 through 9 for user text with the ESC J command, one document per bank. One can jump from bank to bank to work on different documents during a session. You may find it helpful to load the quick reference manual into a spare bank for instant reference. Page 84 of the Superscript II manual has an error, one can not use banks 10-15 as ESC J will only accept a single digit numeric bank designator. Bank 15 could not be used anyway as this bank is for the 6509's operating system and I/O, hence no DRAM is accessible by the 6509.

Calc Result automatically makes use of the extra memory and increases the number of input values from 4,080 in a B-128 to 28,560 in a B-1024! That is correct, no manual bank switching when using this jumbo spreadsheet! This maximum number was probably chosen as the largest file that would fit on an 8050 diskette.

I can't make any comments on the other commercial programs available for the B-128 as I don't have them. However from previous issues Word Result will run integrated with Calc Result in a B-1024.

TOMORROW

RAM DISK UTILITY I have been authorized to inform the group that by the time you read this a ram disk utility should be under development by one of our well known software designers. What is a ram disk utility? A ram disk utility is a program that sets aside a portion of ram memory for use as a "software disk drive". The advantage of this technique is speed. With 983K bytes (65536*15) of dram accessible to the 6509 CPU in the B-MEG one could transfer a complete 8050 diskette, 533K bytes, or possibly a significant number of files from an SFD-1001 into the ram disk then access the ram disk instead of the hardware disk drive. With the 6509 CPU going direct to dram for its information instead of through the slower IEEE-488 interface the speed of program/data transfers would be significantly increased and reduce the wear and tear on your hardware disk drive. After a work session with the ram disk is complete a single backup or copying of necessary files would be required from the ram disk to the hardware disk drive as information in dram memory is lost when power is removed. A complete disk from an SFD drive could not be loaded due to its large storage capability but possibly loading in one side at a time could be feasible which would also aid in making backups with the single drive SFD-1001.

SPECIAL CHALLENGES A ram disk utility can be made to work from within the BASIC operating system but what about Superscript II, Super Base, and other commercial machine language programs that take complete control of the B and have nothing to do with BASIC? Rather than modifying individual commercial programs and have to deal with the copyright situation it would be better to modify the operating system software in the B's ROMs to handle these special cases. I am presently working on developing an alternate operating system circuit board that would let you transfer the data in the three ROMs which contain the BIOS (Basic Input Output System) and Kernal to static RAM. Modifications can be brought in from diskette to modify the data in RAM and execution can then be transferred to RAM. Another option that might happen is for the modifications to reside at the cartridge port in ROM and the new operating system could then auto boot from power up. One could have different cartridges each with unique operating system characteristics such that changing the way your B thinks could be as easy as swapping a cartridge!

THE FUTURE

The options are considerable. The following is a list to ponder. 1. A modem terminal communications program that dumps to ram disk. At the end of a session one could transfer to 8050, SFD, printer, etc. 2. A compaction technique to bring in a complete SFD-1001 diskette into ram disk for easier backups. 3. Using different banks for different high level languages like Pascal, Comal, etc. 4. The B Master as described in the last issue. The list goes on and on only limited by your imagination.

Seeing these ideas become reality doesn't happen by accident! It takes a lot of work and hours to make something useful. We have an excellent means in this club to coordinate our efforts. Get your projects registered and lets go for it! Back to the barn Big Blue..... Clamor for cover you compatibles..... Here comes the 1 MEGABYTE B!

EXTRA MEMORY BANK HINTS

By: Chris Burgbacher

If you have a B-128 that has had memory banks 3 and 4 added, you may not have found a good use for them yet. Be assured that your computer knows they are there. On power-up, the computer tests to see how much memory is available. That is why it takes a little longer for the machine to get ready to operate than it did when it was new. Now, the ROM based programming may not use the banks to split up variables like the B-256 does, but, it will spill over large amounts of programming or files into the new banks and you can make use of them yourself.

The fact that the machine leaves banks 3 and 4 alone most of the time can be used to your advantage. Superscript recognizes and will call them. I have had occasion to be writing about a basic program when I decided I needed to look at the program to verify something. What to do? I saved my partial file, returned to Basic, loaded the Basic program, checked it out, re-loaded Superscript, re-loaded the partial file and went from there. Phew! I have learned to write such files in bank 4. If I need to return to Basic, I just return, check the program and re-load Superscript. When I call bank 4, using ESCape "j", there sits my document, waiting for me. <<An interesting feature indeed first reported, but not published, by Anthony Liversidge. The Superscript II exit sequence only blanks banks 1 and 2. Any text in 3 and 4 is preserved until otherwise altered in B128's. Anyone know about factory B256's?>>

Being able to have 3 documents on board at any one time (bank 1 cannot be written into) can be very handy if you need to refer to others while writing one. Also, each bank can hold up to 714 lines of text. Each bank is individually formatted so that one bank could be set at 80 columns, another at 120 and another at 132. <<Multiple printer types and disk device numbers may also be specified!>>

I used bank 4 as a 64K text buffer in a terminal program. When turned on, it simply pokes everything received to bank 4. Later, the bank is peeked to create a disk file or to print hard copy.

Given a little thought, you may find many such uses for a couple of 64K banks the computer ignores unless it has to hold a massive file.



THE B128 VIDEO OUTPUT

by: Lee A. Cross

<<Note: this is a technical article>>

Anyone who has avidly studied the back of the B128 Programmer's Reference Guide, distributed by Protecto Enterprises, will note that the B128 has a strange combination of output signals coming from its video output connector.

These signals are labeled VIDEO, KEY, HORIZONTAL, and VERTICAL. It would appear that Commodore intended at one time to manufacture a special monitor for the B128 which would have made use of all or most of these signals. Whether such a monitor ever existed or not is unknown to this author, but we have been able to make good use of the "extra" signals. <<The high-boy versions of the B128/256 may make use of those outputs, though the mother board is very different as to layout, and a different character generator ROM is employed for more fully formed characters. The outputs appear to be internally alterable for use with TTL type input monitors as well.>>

For those not familiar with video signals, I will explain how a monitor operates. A signal to a monochrome monitor must contain three types of information: (1) a vertical sync signal that tells the monitor when to start moving the electron beam downwards, (2) a horizontal sync signal that tells the monitor when to begin to sweep the electron beam sideways, and (3) the intensity information which tells the monitor how intense the electron beam should be (and therefore how bright the spot on the screen should be). In an ordinary monochrome monitor or in a television receiver all three of these kinds of information are carried on a single signal line. This is called a composite video signal and is the type almost always used with 40-column displays. The composite video signal is separated into its three components by the monitor. This can be done because the three types of signals differ greatly in frequency and in direction. The vertical sync occurs at a very low rate - about 60 times per second and is a positive-going signal, the horizontal sync occurs about 15,750 times per second and is a negative-going signal, and finally the video signal is very fast - pulses can occur in excess of 10 million per second and, like the vertical sync, are positive-going but of smaller amplitude. The miracle of the monitor is that it can separate all this out and can produce a display from it.

The VIDEO signal from the B128 is a standard composite video signal. It will drive a high-resolution monochrome monitor which must separate out the three signals mentioned previously. The interesting signals are the KEY (K), HORIZONTAL (H), and VERTICAL (V) signals. For some reason, Commodore chose to output the three signals mentioned above separately, as well as the composite video signal. This makes fooling with the video signals much easier since it is no longer necessary to have a circuit which can separate them. (In fact, they start out being separate - the B128 has circuitry in it which combines them to produce the composite video signal.

The H and V signals are just what one would expect them to be - they are the horizontal and vertical sync signals, albeit in an unusual form. The K signal is a purely video signal, without any sync. The H, V, and K signals are all negative-going. That is, the output is high (about +5 VDC) until something is supposed to happen. In the case of the H and V, it is when the respective sweeps of the electron beam are to occur. In the case of the K signal, it is when a dot which is a part of a character is to be written upon the screen. In a region of the screen which is blank, the K signal is always high, when a dot is to be written, the K signal momentarily goes low.

I have a C128 system with a 1902 RGBI monitor and was quite impressed with the clarity of the 80-column display. From the form of the B128's K signal, it is obvious that it can be used to control a color monitor: if K is low, a "character" color should be passed to the monitor, if K is high then a "background" signal should be passed to the monitor. It is easy to figure out how to do this if the slightly more complex signals that a color monitor requires are understood. A color monitor requires the same horizontal and vertical sync signals that a monochrome monitor does, but instead of a single video intensity signal, a color monitor requires four: RED (R), GREEN (G), BLUE (B), and INTENSITY (I). The monitor can produce a total of 16 different colors or tints when these signals are on or off. For instance, if all of them are on, then white is the result, if only "I" is on, one shade of gray is produced. If "R", "G", and "B" are all on, another gray shade is produced. If only "B" is on, the monitor color is dark blue and both "B" and "I" produce light blue, and so on. In order to have the B128 be capable of producing a color display, for example a red character on a dark gray background, the R signal must be on whenever K is low, and the R, G, and B signals on whenever K is high. Therefore, the K signal is the key: it tells whether the character or the background RGBI signals should be presented to the color monitor. A controller which will allow a B128 (or any other monochrome computer) to control the color display on a RGBI monitor must be capable of performing two distinct functions: (1) it must be capable of setting and holding the two combinations of RGBI signals, one for the background and one for the character, and (2) it must switch back and forth between these two sets of signals whenever a dot forming a character must be written upon the screen.

We have developed a device which we call the "Color Box" which performs the above functions and allows a monochrome computer to control the display of an RGBI monitor. We use two counter chips designated 74160's to generate and hold the color information. These chips have four output lines designated Q0 to Q3 which display the contents of the counter's very small internal memory. A counter chip accepts a "clock" pulse which advances its count each time the clock pulse goes high. By pressing a button, a series of single clock pulses may be fed into a counter which will change the states of the outputs Q0-Q3. These may be regarded as being the RGBI signals for either the background or the character. The other counter functions the same way except that its outputs are regarded as being the RGBI signals for the other color. By pressing the buttons a number of times, any one of the 16 possible colors can be assigned to the character and the background. Understandably, you do not want both to be the same because this makes reading the display somewhat difficult!

The only other remaining task is to arrange so that first one set of RGBI signals is presented to the monitor and then the second set, depending upon whether a character or a background dot is called for. We accomplish this by the use of a very fast switching chip called a 74F240. This chip accepts eight input signals arranged in two groups of four. There are also two output enable (OE) lines which permit either or both sets of four input signals to pass through the chip and to appear at the four output terminals of the chip. If one of the OE lines goes low, one set of RGBI signals is output, if that OE line is raised and the other one lowered then the other set of RGBI signals appears on the output lines. (Although we invented this system on our own, when we finally obtained a copy of the Programmer's Reference Guide for the C128, we discovered that we had reinvented the wheel. The C128 uses a very similar chip called a 74F244 to accomplish the same function in the 80-column mode.)

It would seem that the whole problem is now solved: the 74160 counters can be pulsed to produce whatever RGBI signals correspond to the selected character and background colors and the KEY signal can be used to switch between the two. When KEY is high, the background should come on, when Key is low, the character should come on. We tried this and it doesn't work! The fault lies in a peculiarity of the 1902 monitor: if any of the RGBI signals is CONSTANT, it does not appear on the screen! For example, if a red character was displayed against a white background, both the character and the background produce an "R" signal. When switching between the two, "R" stays on all the time and therefore is constant. We have not tried to find out why this is so, but came up with a simple trick to cure the problem.

Since the OE signals of the 74F240 are active low, the Key signal all by itself can turn the character RGBI signals on. To turn the background RGBI signals on, the KEY signal must be inverted (to produce NOT KEY) so that the other side of the 74F240 can be turned on at the appropriate time. However, this arrangement leads to the aforementioned problem with the 1902: some of the RGBI signals may be constant if both colors are present in the character and background. We solve this problem by first forming the signal KEY AND HORIZONTAL and then inverting this signal to create NOT(KEY AND HORIZONTAL). This enable signal has the proper behavior. (These two functions actually are performed by a single gate called a NAND gate, a 74F00.) The HORIZONTAL sync signal is "1" all during the horizontal sweep of the electron beam so that NOT(KEY AND HORIZONTAL) looks like NOT KEY. During the horizontal retrace of the beam (when there is no display anyhow) the NOT(KEY AND HORIZONTAL) signal goes high and shuts off the OE line to one side of the 74F240. The Key is always high during the horizontal retrace so that neither side of the 74F240 is enabled and the 1902 receives the zero input signal it requires even if the same color is present in both the background and the character.

There remains only one trivial problem: the H and V signals must be run through an inverter (two other sections of the 74F00 arranged to act as inverters) because the 1902 expects to receive positive-going sync signals rather than the negative-going ones that the B128 produces.

We are very pleased with the performance of the color box. The 1902 screen is much more readable than that of a monochrome (green screen) monitor. As near as we can tell, this is due to two reasons: (1) the characters on a 14" RGBI monitor are larger than they are on a 12" monochrome monitor and (2) it is easier for the human eye/brain to distinguish between a colored character and a much differently colored background than it is if only the character is colored and the background is always black. We believe that fatigue is reduced. It is certainly more interesting to watch the few low-resolution games we have on a colored screen than on a monochrome one. Of course, the display still remains a two-color one



NEW PROJECT REGISTRATION REPORT

by: Marilyn Gardner
 CBUG Project Registrar
 1630 Madison Street
 Evanston, Illinois 60202-2036

This list summarizes the registered projects either under-way or completed since the last issue of the CBUG ESCAPE.

Marilyn Gardner
 1630 Madison Street
 Evanston, Illinois 60202

2/10/86

Ken Barclay
 P.O. Box 1694
 APO San Francisco, California 96555-0008

PUBLIC DOMAIN EDUCATIONAL PROGRAMS

- * Mathematics, English, science, games, geography, history, business, technology, computer science
- * 340 programs from Commodore 64 to B128
- * nine disks of programs
- * level from elementary school to college

CP/M INTERFACE

- * will enable B-128 to run CP/M programs
- * will probably use CBM 1571 to load CP/M disks

Jeff Spielmaker
 Quality Telephone Services, Inc.
 2145 Galewood Ave. S.W.
 Grand Rapids, Michigan 49509

2/15/86

Les Combs
 P.O. Box 391
 Greenfield, Indiana 46140

INVENTORY PROGRAM

- * 300 fields, 7-8 columns, written in BASIC
- * menu driven with easy editing
- * will print data or save to disk
- * does alphabetic sort when quitting

SOURCES OUTSIDE THE U.S.

- * B-128 Software Vendors
- * B-128 Hardware Vendors
- * other commercial developments

Matthew Goldstein
 479 Duryea Terrace
 West Hempstead, New York 11552

Lt. Col. G. A. Carlson, USMC
 HqCo, Hq Bn (Div Engr)
 3rd MarDiv, FMF
 FPO San Francisco, CA 96602-8600

AUTO EXPENSE PROGRAM

CROSSING DATA FILES B-128 TO SX-64

CIRCUIT ANALYSIS EQUATION SOLUTION

- * solution of matrix equation for nodal and loop (mesh) circuit analysis
- * using modified Gauss-Jordan algorithm

- * transferring SuperScript/EasyScript files back and forth
- * crossing data files from The Manager to SuperScript and SuperBase
- * can probably cross files SuperBase64 to SuperBase128 and back

Armand Carrier
 20 Cole St.
 Torrington, CT. 06790

4/4/86

FILE OF 4023 SPECIAL CHARACTERS

DOCUMENTATION OF ERRORS IN MANUALS FOR B-128, 4023, MPP-1361, SFD 1001

IMPROVED MENU PROGRAM

- * shows directory in four columns, up to 80 programs on single screen
- * modification of Marlin Schwanke's on CBUG #19
- * includes disk drive speed-up and function key definition

Gary L. Anderson
 Anderson Communications Engineering
 1528 34th Street SE
 Cedar Rapids, IA 52403

5/1/86

Gregory Jackson
 805 Adams
 Great Bend, Kansas 67530

GRAPHICS PACKAGE FOR B-128

- * ultra hi-res/high speed
- * 1 mega pixel resolution with a new type of light pen
- * will use 256K - 16 bit of memory

STAND-ALONE ANSWERING SERVICE CONVERSION

- * self-initiating
- * will build to spec

VIDEO ANIMATION

- * will build if interest is adequate
- * system will probably cost more than original B system, but

B-1024 1 MEGABYTE MEMORY EXPANSION CIRCUIT BOARD

- * SuperScript can use 8 banks with a different document in each, switch with ESC J
- * CalcResult can have 28,560 input values, automatically
- * 8432 Emulator will use up to 12 banks
- * can be used as RAM disk, modem terminal buffer

Les Combs
 P.O. Box 391
 Greenfield, Indiana 46140

6/16/86

CHECKBOOK MAINTENANCE PROGRAM

- * maintain home or business checkbook
- * twelve functions, including spreadsheet type
- * included on Mr. Combs inventory pgm disk
- * adapted from program previously published by CBUG
- <<revised version by that author next issue>>

has many possibilities

IMPORTANT NOTE:

This section serves to tell all of us about the superlative benefits of being B128 owner and a CBUG member! Be sure to register your upcoming projects with Marilyn Gardner. She will advise you of any other members working on a similar project should you wish to colaborate (or just avoid doing the same thing twice)



MUSICIANS! HARDWARE EXPERTS! LET'S MIDI!

Anyone out there interested in making music with the B-128 without all the cumbersome numeric conversions? I've considered writing a program to simplify entry of musical data, but actually I'd rather find out if we could hook up a MIDI interface to our RS-232C or other port so we could just enter music via keyboard. Anyone out there familiar with MIDI (Musical Instrument Digital Interface)? Perhaps we could get a few people together who know what MIDI is and/or how to construct interfaces and make the B really sing, play drums, etc. Anyone interested? Music SIG anyone?

Marilyn Gardner
 1630 Madison Street
 Evanston, Illinois 60202
 (312) 866-9159, M-Th evenings 7-9



BIBLE GAMES NOTE

by: Marilyn Gardner

The Bible Games disk released by the religion SIG has some really well-thought out games, but they were written for a 40-column screen and some of the PRINT statements haven't been changed for our 80-column screen, making them hard to read, or at least distracting to the main point. It's easy to add three lines to correct this. You may add the lines to each program (changing line numbers as appropriate) or you may run the program "window" before loading and running one of the individual programs:

```
5 PRINT"<HOME><HOME><CLR><GRAPH>":REM CLEAR ANY WINDOWS AND SET GRAPHIC MODE
10 PRINT"<CLR>"TAB(21)CHR$(15):REM UPPER LEFT WINDOW
15 PRINT"<24 CURSOR DOWN'S>"TAB(60)CHR$(143):REM LOWER LEFT WINDOW
```

If this doesn't work at some point, let me know. I've tried it out, but I don't think I've used all the possible combinations of answers to the various questions in each of the Bible Games.



CBUG ARCHIVE #002

index compiled by: Warren Kernaghan

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	- Pet-II/CBM-II	127	ROM cartridge " "
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008	6509 uP specs	131-140	not used
010	6523 TPI "	141	User port interface pinout
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031	6545-1 CRTC "	145	Extended BASIC 4.0 features
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091	CBM II preliminary memory map		Editor listing May 1983 (similar to PGR memory map - starting on page 140 of the PGR)
093	Color Pet II split bus block diagram	245	Commodore Pet BASIC 128 Version 4.0 (Vers 4.75 Jan 1982)
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wk 5/15/86



CBUG ARCHIVE #003

index compiled by: Warren Kernaghan

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019	CBM II screen editor	070	Chapter 1, Introduction
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645	"	17	"	5	686	"	20.1	"	4
646	"	16	"	2	687	"	20.2	"	13
647	"	17	"	7	688	"	20	"	6
648	"	16	"	4	689	"	21	"	1
649	"	17	"	9	690	"	20.1	"	8?
650	"	17	"	2	691	"	21	"	3
651	"	17	"	11	692	"	20	"	10
652	"	17	"	4	693	"	21	"	6
653	"	17	"	13	694	"	20.2	"	12
654	"	17	"	6	695	"	21.1	"	8
655	"	17	"	15	696	"	20.2	"	
656	"	17	"	8	697	"	21.2	"	10
657	"	18	"	1	698	"	21	"	2
				6509 Machine Language	699	"	21	"	4
				Instructions	700	"	21	"	12
658	"	17	"	10					(The rest of chapter 21
659	"	18.1	"						follows in order)
660	"	17	"	12	777	"	22	"	1 The Screen Editor
661	"	18.2	"		791	"	23	"	1 BASIC & the OS (through page
662	"	17	"	14					798)
663	"	19	"	1	799				CBUG Order form
	System			Introduction to the Operating	800				Commodore - CBUG License Document



INVESTIGATIONS OF THE MPI 8050 DISK DRIVE

by: Anthony Goceliak

First and foremost let me say that all these 'gems of knowledge' were pried from my 8050 disk drive with no aid from CBM, so the accuracy of information, although believed correct by me, is not guaranteed. Nomenclature for the most part is also my invention, but should reflect the underlying ideas fairly well. I may call the interface address \$1025 [channel 0 header block checksum] while Commodore's nomenclature may be different. However, functionally, that is what the address is. You get the idea.

Second, addresses. Oh boy does this get good. There are two computers (yep two), inside the 8050 drive. They both have their individual ROM's, and their individual interface chips, -- BUT they share a common RAM. Ok, you say, not too bad, but there is a further twist. the memory byte that the Interface Processor calls \$1025 is called \$0425 by the Floppy Disk Controller. I will provide a table in a bit, but there is more in the devil's brew. Both fdc and ip double up page \$00xx and \$01xx. That is, the memory location called \$00ff by the ip is also \$01ff. Not confused yet? Pages \$00 & \$01 are the ONLY RAMS in the 8050 NOT shared by processors.

Next, not all address lines are decoded, although Commodore is consistant in calling a given location by the same name always. For instance ip address \$1025 is the same as \$1425, \$1825, or 1c25 because of incomplete decoding. The fdc is worse, it has enough undecoded lines to hang my whole family's wash on.

If you have read this far, you are my kind of nut, or you believe that rumor that the secrets of the Universe are revealed on page 3 of this text.

to business : ip=interface processor [the guy that the b-128 talks to]
 fdc=floppy disk controller [the guy who runs drive]

MEMORY EQUIVALENCES

ip	fdc	buffer numbers	
\$10XX	\$04xx	#0	restricted for job q
\$11XX	\$05XX	#1	
\$12XX	\$06XX	#2	
\$13XX	\$07XX	#3	
\$20XX	\$08XX	#4	
\$21XX	\$09XX	#5	
\$22XX	\$0AXX	#6	
\$23XX	\$0BXX	#7	
\$30XX	\$0CXX	#8	
\$31XX	\$0DXX	#9	
\$32XX	\$0eXX	#10	
\$33XX	\$0FXX	#11	end of user memory
\$40XX	\$10XX	#12	directory block
\$41XX	\$11XX	#13	bam block for drv 0
\$42XX	\$12XX	#14	bam block drv 1
\$43XX	\$13XX	#15	command buffer
			[open1,8,15]

The b-128 channel numbers as in direct access commands like u1:2,X,1,1 where x is the channel number are the buffer numbers MINUS 1. By the way, the manuals are hardly explicit on how to run direct access. A brief digression.

- 1.open15,8,15,"i0" [or "i1" for drive 1]
- 2.open2,8,2,"#0" [for buffer 1, channel number 0, page(ip)\$11XX]
- 3.print#15,"u1:",2,0,77,21 [read a block into whatever channel is associated with lfn 2 -- from drive 0 -- block taken from track#77 -- sector#21]
- 4.print#15,"b-p"2,0 [not needed for u1 but a good hAbit]

```
5.get#2,a$:if a$=""then a$=chr$(0) [done in a loop from 0 to 255 for whole block]
6.close2:close15 [you can get away without this when reading but if you don't close or dclose on write, your data
doesn't make it to the disk]
```

resume text

I recommend printing out my page \$10XX direct table before proceeding further. You'll have to leave superscript.

THE JOB QUEUE

Direct access commands are great. After you have gone to great lengths to lock up a program with my program titled 'security lock' so that you can't scratch it or replace it by accident, direct access lets you bypass that and trash your file anyway. But sometimes they aren't enough. Notice that line1 initializing drive 0. Some nefarious individuals who don't want you to alter their programs try to use dos [disk operating system] against you, by for instance, changing the dos code byte for the bam byte #2 from it's normal value. Dos says Whoa! to any write operations on a disk which has the wrong value there, -- if you let it.

Enter the wonderful world of chr\$(xyz). On a secondary level, we can bypass many of the normal checks constraining what we are allowed to do by depositing job codes, along with track and sector numbers appropriate to the job, and then waiting for the fdc to be fooled into thinking that the ip has approved of this action, and therefore doing it.

Referring to my direct command table, you can see that there are only seven jobs for each drive. The fdc isn't brilliant, it only has a 1k ROM, but give it time, it will grow on you.

All jobs have bit#7 set [>#\$7F].

All jobs end in 0 or 1 [in hexadecimal notation] for drive 0 or 1

All jobs ignore bits 1,2,&3 [although bit 3 is not stripped off before execution allowing us to define new jobs for the fdc (more later)]

In order to run the job q, remember YOU are the boss. Tell the drive to seek for track#-177 and off it goes more and more looking and seeking, but without much chance of finding. You won't hurt the drive, but more than once I've had to shut it off to regain control from a silly command. Switch the drive's power off, wait a few seconds, and then power back on when you do something stupid and the drive says ok boss here I go -----.

Operating the q is simple, once you get the hang of it. For now, let's assume you want to alter a block of code on a protected disk. I won't mention names, but the next to last disk you handled is one candidate.

1. Remove the write protect tab.

There are two ways to avoid having to do this, hardware and software, but for now take it off.

2. Disk in drive, b-128 on & ready to enter a program.

3.open15,8,15 [note NO i0]

4. no more open statements [that's what the whole table of locations does, automatically sending the results of a job from a given location to the RAM page associated with that job address.]

5.print#15,"m-w"chr\$(83)chr\$(16)chr\$(2)chr\$(77)chr\$(21)

Here we are setting up the track and sector, as well as the destination.

We send a "m-w" to tell the 8050 to write into ip memory some of the following bytes. chr\$(83) says we are using the header buffer for buffer #7.

[the low memory byte converted into decimal notation]. chr\$(16) is similarly the high memory byte in decimal. We will stuff chr\$(2) bytes. At last, the data. chr\$(77)=track#77 and chr\$(21)=sector 21.

6.print#15,"m-w"chr\$(9)chr\$(16)chr\$(1)chr\$(176)

Same idea, write into ip address \$1009 the number \$b0, which is job code seek.

There is always a long way round things, and this is it. First seek the track [sector is not necessary yet, but send it anyway]. Then read, write or execute. You never have to verify, the drive will do it for you after writing. And bump or jump need no setup, jump doesn't even spin the drive, it just jumps to m/l code at the address you specify.

7.print#15,"m-r"chr\$(9)chr\$(16)chr\$(1)

8. get#15,a\$:if asc(a\$)>40 then goto 7

Here we are waiting for the job to be done. We stuffed a number over \$80 to tell the drive it has something to do, and it will report back with a number under \$20 to tell us it is finished, and how it made out. The number 1 is the a-ok signal, but be prepared for errors up to at least \$1f.

Don't forget to loop back to the memory read command, or you will never update the value of a\$. p.s. I never include the chr\$(0)trick, because it never returns a null string.

9.print#15,"m-w"chr\$(9)chr\$(16)chr\$(1)chr\$(128)

Job code for read. USE THE SAME JOB CODE ADDRESS THROUGHOUT. It is the only one that is associated with the header table address where we put the track & sector. If you didn't send the sector number for the seek, you just read whatever sector was last specified for this channel instead of the one you wanted. Go back and seek again.

10.print#15,"m-r"chr\$(9)chr\$(16)chr\$(1)

11.get#15,a\$:if asc(a\$)>40 then goto10

Wait again for completion. a further test for the a-ok flag is wise.

12.if asc(a\$)<>1 then60000 [error exit]

Now by your deft manipulations, the data block from track 77 sector 21 resides in ip\$23XX. Yes, it's really in the fdc memory, but we can't address that directly from the b-128. A rose is a rose, etc, etc. It's the same memory page.

Modify it from the b-128 by either reading back and forth, or just directly change what is needed, as in line13. [triptodecaphobiacs beware!]

13.print#15,"m-w"chr\$(80)chr\$(35)chr\$(3)chr\$(0)chr\$(9)chr\$(8)

We have changed 3 bytes (only a maximum of 32 at a time please), beginning at buffer position#\$2350 to 00,09,and08 respectively.

To put the new block on the same track and sector on the same drive, we just stuff job code 144 exactly as in lines 9,10,11,and12. Otherwise first Seek [code176 or for drive1 177], and then write. Need I say that you can cross drive #'s but if you have more than one 8050 not drive units.

One of the more subtle reasons for seeking before writing is to pick up the disk id bytes in the header block table. The fdc will obligingly pick them up, and then calculate the header block checksum for us during it's deliberations over whether to write or not.

Subroutines are the way to go if you plan heavy duty block shuffles, but the b-128's screen editor makes it so easy

to duplicate lines that I just do that.

Take a break, relax, and read this again. It won't become totally clear until you have destroyed a few disks of your own. At least that's been my path to enlightenment. As soon as the drive whirs, and the activity led lights, and my disk is irretrievably gone, I learn something.

The first thing to learn is PRACTICE ON A SCRATCH DISK!!!

This technique is strong enough to make any disk in your library quake unless it is dressed in a write protect tab, and as part of our inevitable march toward progress, I will soon teach you to breach that last island of safety. Not that it matters, unless you used crazy glue to put the write protect tab on with, but as part of an effort to understand the inner workings of the 8050 in order to turn it towards our purposes.



INVESTIGATIONS OF THE MPI 8050 DISK DRIVE, Part 2a

by: Anthony Goceliak

I have had some difficulty getting time to write up the information that I wanted to pass along to the membership with regards to the write protect defeat and formatting/writing/reading in unconventional coding schemes on the 8050 disk drive. Let me at least pass along the hardware method of defeating write protect.

CAUTION #1. I am the fellow who first told Norman about the possibility of damaging your 8050 via the disk drive swapping that was recommended by Cardinal Software in the book accompanying their Physical Exam disk. I trusted them to know what they were doing [since back then I didn't possess the 8050 schematics from the service manual], but they didn't. The following method works fine on MPI 8050 disk drives, anyone else proceed with caution since this circuit board is only present in the MPI drive.

FIRST SHUT OFF THE POWER TO YOUR DRIVE. NEVER WORK ON IT WITH THE POWER ON, OR YOU WILL GET TO KNOW YOUR FRIENDLY DISK DRIVE REPAIRMAN ON A FREQUENT BASIS.

Open the drive up. Two screws (on left & right sides about 3 inches from front). Frankly, if you needed me to tell you that, please don't go any further.

Above drive #1 is a small circuit board containing a single IC and 5 small plugs with wires going to various locations. The three plugs to the right are two pins each, and the two to the left have four pins each.

Take care to note that looking from the front of the drive towards this board that the black wires of each plug are always on your left. This can save some panic stricken moments, as in just after turning the power on, thinking, did I plug it in upside down?

Needless to say, if your drive differs in any respect from this, proceed no further with these instructions.

The simple way to format/write to the reverse side of a single sided disk is to disable the write protect circuitry by means of SWAPPING the positions of the two left-most plugs [the ones with four wires each].

MAKE SURE THAT THE PLUGS ARE RIGHT SIDE UP WHEN RE INSTALLING THEM!

Just to be crystal clear, we are unplugging the left-most plug [labelled p2] and the second from left plug [labelled p1] and putting p2 where p1 was, and p1 where p2 was.

VERY IMPORTANT!!! AS SOON AS YOU FINISH PLEASE POWER DOWN THE DRIVE AND UNSWAP PLUGS RIGHT NOW. DON'T WAIT, OR YOU WILL FORGET, AND A DISK IN DRIVE 0 THAT YOU THOUGHT WAS WRITE PROTECTED WON'T BE BECAUSE DRIVE 1 WAS EMPTY AT THE TIME.

What this does is send information about drive 0 write protect status to drive 1's circuitry, and vice versa. To backup a disk from drive 0 to an upside down disk in drive 1, make sure there is NO write protect tab on the disk in drive 0, and then [after inserting the disks of course] type backup d0 to d1.

I know that a whole lot of you will start wailing about dust and debris falling from the disk liner into your drive and damaging everything, AND I AGREE IN PRINCIPAL, but, human nature being what it is, there are some of us who will do this anyway, and this method is MUCH MUCH safer than notching the disk jacket. That is where you can create major amounts of debris which can either scrape off the coatings of your disk, or deposit themselves at unfortunate locations within your disk drive.

I personally use the reverse side of disks as a handy 'archive' disk. You actually have to DO something in order to be able to erase or damage your files when using an archive like this and you can actually stick the archive side of your disk into your drive and tell the drive to 'header' the disk with impunity, knowing that good old DOS will stand guard over your data.

For those of you who want to write protect only some programs on a disk without 'locking up' the whole disk, just use my program entitled "security lock" (on the normal side of your disk of course).

Enjoy your 8050, it is a WHOLE LOT SMARTER than even Commodore is willing to admit to us, having quite a few 'secret functions' it is capable of performing only no one bothered to tell us about them. My own feelings on the matter are that there is more combined computing power in our peripherals than there is in the b machine, just that it is so tough to get access to it.

Remember that knowledge is power, but shared knowledge is the only useful power. If you find out something about our computer or drive or printer, send it in. It may help someone else to uncover something that you didn't even suspect was there.



8050 BIG MODE

by: Anthony Goceliak

OK you guys, so you think my disk ideas are flaky, that nothing can come of them, that I've watched disks spinning round and round until I'm dizzy?

Maybe you're right. Don't read any further.

Still there? All right, disks are our chosen storage medium and I think that we ought to exploit them to their fullest extent. If you haven't gotten the pun, I promise you will in a few more sentences. The 8050 drive and its close relations all operate in essentially the same way as far (*) as they go.

Track #1 is defined by a physical barrier that mechanically prevents the read/write heads from moving further outward than the barrier permits. No room for expansion on this frontier unless you are willing to give up disk compatibility with everybody else's disks, as some who have attempted to 'align the drive' by means of one commercially available means have discovered.

Well, you ask what keeps us from stepping the heads INWARD? Another barrier yes, but not mechanical this time, electrical. Well, not exactly, electrons in a memory location to be precise. Software.

What Commodore has decided on in almost every respect for this drive has turned out to be well within any physical limitations for two very good reasons. Variability and extreme reliability. Tandon, Micropolis, MPI and who knows who else made 8050 disk drives for Commodore. Different drive mechanisms entirely, and these all had to be able to read each and every piece of software put out by any other 8050. Well I'm not proposing that you will be able to exchange 90 track 8050 disks from an MPI drive and read the 90th track on a Tandon, I haven't even seen a Tandon drive, but we should be able to exchange 85 track disks.

The very best of all is you can read an 8050 Superdisk on a non-superized 8050 (the first 77 tracks only, of course), and so you can store the 'expansion' program on a superized disk, to expand your drive the next time you sit down for a computing session without having to type in the entire 1 block long program.

Second best is that a 'superized 8050' can read AND write to a NON super disk within a very few limitations. It merely looks at a normal 8050's bam when deciding whether and where to write (as in dsave) to a disk, and a normal 8050's bam says there are no empty spaces past track #77. You get a 'disk full' error exactly the same as you would on a normal 8050. This is because normally, only a full "header" (or ns) can create header blocks which are the street signs that our drive uses to know where (and when) to read and write.

The limitations come with disks formatted on an 8250 or sfd-1001 drive. Their bams say track 85, fine business, all empty come and write, only their track 85 is on the top of the disk, where our head can't get to it. Off we go, looking for that elusive track, and we don't find it. After a short while the drive gives up and sulks by turning the error led red. The difference is that this time the drive has whirred a reasonable length of time, your dsave has failed, and if you don't make a habit of looking at the error led after disk operations, you may type 'new' and then your program is gone. This can only happen, however, when we are dealing with an almost full disk WHICH WAS FORMATTED BY AN 8250, since we have to completely fill the normal tracks before beginning to deal with the expansion tracks. There is absolutely no problem with a disk which was ORIGINALLY FORMATTED by an 8050.

The only minor drawback that I have found to date is the 8250 complex we give our 8050 when it becomes expanded. That is, the first time that you access a normal 8050 disk in an expanded 8050 drive, it may not co-operate. Just make a habit of typing 'f8' or (directoryD), and that is that. Whether you get anything back or not is of no consequence at all, because the next disk command you send WILL work, whatever it may be.

Once you have expanded your drive, it remains so unless reset by powering down, typing a 'uj' or 'u9' command or running a faulty machine language program in the 8050 that wipes out my altered bytes which would probably halt your drive anyway.

To review, expanded 8050 disk drive operation has worked without a hitch for me, but do I guarantee it? No way Jose! You want guarantees, see Commodore. Basically, if you can 'header' a disk after expanding your drive, you are o.k. If you are going to save your masterpiece of programming, or the data it just took 3 days to type in, do it first on a standard disk in the unexpanded mode. Then do it twice more, on other disks, and NOW try the expanded mode. That's just plain common sense. An 8050 can trash a disk faster than you can pull the plug (who says it's slow), so backup first, then there is time to enjoy.

To give you some idea of the reliability of the 8050 in the expanded mode, I have included a test program for you on this disk titled 'superseek test90', which purposely exceeds the reasonable expansion limits for an 8050 by formatting the drive to work 90 tracks. The program performs a seek function to each track beginning with #1 and working upwards until it fails. We purposely don't tell this part of the program how many tracks to expect, just to keep a record of the lowest track to fail the test in 100 tries. Don't bother watching the monitor, the final result is displayed later. The "normal" failure to expect is error code #3 no sync on track #91, because we only formatted 90 tracks, so we get a report of how many times this was the error that stopped the loop. If it equals 100 there were no seek failures from real errors.

Scrunching all those sectors into that tiny space (the tracks get smaller as we work inwards) must cause read & write errors you say? Ok, next we read each sector on the highest track which always passed the preceding test, and report any errors. When all done we get a summary and a query of whether you are convinced yet, or do we go again. When you are convinced, exit the program which will then restore your 8050 to the normal mode.

Go ahead, type 'directory' and see what the program did to that blank disk. Looks suspiciously normal, blocks free and all you say? Exactly! What good is a program to expand the drive if it will no longer allow us to exchange disks? dsave programs as you like, expanded mode or normal, on a normal or expanded disk, just remember that if you do manage to fill an expanded disk past track #77, programs that show up fine on the directory of an 8050 in the normal mode will not load. DOS just sneers "track #84, you MUST be joking". No harm done, but no dload either.

Just one more caveat. Backup an expanded disk in the expanded mode, or anything from the extra tracks is ignored. The result of backing up in the unexpanded mode is to create an essentially 'normal' 8050 disk, with only a few bytes on it that are not precisely what they would have been if no one ever heard of this, and of no consequence whatever except to an 8250.

Before I released this stuff to CBUG, tracks 78+ is where I used to store 'sensitive' information, but now I'll just put it elsewhere. Or encrypt it with my program 'encrypt'. If you do much disk snooping like I do, you tend to find all sorts of things on disks that shouldn't be there. One more time, if you don't want the world to read it, don't put it on

a disk, and if you did, don't merely scratch it. Run my program 'drink of Lethe' and your disk will sip from the river of forgetfulness for that file.

Again a qualifier, but no one using ordinary equipment will ever resurrect a file that 'drink of Lethe' has obliterated. The same sort of techniques publicized by the White House Tapes incident would be needed, and with the same doubtful results. Don't send me any disks that have been Lethed with any hope of their revival. It is just as one-way as its name suggests.

Now that you have been convinced of the merit of the expanded 8050 why run with only 85 instead of 90 tracks? Why not 92, since that's where the drive will begin to obstruct? Come on, we only want to sacrifice a small measure of the reliability built into the drive, and until the results are in from the other types of 8050 drive besides the MPI, I don't want to extend ourselves past the point of compatibility. 8 extra tracks at 23 sectors per track isn't too hard to accept, and essentially for free.

Anyone with a DOS 2.5 drive, please report the results you obtain on your drive using the test program so that we can agree on a 'standard' for expansion.

Have fun, and enjoy 'flexing the 8050's muscles'.

Mr. Anthony J. Goceliak Jr.
32 Cottage Street
Jersey City N. J. 07306

<< These and a whole slew more of Mr. Goceliak's findings are to be found on his disk in this issue of the CBUG ESCAPE Library listings. CBUG #27. >>



This is a last minute letter transmitted via Delphi from Progressive Peripherals for inclusion in the Summer ESCAPE. For those of you not participating in Delphi, this is but an example of easy and fast communication with other members, some of our vendors, and the numerous experts waiting to help you out within the CBUG corner of Flagship Commodore on Delphi.

#1 3-JUL-1986 17:37:02
NEWMAIL

From: BOS1A::SFDAN
To: CBUG
Subj: Status of B-128 Support and Upgrades

Progressive Peripherals and Precision software would like to apologize for the delay in getting the Superbase and SuperScript upgrades to the people of CBUG. However, there are some very good reasons for the delay:

- A) When Precision sent the first copies of disks to Progressive, the programs failed to operate properly on U.S. versions of the B-128.
- B) The upgrades did not fully take advantage of the various extra features of expanded B machines, i.e. extra memory banks.
- C) Precision's upgrade programmer left halfway through the upgrade process.
- D) It has never been the policy of either Precision or Progressive to release incomplete, bugged or lesser-quality product knowingly. Therefore, when the up grades are released, they will be of state-of-the-art quality at the very reasonable upgrade price.

Progressive Peripherals & Software is formally making available the technical support desk which they have built up over the past year. The desk is available by phone Monday thru Thursday 3 p.m. to 6 p.m. Mountain Time. Perhaps a better way to contact the technicians is via mail correspondence to: Progressive Peripherals & Software, 464 Kalamath St., Denver, CO 80204, (303) 825-4144

All requests should be addressed clearly to TECHNICAL SUPPORT department.

Again, we apologize for the inconvenience, but the upgrades will soon be available and your orders are being kept in the top priority area.

Sincerely,
Progressive Peripherals & Software, Inc.

Dear Heavenly Father;

We at CBUG want to thank you for Commodore. Without their kind cooperation it would be like no drive on a C-64.

We thank you for the fast peripherals we all use with ease and the wisdom of Commodore to use the IEEE.

We will never forget our B-128's. The fact Commodore released so few was their biggest mistake.

Perhaps times will change and we will all use mini-mainframes, but just like our B's we hope they have the Commodore name.

Now most us hope we have computer's in heaven. Till then please keep Commodore from chapter 11.

and all their bankers said "amen".



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414-743-4151

DEAREST COMMODORE;

On behalf of the thousands of members of the Chicago B-128 User's Group - International, I extend to you our thanks that goes far beyond these words. You have proven to the members of CBUG all over the world that you are by far the friendliest of all the computer companies.

We all stand amazed at the phenomenal abilities of your business line. While most of America thinks Commodore is a home computer producer, we know better. From our doctors, ministers, attorneys, and engineers, to our home computer users and kids, we all know the truth that Commodore Business Machines makes the very best.

Our advanced technical people are still marvelling at the intelligent peripherals and complex engineering you have master minded into your business line. We depend on you each day to keep our hospitals, churches, businesses and homes all running smoothly, and some people think you just sell the best valued home computer! Seldom are we disappointed and usually by our own errors.

Your level of cooperation with CBUG has exceeded anything, any of us, has ever known before. Your efforts to help us after the sale have earned you all the respect we could give. You have not only made it possible for us to perform hours worth of work in minutes, but you have kept us going through your service and assistance.

In todays world, the question is often asked "can it emulate the IBM?". Well, we at CBUG will soon emulate IBM, but we ask IBM, CAN YOU EMULATE OUR COMMODORE B128?

Thank you, for making our world easier, and on time.

Respectfully yours,

The Chicago B-128 User's Group - International