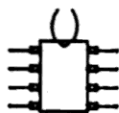


South Bay Users Group

Contents Copyright SBUG 1986



DYNAMIC MEMORIES

SEPTEMBER
THE COMPUTER IS HERE
TO STAY

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FRANK VANSLAGER DOES WINDOWS!

DON'T MISS IT!!!

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- 11. WHAT IS A PORT ANYWAY? by Bill Allen
from the SYDTRIG NEWS from BITS AND BYTES

The next SBUC meeting will be held at the Saratoga library. The meeting dates will be as follows: September 8th, October 13, and November 10. The Mayans, who were really calendarists would have needed only nine fingers and no toes to figure out that these dates all occur on the second Tuesday of the month as has been our immemorial custom. The time of our meetings is at least constant // 19:15, otherwise known as seven fifteen P.M. The Mayas had dates figured out seven thousand years ahead. I have trouble getting the meeting dates right.

Speaking of meeting dates the next steering committee meeting will be on Wednesday, September 9th at Chris Qman's residence as is our memorial custom.

COMING EVENTS: Chris Qman will speak on bulletin boards.

```
*****
* Frank Vanslager will give an informal introduction to *
* Microsoft Windows. *
*****
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MEMBERSHIP If you wish to become a member of SBUG and start receiving our newsletter **DYNAMIC MEMORIES** then send a \$20 check or money order to the following address:

SOUTH BAY USERS' GROUP
P.O. BOX 60116
Sunnyvale, CA 94088

Or come to one of our meetings. We also perpetrate a bulletin board to which you will have access as a member of SEUC.

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If the need arises feel free to give anyone of us a call.

THE EDITOR'S BYTES AND BITES

I recently returned from a stay in Mississippi where the company had sent me on a trouble shooting mission. Some of my experiences are detailed further on in this newsletter. A couple of other things I observed are worth relating here

The apartment complex where I was working was the only complex in Mississippi with a computer according to everyone I talked to. (Not many complexes in California have them either, and I find that puzzling)

By chance I found that the local pharmacist was a computer nut with an IBM. In Pass Christian!!!! The most attentive and helpful Radio Shack computer center I have ever been in was the one in Gulfport.

Harrison County has a year old computer network. The tax auditor with whom I dealt was obviously completely at home with it. Nevertheless the new tax assessments will be at least 3 months late this year. I couldn't say if the computer system has anything to do with that.

SBUG Financial Statement
August 20, 1987

Receipts:	August	Y-T-Date	% Used	Budget
Members dues	40.00	410.00	41.00%	1000.00
Disk Library	2.00	52.00	34.67%	150.00
Load80	28.00	341.00	113.67%	300.00
Documentation	0.00	.00	.00%	24.00
Interest	0.00	9.60	96.00%	10.00
Miscellaneous	111.80	209.80	104.90%	200.00
Total Receipts	181.80	1022.40	60.71%	1684.00

Disbursements:

Phone	9.66	59.95	58.77%	102.00
Utilities	0.00	90.00	50.00%	180.00
Printing	0.00	231.69	42.91%	540.00
Postage	22.00	66.00	45.83%	144.00
P O Box	0.00	29.00	111.54%	26.00
Bank charges	4.00	32.00	133.33%	24.00
Disk Library	0.00	.00	.00%	120.00
Documentation	0.00	10.00	20.00%	50.00
Load80 Subscription	0.00	149.95	74.98%	200.00
SBUG BBS Repairs	0.00	.00	.00%	100.00
Misc. Expenses	0.00	94.00	75.20%	125.00
Total Disbursements	35.66	762.59	47.34%	1611.00
Beginning Cash Balance	427.98	314.31	100.00%	314.31
Net Receipts	146.14	259.81	355.90%	73.00
Ending Balance	574.12	574.12	148.23%	387.31

COMPUTING IN MISSISSIPPI

There isn't much. There are two bulletin boards in the whole state. One is a Commodore oriented board, the other is the Radio Shack board in Gulfport. Harrison County where I was has a very modern system for tax collection purposes (are you surprised?) and as always there are individuals whose curiosity leads them into strange things. (Computers are strange in Mississippi).

It is tempting to say that Gerry McKee had more computers than all of Mississippi. Maybe he did. The very excellent Panasonic printer at the complex where I was working went haywire. That was my fault because some paper got jammed in it and I was too rough in clearing it.

After a round of phone calls I found that we had a choice of sending it to Norcross, Georgia, or Dallas, Texas. The delay and hassle you have already imagined. I took the printer into Gulfport to a type who billed himself as the computer doctor. I usually distrust people who title themselves==watch doctor, or calculator doctor or doll doctor (witch doctor is all right) but this guy was O.K.. He fixed the printer. \$12.50. It came apart again and this time the apartment manager fixed it using a stronger glue. It was still working when I left. The good doctor also fixed the external drive cable which some one had punched a nice round hole through. \$25.00 and that continued to work O.K.

The doctor was making himself a nice piece of change translating odd formats from 8 inch drives to 5 1/4 and 3 1/2 inch drives. He was also earning his money. They had some systems there that have disappeared into the mists of bygone computer history without leaving a trace. He told me that they would have been better off junking it and redoing the files from scratch, that is to say from the hard copies but they insisted on copying these antique, oddball formats onto modern disks and into modern formats, and who was he to refuse their money? There were at least 3 companies going through this metamorphosis and more on the horizon.

There isn't any moral to all of this except that if you like computing as a hobby you're better off in Silicon Valley.

THE COMPUTER TEACHER

This is about me teaching someone how to use a computer. I should begin by saying that I think that a good teacher is a jewel beyond compare and that I rate myself (on a scale of 1-10, what else?) as a 2 in the teaching profession.

The person I was teaching was the apartment manager at the complex where I was temporarily assigned. She had a third grade education and a Mississippi third grade education is not a very good one in its class. She had begun her property management career as a housekeeper at the complex and that was her concept

of herself. She never expected to reach the exalted position of apartment house manager.

Previous to my arrival a team from the company had gone to the Mississippi complex. They were interrupted in their task by a hurricane. Hurricanes do a very efficient job of interrupting. The manager had learned nothing about the use of the computer. It was morosely sitting on a desk, communicating with no one and no thing. Aside from the hurricane the manager had not learned because the person who was to teach her was very smart. Smart people are apt to be impatient with people not up to their standards. Even though they may be pleasant there is something in their demeanor that subtly informs the student that he/she is not--not quite with it.

In my case I have no natural abilities with computers, they are very hard for me to learn. I will give you a couple of examples so you will have an idea. On one occasion Jim Gonsalves was at my place and I showed him a facility that AIDS has. It is similar to a BAT file except that it memorizes precisely the key strokes the user tells it to memorize and repeats them on command. I had never been able to do that. Jim looked at the instructions, set it up and it worked. When I read the instructions more closely, I realized that I simply hadn't been following them with the faithfulness required.

When Robert Byrd was teaching me how to do the newsletter, using Scriptsit I was sweating bullets. He was unfailingly polite and patient but I felt bitter about the stupid mistakes I was making in his presence.

In Mississippi we were working with a Model 4. My hope was to teach the manager **ELECIRIC PENCIL**-- because it is so easy, AIDS also easy and powerful, and **MLINK** a very competent and easy to learn communications program with a great help screen. I had six weeks to do this, sandwiching it in between other duties.

Susan, the manager chewed up and digested **PENCIL** in four days. AIDS took a couple of weeks but she was laying out her own programs by the middle of the third week, something I had not dreamed of teaching her. **MLINK** took about two days.

I showed her a little of the power of **ALLWRITE** as compared to **PENCIL** and she wanted to learn it. She did. She could not turn out a newsletter with **ALLWRITE** but she can write letters to the tenants. She can't make headers or footers, number the pages, search for words or a number of other things that are routine, but she can write letters and address envelopes.

All was not glory and fastlane go ahead progress. As much as I repeated backup, backup, backup, what is the first law of computing? it is backup, backup, backup, she several times overwrote AIDS files and had no backup, in one case overwriting both the original and the backup. Is there any of us who has not forgotten to backup or overwritten a file? Stand up and show us your luminous halo!

What were my so successful methods? I remembered my pain when learning Scriptsit. I would teach Susan an item or two and take a walk. She was free to make mistakes and not feel stupid about them. Of course when I sat at the computer with my fingers flying over the keyboard working with programs I have used for thousands of hours, I looked like a true expert even though I made it clear that I knew that I was no such thing. By leaving Susan alone I avoided traumatizing her.

Of course there is more to this success story than my teaching methods. Bernie Thompson has suggested that in dealing with an unsophisticated person, a person with no preconceived ideas of what a computer is or should be or should do, that there is an advantage because there is nothing to unlearn. This is true but it is only part of the story. Susan wanted to learn she liked computers. She was absolutely fascinated with the idea of one computer communicating with another. We did get in touch with the only two bulletin boards in Mississippi. Had there been more I am sure that she would be working the boards all the time.

I compare computers with chess. It is a wild talent. There are illiterates who play great chess. Certainly we can see here that minimal literacy is no impediment to leaning computers, indeed what I tell here is a strong argument for teaching semi literates the use of computers to quickly make them useful, competent members of society.

I must stress that had the desire to learn and an innate talent not been present I would not have gotten very far.

As so often happens there is what maybe considered a coincidental article in the September COMPUTER SHOPPER. This deals with a 22 month old-- definitely illiterate, using a mouse with a Macintosh. She was found to be able to use 75% of the commands. What is most profoundly interesting in this case is that she understood the concept (via the icons) of saving what she had done. I would have some hesitation in working on my computer when she was around.

DON'T LEAVE HOME WITH IT

(QN)

Not long ago my wife called me because Xavier Tarragon (my XT) was making a horrible noise. One horrified glance showed me that the hard disk was stuck. I turned the computer off, let it rest, and turned it back on. No damage was done and it has never happened again. Nevertheless there is no doubt that permanent damage would have been done had I not been there.

MORE ON WORD PERFECT

WP of course is a very complex system. Anything that does as much as it does would have to be. I intend to write something

about it each month, trials, tribulations and triumphs, criticisms and appreciations more or less as they occur.

I have recently acquired a helper for WP (Word Perfect), called Perfect Pal. It is a pal-- it is not perfect. What does it do? Function keys are great. I use function keys for SIDEKICK, for ABILITY, for TWIN, for ELECTRIC PENCIL, for MACE, for WORD PERFECT, for REFLEX, and on and on and on. So do you and maybe more. I make no attempt to memorize them, it's just too much work. I lose considerable time with REFLEX by not learning them. It is not possible to work with WP without knowing them. Almost impossible. WP has such an excellent and rapid help facility that whenever I need a function key that I can't remember (which is most of them), I type F3 and access the help file. Perfect Pal uses the excellent WP macros to supply mnemonics. Alt-S is save, Alt-10-type "Preview" is preview, and so on.

At first I copied all the PP (Perfect Pal) files onto my WP directory. It took me forever to get into the directory. This was so time consuming that I eliminated all but the ones it appeared that I would be using all the time, going by guess because it is not completely apparent which is which. It's a big help if you are not a dedicated function key memorizer (of whom there are few).

Along the way I lost something. WP has a setup using the Alt and Ctrl keys to access the ASCII characters not available from the keyboard. It doesn't work. I suspect the intrusion of PP. There is a way of placing the PP macros in a separate directory. The PP manual explains it very poorly but the WP manual explains it well. I'll try it sometime soon. If that doesn't work, I'll try using WP in a separate directory without the PP macros. I would certainly like to have my cake and eat it too.

The more I use the WP spelling checker, the better I like it. PENCIL's spelling checker is good too, but over all I have to give it to WP. As for MICROSOFT WORD forget it. I have not used the Thesaurus but probably will in the course of writing this newsletter.

I have two gripes about WP and two unfavorable comparisons. When you are working on one document in WP and then load another, the newly loaded document does not wipe out the first document as it does in other programs; instead it pushes it down to page two. To be sure this does not happen (it can be very confusing) you must first clear the screen. This may be done by using PP's macro <clear> or going to the top of the resident document and typing <ctrl-page down>. A little nuisance. I wound up several times with a blank page 2. I found no way to get ride of it under <delete> or <erase>. Eventually I found out how to get ride of it under <page>.

WP has delete functions as follows; delete left, delete right, delete word, delete to end of line, delete to end of document. All of these must be memorized. In addition large

deletions may also be accomplished easily with the block-delete setup. This doesn't compare with ALLWRITE's "clear w, clear s, clear p, clear l" for word, sentence, paragraph and line. In addition WP'S block handling is simply not in a class with ALLWRITE's which is the most imaginative, simple and at the same time capable and complex of all the word processors.

For cut sheet handling when printing it is necessary to do as follows: Shift+f7, again Shift+f7,4,G. It doesn't take as long as it sounds but it's a slight nuisance.

I still consider WP to be the word processor of choice. I will have further gripes and praise as time goes by. Some of the above (such as the cut sheet operation) can be eliminated by using the excellent macro system that comes with WP. I still haven't learned to use the page numbering facility properly. I'll either learn it or you'll get some very peculiar page numbering with this month's newsletter.

WP's manual is excellent-- but I don't use it much. From habit, I started off with the 3 manual approach-- actually 2 manuals. I of course have the WP manual, purchased "The Power of Word Perfect 4.2" by Rob Krumm, very good, and my neighbor lent me "Mastering Word Perfect" by Susan Kelly, not so good. I am inclined to use Krumm's book because the WP manual is very thick and not easy to leaf through.

I think it appropriate and productive to continue writing on Word Perfect through the months. Word Processing is the most widely used micro computer application and it seems reasonable that my ?faithful? readers will be interested.

FLOPPING ALONG

When Xavier Tarragon loomed on my horizon twirling his hard disk I immediately declared my liberation from floppy disk slavery. I considered myself manumitted. One lives by one's illusions but I didn't live by that one long. Those of you who have hard disks know why.

If you have a hard disk you have room for a lot more programs, right? Of course. Also there is just a lot more available and at reasonable prices in the MSDOS ambient than there ever was for Model 4. Not necessarily better, but more.

My 20 meg hard disk is only half full because I do make some attempt at housekeeping, erasing unused programs and bygone data information like how many miles I drove for the company in December of 1985.

All these programs on floppies must have their backup. And the hard disk has to be backed up-- 24 floppies worth as of this writing. My Model 4 is still with me. It's worth more as an emergency backup for Xavier than it is for the money it would bring by selling it.

Any time you wish to visit me, please do so. You'll find me behind the pile of floppies in the Northwest corner of the

office. Just get up on the stepladder (provided) and peer over the top.

FOR SALE COMPUTER PACKAGE

Call E.D. Fonda after 6 P.M. at (415) 969-9265

- I 1 TRS-80 M.D. III computer
- II 2 built in floppy drives 80 track, double density dual side Tandon MD #TM 100-4
- III Automatic Dial Modem 1200 bps Racal Vadec VA212
- IV Optical (serial) mouse #MS 3 (baud rate 4800) mouse system
- V Lots of software--Newdos 80, Dosplus, R/S Superscripts, books, manuals. Full size desk also! \$450.00-- offer. Guaranteed!!

IF I WERE RICH----

I have a taste for Beluga caviar, Moet e Chandon and Scottish grouse. I similarly have a taste for a Compaq 386 with a 60 meg HD, a full fledged desk publishing system and a laser printer. (Of course with 4 meg Ram).

Actually a cut rate XI graces my second hand desk. Said desk was purchased from a liquidator. The rest of my equipment is similarly competent but not at all outstanding, closer to nondescript. It is my feeling that inasmuch as the number of millionaires in our club being as it is at its all time low (and all time high), there may be some interest in these wish items I have culled from the pages of COMPUTER SHOPPER and other sources.

Item: A flyer from ProSoft with an ad for Fontasy selling at \$35.00. Fontasy prints in all kinds of fancy script. The results you can get from a dot matrix printer with this type of program are fun even for people like myself whose talents don't lie in that direction.

Item: A Seagate 20 meg HD from Megamedia with the hard disk solution series. The hard disk solutions series consists of: The storage maximizer. "--expands hard disk storage capacity by an average of 50%" the data guard, "recovers and reconstructs data lost in bad areas of disk- up to a full sector." Flash disk, "makes your hard disk run 50% faster on average." (A disk cache program-- editor) Auto optimizer, "Does what disk optimizer does, but automatically."

I saw these programs operating at the San Francisco faire and was impressed. Part of the above is hype but it's still a bargain. Wouldn't you like a second hard disk as a backup?. Certainly the desire for a second hard disk is paranoia at its mildest. The cost of this paranoia, all included; \$478.00.

How about just a little more software. Never mind those programs on the HD you've never even run, maybe never even looked at. Just a teaspoon full--half a teaspoon. We have here for example from COMPUTER SHOPPER>>> ULTRA UTILITIES <<<. This works on floppies only but it will do all that SU used to do on the TRS-80s, and then some. It's freeware but if you want to lay out \$30.00 you may write to the: FreeSoft Company, P.O. Box 27608, St. Louis, MO. 63146.

Are you tired of listening to all those people bragging about their ATs while you poke along with your slightly shabby XT? Make it shine, make it sparkle. Here's the recipe.

Again from the COMPUTER SHOPPER: The FMI Fastcard IV. "Expands your memory up to 2 megabytes to make it work faster and better. For IBM PCs, XTs and compatibles." \$99.00 with 0 K. from BCE your friendly liquidators at 1-800-545-7447.

Complete this transformation with the 286 accelerator board also by FMI running at 10 Mhz. "Switch selectable 80286 or 8086 modes. Compatible with 8 Mhz XT motherboards." \$289 from BCE.

I will not ever see the Desk Publishing system on my desk but I might sometime convert my XT to an AT running at 10 Mhz with 2 Meg memory and 40 megs of fast performing hard disk. Many of us will. That's a long way from my Model 111 with 16 K Ram running tape.

VAGRANT THOUGHTS FROM A VAGRANT EDITOR

As entrenched as they are the 5 1/4 disks are bound to disappear. The 3 1/2 inch floppies just have too many advantages. They stand up to punishment better, they are more transportable and they hold more information. Of course all this may be changed with the advent of ROM disks.

Many national governments have laws requiring that all mimeograph machines be registered with the government. Most young people nowadays don't even know what a mimeograph machine is. Progress has made these laws archaic. It is the nature of governments to wish to retain all power and information is power. There is no doubt that Russia is a closed society but we have no evidence that the advent of the microcomputer with its potential for an almost unlimited spread of information has caused any chaos there. Governments also tend to exaggerate in their wish to hold onto power. Even when information is circulated that is inimical to a government it does not follow that government will fall.

FROM THE SYDIRUG NEWS (OUR AUSTRALIAN CONNECTION)

WHAT IS A PORT ANYWAY?

by Bill Allen

(Reprinted from "Bits and Bytes, No. 55, June 1987)

I know we often use the term "port" in describing various functions inside our computers. This, of course, will normally fly right over a lot of users' heads. I am now going to try to enlighten these people by describing ports--as I understand them--in the simplest possible terms.

Most users will know that the chip controlling the actions within our computer is called a Z-80. It is known as a Central Processing Unit or CPU, a term you'll often come across. The Z-80 processor chip is able to read 65536 distinct memory addresses (0 to 65535), and write to most of them, depending on the hardware. It is also able to address 256 PORTS (0 to 255) and this extra function opens up myriads of possibilities.

A port can be likened to a "gate" leading off the main road (the computer's bus). The various ports have a unique number, e.g. Port 255 (FFH), Port 254 (FEH), port 84 (54H) and so on. The number of the port is the "key" to a specific "gate". If the Z-80 receives an instruction like IN(254),A(fetch a byte of data from Port 254 and put it in the Z-80's "A" register), it sends that key along the bus to open the "gate". Once the "gate" is open, data can be transferred from the hardware connected to the other side of that "gate" to the CPU. Conversely, the instruction OUT(254),A can open the "gate" and transfer data outwards through it. This may be an over-simplification, but that's the general idea.

In practice the port "gate" is quite often used as a means of operating a logic flip-flop (digital) switch to connect/disconnect a peripheral's data handling circuit electronically. Because each port (gate) is unique in usage in a particular hardware setup, it is very simple to ensure that only one peripheral device is turned on for the Z-80's use at any given moment. Disaster would be the order of the day if it were otherwise.

Our machines in fact use only a few of the available ports and this leaves many possibilities open to hardware hackers to greatly expand their machines' capabilities by using some of the spare ports to attach all kinds of weird and wonderful devices. These extra devices can only be used by software specially written for the purpose.

What's a bus? A computer bus is a number of parallel circuits leading past all the devices in the computer. In our case, there is an address bus -- which has sixteen parallel lines -- and a data bus with eight parallel lines. The ports use the eight lower order lines of the address bus.

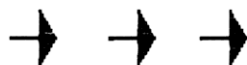
Another aspect of the port "gates" is that they generally are set up so that data can only pass in the correct direction according to whether the Z-80 instruction was an IN or OUT. This means that the gates are not just a simple opening, but are twin ONE-WAY "turnstiles", with each of the pair allowing data past in the opposite direction to its twin and only one of the pair can be UNLOCKED at the one time. The Z-80 has a control line to the chip that controls which turnstile is unlocked -- and this line is in turn controlled by the function of the IN or OUT instruction.

So, in respect to ports, the net effect is that there will always be ONLY ONE (or none) of the available turnstiles unlocked at a given moment out of all the ports decoded in the machine.

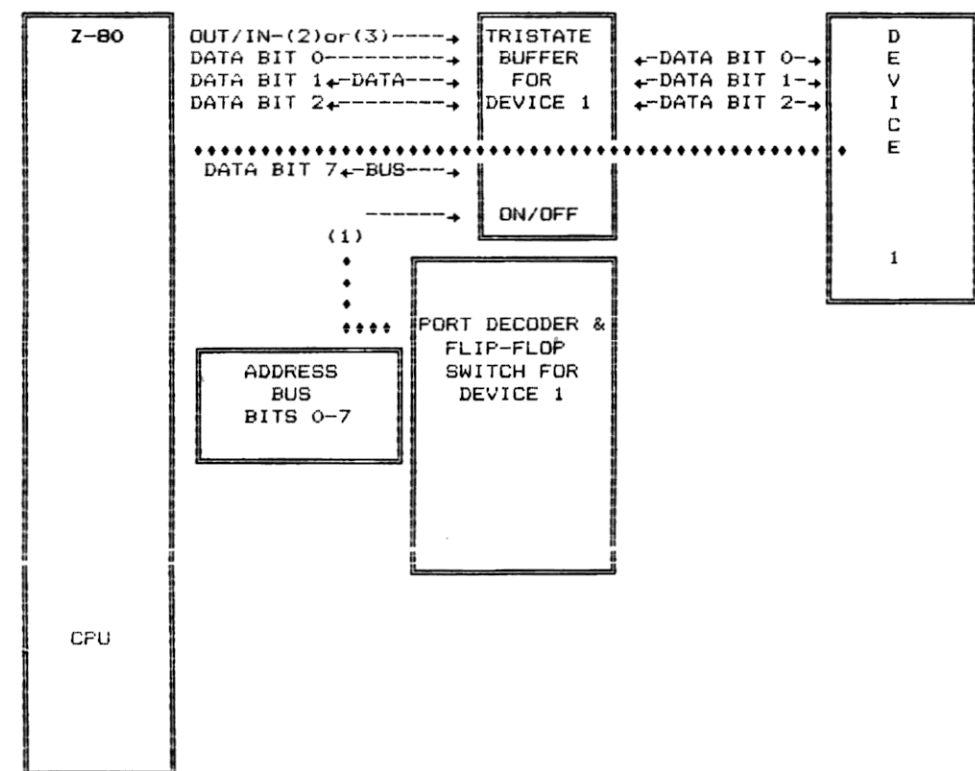
In fact there might be only ten or so ports decode for use within the machine, depending on the model. The number of available "turnstiles" is twice the number of decoded ports. If an instruction is sent to a port which is not decoded in the hardware, it just has no effect, because there's no existing turnstile to unlock with that instruction. So, the default setting in the computer is that all the turnstiles are locked unless the Z-80 says so, and it can only unlock one at a time. The one unlocked is automatically locked by the hardware as soon as it has been used.

In the diagram, you will see that a "turnstile" actually passes eight bits at a time, so the gate has become even more complex under closer scrutiny. The usual device that performs this function is a Tri-state buffer. By tri-state, it is meant that there are three states: (1) The buffer is turned off -- i.e. data can't be passed in either direction. (2) It is turned on and only passes INward data. (3) It is turned on and only passes OUTward data. The flip-flop switch operated by the output decoder performs function (1) It selects/deselects the buffer chip. Functions (2) and (3) are decided by IN or OUT Z-80 instructions on a separate control line.

SEE NEXT PAGE FOR SCHEMATIC



SCHEMATIC DIAGRAM ONLY FOR TRANSFER OF DATA VIA A PORT:



In practice, more than one port is often assigned to a particular device for the purpose of performing a complex task -- such as addressing a disk controller, a printer, or an RS-232 interface. This means that there are in fact less than 256 devices controllable via port addressing. Nevertheless, if you're going to use as many ports as are available, I'm sure you'll run out of inspiration long before you run out of ports.

HOW TO DO IT

A little problem came up on my way to my vacation. Someone else (who shall be nameless to protect their identity) is going to be using my computer. I do love my elder sister, but when I found out that she didn't know what CP/M is, or what an operating system is, I shuddered to think of trusting her with my hard disk.

I shuddered over to the telephone and called Bernie Thompson for help. In his usual, slow, ponderous way he thought 30 seconds and gave me the answer. He has put it in the public domain so I'll give it to you.

Rename "Command.Com:". If she forgets to put a disk in drive A the system will not boot up on the HD but will boot up on drive A once a floppy is placed there. Once I return I simply go from drive A to drive C and return Command.Com to its proper name.

The schematic on page 13 was done with a program called **PAGER**. I can't speak too highly of it. I am a nonstarter in the graphics race nevertheless I was able to do this ==simple== schematic with **PAGER** with no problems and not too much time. It is one of those programs that is laid out with every kind of provision to make it handy and easy.

Do you have any forms that you have to fill out repeatedly? If you use a typewriter you make mistakes and must erase. What a hassle!! You can set the form up on a computer printer and after considerable calculation it'll print out with no mistakes. Just roll the paper a little too far up or too far down and -- go get another blank form.

PAGER is the answer. Make up the form in **PAGER**, save the form so that you have the blank on disk, fill in the information on the appropriate lines and you've got it. There are not many forms that **PAGER** won't handle.

I got a copy of **FONTASY** today. Using **PAGER**, **PRINIMASTER** and **FONTASY** I hope to dress up the pages of your newsletter a little. I'll also be glad to publish any diagrams and schematics you deem worthy of publishing in this distinguished print medium. Of course if you send me any of those with little curlicues like pigs' tails (or any diagrams of pigs' tails) I will have to go out and get an EGA system with a laser printer and CadCam program. Don't put me into that bind, my credit cards won't stand the strain.

South Bay TRS-80 Users Group
P.O. Box 60116
Sunnyvale, Ca 94088

FIRST CLASS MAIL