PORTLAND ATARI CLUB

$1.50

AUGUST 1985

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NEXT GENERAL MEETING

MONDAY, AUGUST 5, 1985 - 6:30 PM

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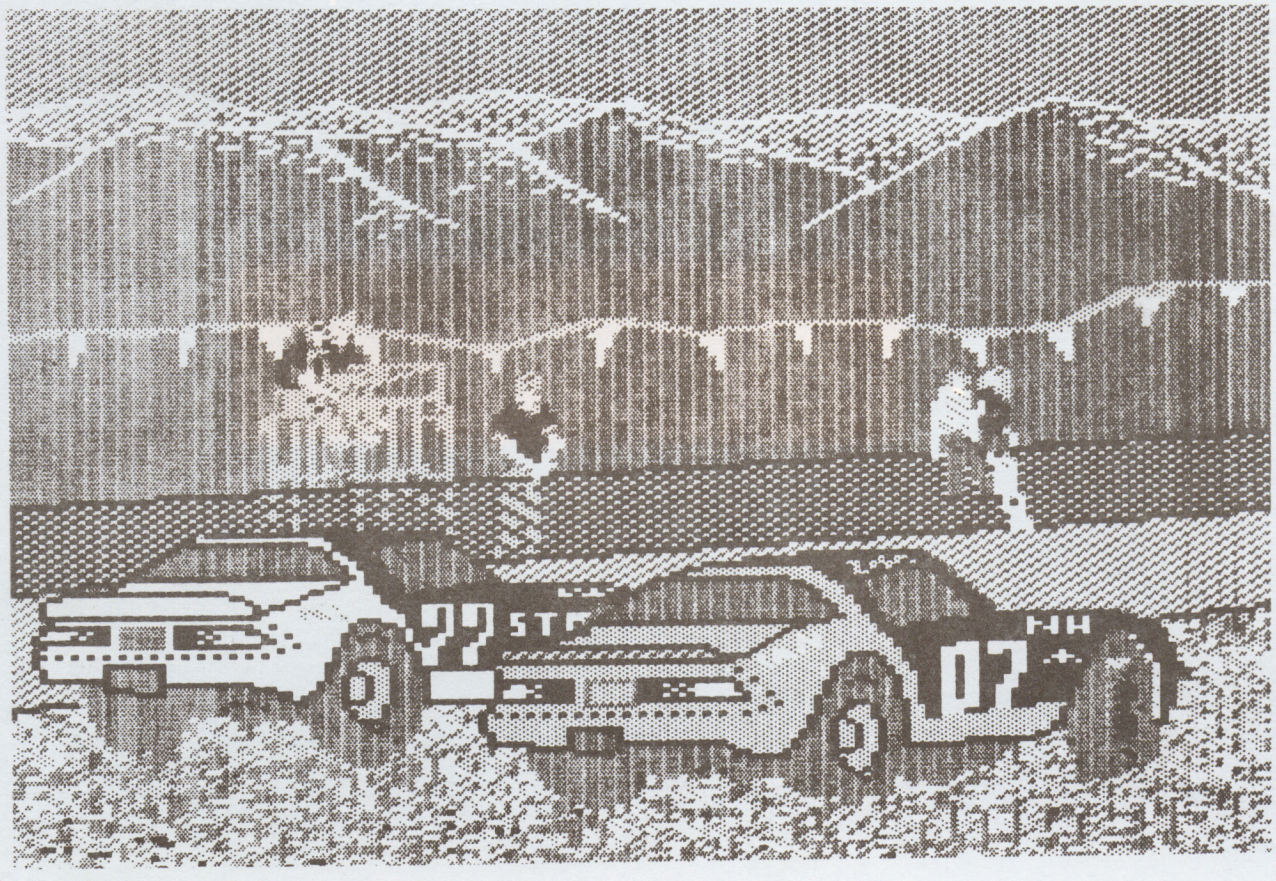

PORTLAND ATARI CLUB

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Commercial Advertising rates are; full page (7 X 9 1/2) - $50, half page (7 X 4 1/2) - $25, quarter page (3 1/4 X 4 1/2)- $15. Ads must be prepaid and a 1/3 discount is given for 3 consecutive ads. The copy may vary in content, but the space must be the same in each issue. Send camera ready copy and check payable to PAC at the address below. Contact the Editor for other arrangements. Ad deadline is the 5th of the month prior to publication.

Membership is $20 per year and includes a subscription to this newsletter and access to members only functions. Single copy price of the newsletter is $2. General meetings are open to the public and start at 6:30 PM on the 1st Mon. of each month (2nd Mon. in the case of holidays) on the date and at the location listed on the cover of this newsletter.

Exchange newsletters, articles, correspondence and ads should be sent to the following address:
Portland Atari Club, Attention: (appropriate board member), P.O. Box 1692, Beaverton, OR 97005

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CLUB BUSINESS AND ACTIVITIES

PRESIDENT'S COLUMN
Chuck Hall

I was hoping to be able to start my column this month by saying "They're Here", but it looks like I am going to miss that by a couple of days. Of course I am talking about the 520ST's. We have had many false starts on the shipping announcement of our machines. The latest was that there was a mixup at the warehouse, and non FCC approved machines were assembled for shipment. Apparently the machines arrive in parts and need assembly. If you were lucky enough to see Neil Harris take one apart for us at the CEE show, you know that their is not a whole lot to put together. One club in the Bay Area (BAAUG) went over and picked up their machines, only to have to take them back and get the right ones. Frank Nagle, the president of that group has been on Compuserve bragging about using his machine, and having been the first one to use it on Compuserve. But it seems that the Canadians were the first to receive the machines and have been using them for over a month. The first 500 have also been shipped to distributors, so it is going to be awful close as to whether the club will get theirs first or not.

The club offer has been extended. You may purchase the 520ST with color or monochrome monitor directly from ATARI through yours truly. As other equipment becomes available we should be able to order it the same way.

One major drawback. I have just been informed that the Moore Co., who is the ATARI distributor in this area, will refuse to do any warranty work on equipment purchased through the club. Can you feel that blade slipping into the middle of your back? It astounds me that after all this time, with PAC being primarily responsible for keeping the ATARI alive in this area and making a large amount of the sales by the Moore Co., possible, we are going to be treated this way. I am not going to stand still for it. I will be calling and writing to various folks at ATARI and getting their response to this situation. The Moore Co., says that ATARI is giving them 3% on each machine to cover authorized warranty repairs on the ST computers. Yet, ATARI tells me, that there will be no authorized repair, you just trade in your machine for a new one. Too many stories going around. I will try to get to the bottom of this and report the results to you at the next meeting.

I was amazed at your response to my questions at the last meeting concerning the 800XL and 1050 drives. I will do my best to get the best price I can for you. Whether it will be as low as we talked about at the meeting, I can not guarantee. But I will make the proposal to ATARI and see what I can do. I should have some solid prices to report to you at the next meeting, and we can start taking orders at that time.

I have just received a large envelope of new releases from ACTIVISION. I was really excited when I started reading them. Then the second time through, I looked more carefully, and not one item concerned ATARI. All announcements were being developed for Commodore or the IBM PC. What I would like for you to do, is drop them a postcard or note, expressing your disappointment over this trend to not develop for the ATARI. A postcard only costs 14 cents and if we send enough of them, they might get the idea. Their address is; Activision, Inc., 2350 Bayshore Frontage Rd., Mountain View, CA 94043

Anytime you see about a new product coming out that is for one of the other machines, and not for ATARI, then drop them a card. If we let them know that we do care, it might just help us to get some new software. After all, the ATARI is not a discontinued machine and will be around for a long time to come. What I might suggest is that next time you are at your Post Office, or close by, stop in and get a package (10) or two of postcards, and when you are looking through magazines or announcements of products for those other machines, fill out a card right there and then. You might keep track of who you write to, and pass that info on to Jim Link, our VP who will then keep tabs on who has been written to, and what kind of response we are getting.

We seem to be missing our large screen. Somebody picked it up at the May meeting and forgot to bring it to the next meetings. If whoever picked it up will please call Jim Link (232-1138) and make arrangements with him to return it, it would be appreciated.

One last note here and I will get off for awhile. I received the "Combined Puget Sound Newsletter" this week. One of the pages in it listed the five clubs that make up the newsletter and was slightly amazed. They listed the number of members for each group. The total of the five groups was less than half of our group! You all have much to be proud of. When you compare the population densities of the two areas, and see what we are doing down here, there is no question on who has the best club around. Keep up the good work.

BOARD MEETING NOTES
Dan Gibson

The June board meeting was held at 7pm on June 19th at IB Computers. Attending were the following, Jim Link, Clyde and Debbie Pritchard, Chuck Hall, Dave Holliday, Dan Gibson, Lloyd and Floyd Suiter, Jim Berry, Steve and Debbie Billings, and Russell Schwartz.

The PAC BBS

The Board again elected to upgrade our bulletin board system this month. We gave Steve Billings a $600 budget to purchase a 1200 BPS modem and software for the PAC BBS. The 300/1200 modem we tried out last month didn't work out. With this addition we are in a position now where we can support two Bulletin Board Systems. We will be deciding where these boards will be and what will be on each, in the near future.

July Meeting

Bill Pike will be demonstrating the Relax System from Synapse. Lloyd will be premiering three new disks, Entertainment II, Education V, and Translator II. We will be showing a video tape from Atari on user group support. Clyde will be demo'ing a word processing program called Paper Clip from Batteries Included. A new contest will be introduced at this meeting for kids. Details will be given at the next meeting and the prize will be PIC Builder, a new education program from Weekly Reader. The doors will open from now on at 6:30 pm. We will be demonstrating the new PAC disks in one corner of the room. PAC software will be available for sale from 6:30 pm until the meeting begins between 7:00 and 7:15 pm. The general meeting will proceed without a break until between 8:45 and 9:00 pm. We hope this will speed up the meeting and make it more enjoyable for all.

Miscellaneous

As of this meeting we have 459 members and are well on the way of reaching our goal of 500 members by years end. A tentative date for the PAC picnic has been set for Saturday, August 17th. Now all we need is a place and volunteers. We have a large supply of T-shirts left and will be pushing them at future events. We are working on setting up a booth at Washington Square after school starts. The 24 520 ST's ordered by the PAC members was the largest order placed by any Atari User Group. At last report the machines are on the way.

Treasurer's Report

As of this writing, the balance in our checking account stands at $2,348. At the last meeting software sales totaled $301, and $520 for memberships.

MEMBERSHIP SECRETARY NOTES
Debbie Pritchard

The July meeting was great! A little slower at the membership desk, but gave me a chance to chat with everyone a little more. We add 12 new members at the meeting, plus had several renewals, so it was a very successful meeting. We also received 13 other memberships through the mail and through the services of IB Computers. Our total membership is now at 475.

Once again I would like to extend to all the new members and their families a welcome to the Portland Atari Club. We are very happy to have you involved with the club. If you would like to become involved with any of the Special Interest Groups feel free to call on the SIG Coordinator or the leader of the SIG you are interested in.

I would also like to take this time to but in a plug in for the newsletter staff and ask you all to consider becoming involved with the newsletter. We always need articles to be written and people to help with the assembly, production or mailing. No experience is necessary. We sure didn't have any experience when we started but we have all enjoyed the adventure.

If you need answers to questions, call any of the board members, if we can't answer your question we can probably send you to someone who can.

Once again Welcome to the group. Hope your association with PAC is a successful one.

New Members

Albert Spor	Mark Erickson
George Dobson	Douglas Strain
Terry Ross	Rex Freeman
Wayne Winterbottom	Richard Randol
Art Lago	George Wise
Charles Florian	Alton Byrd
Richard Black	Samuel Palmer
Dennis Lionberger	Teri Williams
Transoniq Hacker	Richard Coppock
Michael McCanta	Harland Maier
Doris Ditter	Thomas Person
Vern Smith	Sheryl Florek
Randal Schwartz	

SPECIAL INTEREST GROUPS
Thomas Brown

Some of the Sig Groups are having problems keeping the interest up. This lack of interst can be caused by not having a specific project or goal in mind for your group.

The Communications SIG is working on new communications disks for the Club; the beginners SIG is doing a brochure of the clubs organizations and activiites; the ST Sig is hard at work on learning programming in "C" with the 8 bit-computers and in preparation for the Atari-ST's. These groups are very active. So maybe the key to keeping your respective groups happy and active, is to get them involved in a project. One project you and the club as a whole can benefit from is new SOFTWARE for the disk library. That should keep any group busy.

There is plenty of help within the club. If you have any questions, give me a call. Lets keep the SIG groups moving.

BUSINESS SIG: No meeting is scheduled for August. This SIG will resume in September. There is a lot of new business software out and there is going to be even more when the ST's hit the market. If you are interested in this SIG get your name to me or to Chuck Hall, and we will be sure to let you know when and where the September meeting is going to be.

COMMUNICATIONS SIG
Jerry Andersen

On June 11 we held our first Communications SIG meeting. We had seven people in attendence. Two of the people were sysops of two different Atari BBS's. We discussed what direction the group would take and what would be the best night to meet on. We will be meeting the second and forth Monday's of each month. call me for directions on how to get to my house. Number is 655-3914. One of the things we will try to do at each meeting is to have some kind of a demonstration. at our first meeting we had a demo of what it is like to set up and run a BBS. One of the things that we talked about is the possibilty of one of the people in the group setting up a BBS just for the group's use. this would be a private board just for the members of the Communications SIG. We welcome all modem users, beginner and experinced alike. If you have something special in a modem or BBS program we would love to have you come to one of our meetings and demo it. See you at the next meeting.

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NEWSLETTER SIG
Clyde Pritchard

The PAC Newsletter SIG has one meeting every month. We use the meeting to lay out a rough plan of what will be in the next and upcoming issues of the newsletter, and to review how things went on getting out the last issue. We also use the meeting to relax and talk about whatever feels good, eat some pizza and drink some whatever.

Anyway, we are always happy to get your ideas for the newsletter, and will do our best to give you what you want, but to do this we can use some help. Once we have ideas, we need people to implement them. This means people to write things, people to do artwork, people to help layout the copy for the printer, people to run errands, people to prepare the newsletters for mailing and so on.

We currently have a need for more people to help out in the mailing area. Ruth Pettinger who has been working on the mailing for over two years now will be "retiring" next month, leaving a large gap in our staff. This is a hard area to get people for because it requires people who have time in the morning during the week, usually on Tuesdays. Jim Miller has volunteered to help us out, and we greatly appreciate this. However, the mailing function is critical in terms of the the kind, amount and time that the work must be done, so we need to have some other people trained to do the work if he, Jean Hall or Debbie Pritchard have a conflict. Please give me a call if this kind of work would fit into your schedule.

We are always looking for more people to submit items for publication. We need reviews, editorials, tutorials, programs, artwork or anything else that you can think of that would help make our newsletter better. We get several newsletters from other clubs, and many of them are filled with downloads from CompuServ or other systems, or copies of articles from other clubs. We often use these items, but we do like to have most of the newsletter made up of items from PAC members. We just need to have more people involved, rather than the same small group of people every month. You don't have to be the world's best writer, you just need to be able to get your ideas down in a fairly coherent manner. I will be happy to polish things up a bit, that's my job. You will be surprized how nice it feels to get something printed for others to learn from, and your fellow members will certainly appreciate it, I know that I will. Start something now!

ST SIG
Chuck Hall

The ST SIG met at the home of Chuck & Jean Hall in anticipation that our machines might finally be there. But, another setback at Atari has delayed delivery until the week of July 15. We had a turnout of 25 with one guest (Charlie Andrews) from Eugene ACE. They of course are also waiting for their machines. I believe they ordered nine. We ordered twenty-four, and we can order more anytime we want to. If you are interested in ordering one, give Chuck Hall a call.

This was our third meeting in which Pat Warnshuis gave a continuing class in the 'C' language. This class wrapped up the Printer Driver program, and brought out the standard formats of the "While" "For" and "If" instructions. It showed the proper structure of the CASE Statement and gave us a good understanding of the structure and key words or parameters in this statement.

Most of us are now capable of writing simple 'C' programs. Additional instruction will be available within the SIG group, but only experience and practice will make you profficient. If you are interested in the ST's, 'C' or in a battle of Puns (right Pat & Randal) then plan on attending the next meeting. Meeting dates are included in the calendar on the back. The location will be at Pat Warnshuis home or Chuck Halls home. Call ahead to make sure. We should have ST's at our next meeting. One goal of this group will be to start putting out a disk of ST software as soon as possible. This group is for all ST owners. We are learning 'C' currently, but that is while we wait. Once the machines get here, and you get the development software, we will have people writing software in LOGO, C, 68000 Assembler, and others. Hope to see you at the next meeting.

BEGINNER'S SIG
Elanna Schlichting

Debbie and Clyde Pritchard were the guests at the June Beginner's Meeting. Debbie was returning by popular demand to repeat her presentation on using Atariwriter. As I noted on that occassion, you have to be there to get the most out what she presents. The manual is fine, but there is nothing like audio-visual aid(e)s. Debbie went through each command, explaining its use and clarifying any ambiguous points as she went along. By the time she was finished, she had given an effective presentation of the power of this word processor. It is capable of fulfilling most of the needs of the home user and is becoming quite a bargain as its price continues to fall.

Clyde Pritchard was on hand that night to supplment Debbie's presentation with any technical data that was needed. He also gave us a look at the new Printer Driver Construction Set available through Antic. As we know, to use Atariwriter with a non-Atari printer, it has been necessary to either use a multitude of printer commands imbeded in the text, or to use the now hard to come by Atariwriter Printer Driver. This new software allows the user to construct his own Printer Driver custom fit to his personal printer. Though it takes some time to set up (especially for those of us not yet familiar with the printer commands in our manuals) the result is not a jury-rigged "well, my printer sort of works with the Epson format on this disk", but a specifically designed set of commands to fully utilize the potential of your printer with Atariwriter.

We were forced to cancel the second meeting in June due to 100 degree weather. Quinten has since installed air conditiong and that will no longer be a problem, but in connection with this I need to make a comment about cancellations or postponements. In such cases where we need to cancel, I attempt to call as many people as I think will be coming in order to save them the trip. However it is difficult to do so, as the list is long and I can't always get ahold of everyone, so please accept my apologies in advance if you are inconvenienced by this. In the future, I will continue this policy unless someone can give me a better way of dealing with the problem.

We welcomed Chuck and Jean Hall to our July 9 meeting. They were back after a long absence and Chuck gave us a look at how the club is structured and how it functions. He went over each Board position, explaining its duties and responsibilites and encouraging the beginners to consider running for a position in the elections at the end of the year. Chuck noted that members also have a responsibility to to the Board, to give them any ideas, comments, criticisms or praise they may have. The flow of information between Membership nad Board (between us and Chuck and the gang) is essential to the vitality of the club.

Chuck also had a special project for the Beginner's Group to take on. He is asking us to develop a pamphlet to be used in advertising the club at special functions, in stores or wherever we have the opportunity to expand our membership. Suggestions as to format and content are being taken now. We will begin work on it at the July 16 meeting. Please call me if you are interested in helping, have ideas or suggestions.

The rest of the meeting was devoted to culling information on new products, news of the industry, product recommendation, etc. Chuck then offered some club disks for sale and shared some public domain software he had acquired along the way.

SIG CONTACT LIST

The following is a list of our current groups and the contacts for each:

ADVENTURE GAMES	
Russ Schwartz	646-6418
SIGASM (ASSEMBLER)	
Clyde Pritchard	648-0461
ATR-8000	
Jim Scott	281-6724
BEGINNERS	
Elanna Schlichting	285-4471
BULLETIN BOARD	
Steve & Debbie Billings	246-1751
BUSINESS APPLICATIONS	
Thomas Brown	644-6674
MODEM & COMMUNICATION SIG	
Jerry Andersen	655-3914
NLSIG (NEWSLETTER)	
Clyde Pritchard	648-0461
PACE (Portland Atari Club Educators)	
Trudie Mishler	230-9545
Chris Fouts	206-687-4951
ST SIG	
Pat Warnshuis	246-3724

ASSEMBLER SIG
Clyde Pritchard

Yes, PAC does have an Assembler SIG. Sometimes it's hard to tell when you look at the number of people that make it to a meeting, but we try. We had a large turn-out for the June meeting when Pat Warnshuis came to talk about the ST computer, its MC68000 microprocessor and its assembly language as compared to the 6502 microprocessor that we have in the 800 series. It was a very interesting discussion, and I think everyone learned quite a bit in a short time. Thanks again Pat.

In that meeting we also took a look at a CP/M public domain utility called SWEEP. We actually looked at a couple of IBM PC DOS versions of SWEEP, but its the thought that counts. Anyway, the purpose was to let everyone take a look at the program in order to consider writing a version for our Atari systems. At the next meeting, we discussed the idea a little more, and decided to pursue development of an Atari SWEEP utility as a group project. Then we proceeded to "brainstorm" a list of proposed functions for our version. This got a little wild, but we all left feeling pretty good. The idea was to continue the discussion and start the program design at the next meeting, but because only three of us came, we really didn't get to far into it. Instead, we took a look at the program C.COM from the latest issue of ANALOG Computing. This program is a great copy utility for those who use OS/A+ or DOS/XL from OSS. It will do most of the things that the copy utility supplied by OSS does, but it is a much smaller program (7 versus 75 sectors) and loads much quicker. It had been written using the Atari Macro Assembler (AMAC), so I typed it in and assembled it with AMAC first, then converted it to work under OSS's MAC/65, which is the assembler that we normally use in the SIG.

I hope that we will have a better turn-out at our next meeting which will be the week that you get this newsletter, so saying so here won't help much, but I feel better doing so.

Anyway, back to the ST's for a bit. I think that there will be only one person in the Assembler SIG with an ST, but we have been talking about including 68000 assembler language programming as part of our group. The ST SIG seems to be concentrating on 'C' rather than assembler, but 68000 assembler language looks very nice, especially compared to 6502 assembly language. If you have an interest in 68000 assembler language (or 6502), even if you aren't getting an ST right away, give me a call.

My last item relates to something that may or may not be in this issue of the newsletter. This is an assembler language programming course by Chris Crawford, a former Atari programmer and author of several excellent programs for the Atari computer. This course is being made available by ANTIC magazine via the Worldwide User's Network, of which PAC is a Charter Member. I downloaded the first two lessons from CompuServ, and will reprint one or both of them if there is space available. I may also make them available on the PAC BBS, and have handed them out at the SIG meeting. These lessons, especially the first one, contain a lot of information that will benefit anyone who wants to understand what is going on inside computers, even those who aren't interested in assembler programming. Take a look, you might be surprized at what you learn.

PAC HELP HOTLINES

The following people have generously offered to take telephone queries in the areas indicated.

Adventure Games	Russell Schwartz	646-6418
Assembly Language	Leroy Baxter	653-1633
BASIC Programming	Nick Yost	981-0838
	Lee Gassaway	642-2455
BBS Usage	Russell Schwartz	646-6418
C	Randal Schwartz	643-1089
Cassette Operation	Lee Gassaway	642-2455
DOS Operations	Gary Lippert	233-7069
FORTH Programming	Ricky Wooldridge	224-7163
Hardware Operation	Gary Lippert	233-7069
Modem Operations	Gary Lippert	233-7069
Operating System	Nick Yost	981-0838
	Leroy Baxter	653-1633

BBS UPDATE
Steve Billings

The download of the month, and as far as I can remember, maybe the download of the year, was the "Applekill" demo that Jim Berry showed at the general meeting July 1.

It was a very popular item, it's viciousness seemed to excite people. For some unknown reason June was a very aggressive month on the bulletin board. There were a lot of semantic arguments and rather pointless name callings. The arguments reached the point that other Atarians were being offended by the vociferousness of the discussions. My attitude and policy as a sysop of the PAC BBS is pretty much hands off the message bases. There are few things that I will censor. I am a very open minded person and if a few people are offended by the messages on occasion that is too bad. The things that I will delete from the board are:

1 - Any public message containing swear words or personal insults.

2 - Any public message with references to bootlegged software or hardware.

3 - Any public message with non-public domain phone numbers or passwords.

Anything else pretty much goes. This is a public forum and I will not delete any messages just because the viewpoints are bizarre or slightly offensive to some people. If anyone would like to discuss the BBS policies give me a call, I would like to hear your opinions.

Anyway, "Applkill is still on the board and for those of you who are having trouble getting it to work, or have not yet downloaded it, there are 3 files you need to download. They are called: "Applkill, Applchr, and Appldoc". Read the Appldoc file to learn how to set it up to run.

If you are ambitious and want to try making some changes in it to show other logos or messages, send the modified file back to the BBS as "Applk12" or something I can identify and I will make it available for the other Atari users amusement. Another recent file on the board is the "Atari 'Toon" Program from Antic Magazine. This program lets you make cartoons using the control character set. Get the Antic Magazine to find out how to use it and to find out about the contest for the 1200 BPS modem! You will find the files listed on the PAC BBS as "Atartoon, Atoonsys, and Knigtoon". The last file is a demo of the type of thing you can do. Get the magazine or you won't know how to use it.

Speaking of 1200 BPS modems, The PAC BBS is now using a Hayes 1200/300 Smartmodem. I have modified the program to recognize 1200 BPS. If you call at 300 BPS you will notice no difference in the Board. If you call at 1200, after you connect you will get a few lines of garbage on your screen. When it stops- hit RETURN and it will switch to 1200 BPS and then look just like the old PAC BBS, except a whole bunch faster. This should speed up downloads (and uploads) for those with 1200 BPS modems leaving more time for the rest of us slow (300 BPS) pokes.

Thanks go to IB Computers for giving the club a good deal on the purchase of the new Hayes modem.

All was not roses during Rose Festival month, another drive crashed on me at one o'clock in the morning while I slept. I don't remember the technical terms, But the drive number one that has all the messges on it too a hike and ran continuously from 1 am to about 6:30 am at which time my Kermit, my cat determined that there was something wrong with the bulletin board and came in to wake me up. Well, by then the drive had already plowed a groove into the floppy disk. This is not the first time that Kermit The Cat has tried to warn me of a problem. Once I was up on the roof scraping moss off my roof (a favorite pastime) and Kermit came up on the roof to warn me that it was starting to rain. Unfortunately it is usually difficult to figure out what Kermit is telling me ,but I have found that occasionally I should listen to him. This time it was a little too late, but then Kermit is not real good at computers. The fact that he recognized the problem at all amazes me.

The drive is now repaired and back on the system.

MASSIVE KUDOS
Steve Billings

A big thanks to Dave Willard. After begging for cover art for quite some time this gentleman finally answered my prayers and handed over his collection of graphic files.

Dave has done some of the art himself and has some artistic friends also. There is a big selection here and I will cull out the best ones for the cover.

My artistic bucket has been coming up out of the well pretty dry lately and drawing a new cover every month had become quite a chore along with all my other duties to the club, so all this input is very much appreciated. Also you readers will be blessed with a little more variety in covers.

I would very much like to encourage other members out there to take that bold step and contribute to the newsletter. You can see how happy it makes us newsletter SIG members to get contributions.

Thanks again to Dave Willard. I do not know who has done each of the sketches we may use on the cover. If the individual artist would like to make themselves known after seeing their work in the newsletter, let me know and I will put your name in after the fact.

BBS TEN COMMANDMENTS - VERSION 1.1
FROM M•A•C•E• JOURNAL, MAY 1985
Original Author - Tim Linehan

1. Thou shalt not overstay thy welcome.
2. Thou shalt not use offensive language.
3. Thou shalt not use this BBS to engage in or encourage acts of software piracy.
4. Thou shalt not use this system to advertise products not related to personal computing.
5. Thou shalt not have more than one ad online at a time.
6. Thou shalt not use this system to advertise thy business, except by arrangement with the SYSOP.
7. Thou shalt not log on using silly names lest the SYSOP rise up and smite thee.
8. Thou shalt not clutter up the system with trivial messages which are not computer related.
9. If thou art a new user, thou shalt make every effort to find out how the system works through its built-in HELP functions before bothering thy beloved SYSOP.
10. Thou shalt contribute software as well as take it.

amen.

SWAG
Chuck Hall

We tried an experiment this year that was not altogether a success. There are many of our members that live in the Vancouver and SW Washington area. They wanted to have a meeting place up there which would be more convenient to them and allow them to get more involved with each other.

The first thing I thought of was a SIG group. This quickly got out of hand, with a group of interim leaders attempting to use this to form their own club. The members were given a choice which way they wanted to go, and resoundingly voted to stay as a SIG with PAC. Yet the leadership each meeting brought up the same questions. The attendance fell off drastically and at the last two meetings less than 10-12 people showed, out of a possible 75+. I believe part of it was due to the quibbling that continued. At the last meeting is was voted on to disband for the summer and try again in the fall. I also found out the part of the leadership had also approached the Seattle clubs and requested membership with them for the group, thereby breaking away from PAC. The membership was never notified of this or given any choice. This fall, if this group wishes to reorganize as part of PAC, they will do so under the auspices of a SIG only, and will be supported by this club as all SIGs are. If they want to form their own club, then I wish them luck. I will not stand by and let any group of people use PAC to further their own aims of joining with another group. If the people of SW Washington want to be part of a group 150 miles away, with no support, then so be it. One word of warning. The so called "organization" of 5 clubs in the Seattle area is already showing signs of stress and of breakup.

In talking with many of our members in the Vancouver area, they have expessed that they had no interest in joining with another group. They are members of PAC and wish to remain so. I believe this is true of most of the members we have in SW Washington. It is only a few that are causing the disruption. I invite members from this area to get in touch with me so that we may once again try to get this SIG group going in a productive direction. I am open to all suggestions and will support you in any way I can. If you wish to lead in this effort then please call me or Tom Brown, and we will help you get started.

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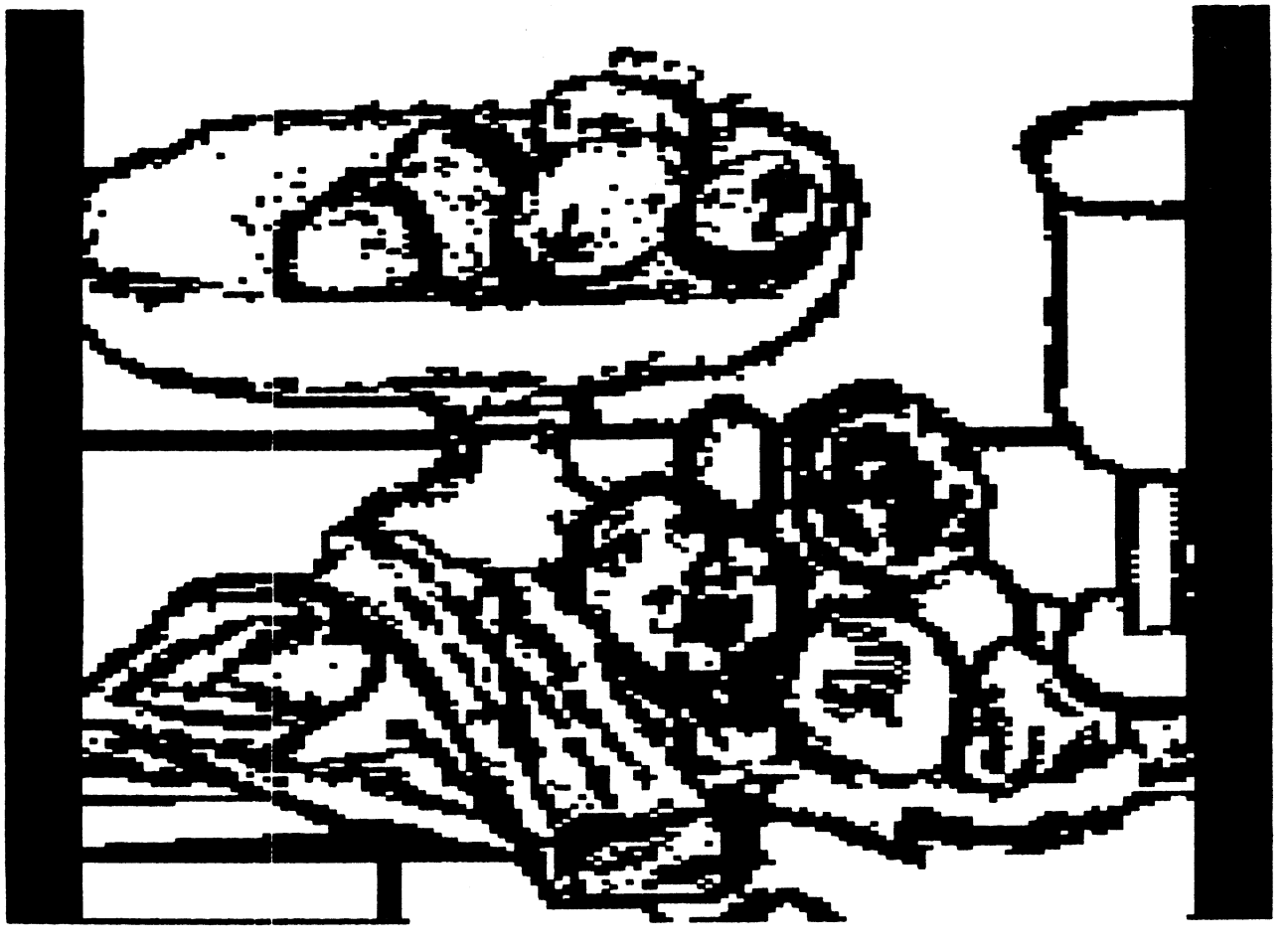
KERR SCHOOL
Chuck Hall

Last week Jerry Anderson, our SIG leader for Commmunications called me and told me about a unique situation at the Kerr School. This school is a residence for children who have some rather extreme disabilities. The children range in age from 8 to 18, and various degrees of abilities. The school has accquired an ATARI 800. But that is all they have. Several of the kids are taking computer classes to learn how to use special equipment produced for the handicapped. One of the kids even has his own Commodore 64. The 800 as it sits is of no value. They have no software to run on it, or even a monitor or TV to hook it up to. Yep, here it comes. Time for the pitch. What I would like to ask is that the club extend some kind of support for the school. I would like to set up a minimum configuration at this time of the 800, a monitor or TV (color) and whatever cartridge software we can come up with. If someone has a small color TV they no longer need, or could use the tax deduction for a color monitor then please give either myself or Jerry Andersen a call. Both of our numbers are in the newsletter. If you have any of the old cartridge games sitting around that you no longer use or need, I know that these kids would appreciate them greatly. Please bring them to the next meeting and I will see to it that they get them. If you have any other software or items you no longer need, bring them in, and if the school can not use them, we will auction them off at the meeting and use the proceeds to enhance the schools system. Educational software is in great need for all levels. Also any software that has been developed for the handicapped is also needed. We have contacted Duane Bolster and he has graciously donated his Sign Language Fun (Finger Spelling) program. And of course volunteers to help direct the program are in demand. This might mean a visit once a month to check on how things are going, taking new software out to the school, or teaching classes on computer literacy or on BASIC programming. I will help where I can, but I am already spread pretty thin. Jerry Andersen will be the primary focal point for this activity, so please coordinate with him. Thank you for your interest, and I hope that this will be a successful venture for us and the school. I will also be contacting our local vendors for support so we won't have to stand alone.



NEWS AND REVIEWS

JACK TRAMIEL INTERVIEW

Jeffrey J. Williams

Atari asked the Chicagoland Atari User Group (CL.A.U.G.) to help assist them with their exhibit at the Summer Consumer Electronics Show in Chicago. As one of the volunteers participating in the show, I asked Jack Tramiel for an interview that would appear in the newsletters of the various user groups I belong to (as well as any other groups that pick it up and choose to print it). He was most eager to talk to Atari users so he made time in a very busy day to talk with me. During the interview, I was somewhat nervous and sometimes had trouble following my notes, but Jack was very cordial and tried hard to put me at ease. We talked about CES, the ST series, the CD (compact disk) ROM device shown at CES, and Atari's relationship with user groups.

JJW: Atari announced that they would not be attending Summer CES. What prompted you to change your mind?

Tramiel: The CES show, the way we had to display it was too expensive to bring our booth, to refurbish the booth. It would have cost about $500,000 and I felt it wasn't worth it to spend that kind of money, that I could attract the people to come to a suite in Chicago during that time and to pay much less. When we were offered the present space, we took it because it cost much less. It was strictly economics. We are here to produce computers for the best price, for the best value, not to show off.

JJW: At this show, you are displaying not only the 520ST package, but also a 260STD with 256K RAM, operating system on ROM, and a built-in 3.5" disk drive. What prompted you to include the 260STD in your planned product line?

Tramiel: We feel that there are different buyers in this marketplace... people who like to buy from K-Mart and people who like to buy from specialty stores, so we went ahead and designed two different kind of machines. There is the total system like the 520 which will be sold to specialty stores and a system like the 260 where the mass merchandiser, if he wants to, can buy it. It was strictly to be able to produce the volume and to satisfy our customers.

JJW: The 520ST will initially have its operating system loaded from disk into RAM. Do you hope to put it on ROM at some future point?

Tramiel: The 520 will be on disk only (NOTE: Atari has since announced that the Operating System WILL be available on ROM for the 520ST. Anyone purchasing the 520ST prior to the ROM availability will receive the Operating System on ROM. -JJW). We will definitely have new machines constantly. Our aim is to continuously improve the product line. We intend to show at Comdex this year an even higher graphic machine.

JJW: Would that be the 32-bit machine?

Tramiel: No. We intend to keep the ST as the basic machine. What we will do is we intend to have an expansion box. In that expansion box we intend to put quite a few boards. One of those boards will be a 32-bit board. Not a machine, but just a board. It will turn the STD which you own today, into a 32-bit machine if you want to.

JJW: That is exciting. Do you have any problems with me publishing this?

Tramiel: No, go ahead... if I did I wouldn't have told you. You are the first one to be hearing this because to me, people like yourself being part of a club, you are my boss. You are the end user. You are the people that I am working to produce a product for.

JJW: Speaking collectivly for other users, we appreciate it (NOTE: I subsequently asked Leonard Tramiel what processor will be mounted on the board. He said Atari is not ready to announce that information). You are showing an early prototype of CD ROM here that seems to be generating quite a bit of interest and excitement amongst the people who have seen it. Earlier today I was walking around the CES looking at other displays and it seemed I could always hear "Atari" wherever I went. I couldn't key in on exactly what they were all saying, but that word always catches my ear. You currently have a 20-volume encyclopedia stored on a 5" compact disk and the retrieval rate is astounding. What other applications do you see for the CD ROM?

Tramiel: There are many. They can be used for a law library of any state of the United States. You could have the whole Library of Congress with every book that's been published in the last 200 years. A lot of hospital information which is all public information for doctors. Instead of having to go into a data base in Minneapolis, he can have it right on his desk. There are hundreds and hundreds of public domain applications that could be put on that ROM.

JJW: So you see it for use initially perhaps as a professional reference device as well as an institutional reference device like for schools and colleges.

Tramiel: Exactly. And I am hoping that this is one service that we can sell to remote areas in other countries where people could have a whole

continued...

library, like 42nd Street and Fifth Avenue.

JJW: It really brings to the present the concept of sitting down at a computer and being able to call up a wealth of information, something I thought was still years away.

Tramiel: Exactly. That's the whole idea, we are trying to bring it forward. I am trying to take away the "black box" image, that it is "not available"... it IS available.

JJW: Tell me about peripherals for the eight-bit line.

Tramiel: We will be expanding our drive capacity. We will have a 3.5" disk drive with a half-megabyte and one megabyte in the future. We have a number of different printers, including a daisy wheel printer. The whole idea as far as the eight-bit line is concerned is to keep that product alive and expand it. As far as beginners, as far as education, as far as people who don't have much money, the eight-bit line is a fantastic product. We will continue producing it and expanding it. I'm hoping in 1986 or even the end of this year to have a 256K eight-bit machine with a built-in drive.

JJW: 5 1/4"?

Tramiel: No, 3.5". We want to keep all those products alive and build on the software.

JJW: Perhaps you've just done it for me, but could you describe your vision of the ideal Atari personal computer. If you could just point at the table and it would be there, what would it be like?

Tramiel: It would not be on the table. My ideal Atari computer of the future is to have a television with a remote keyboard to be your computer.

JJW: I've respected your work both at Commodore and especially now with Atari. I've read the book "The Home Computer Wars" which I took to be the Jack Tramiel success story, rather than being the Commodore story or the Michael Tomczyk story. I got out of it a greater admiration and respect for you. Have you read it and what do you think about it?

Tramiel: I did read part of it because he is an associate and a friend of mine. He asked me to read it and give him comments beforehand. I did not want to give him any comments and I did not give him any comments. It's the way he interpretted the way I have operated and there are many paragraphs that are not correct, but that's the way people write.

JJW: Would you say he captured the flavor of Jack Tramiel?

Tramiel: I would say about 80% he did.

JJW: Could you run down the expected availablity dates and prices for the current planned line of Atari products?

Tramiel: The 520ST system (512K RAM, half-megabyte 3.5" disk drive, & high resolution monochrome monitor) will be sold in July retails for $799. The 260ST will be available in October or end of September and we'll have 2 machines... one will be $395 without the drive and $495 with the drive.

JJW: What about the other monitors that will be available for the ST's?

Tramiel: In case you would like to have a color monitor, for $200 more you will be able to get the color monitor instead of the monochrome. So for the black & white, it is $799, with the medium-res color monitor it is $999.

JJW: And the color monitors will be available in July also?

Tramiel: Yes.

JJW: James Copeland (Vice President of Marketing) in a staff meeting I attended the day before the opening of CES, said that Atari has some plans and directions that Atari would like us, the user groups, to take with Atari distributors and mass merchants for which Atari is prepared to help support those user groups. Could you elaborate on those plans and what kind of support is planned for cooperative user groups?

Tramiel: I really am not familiar with what exactly he said. I believe very much in sex. When I mean sex I mean for people to be involved... that's what I call sex. When I have a question to ask, "Is this machine good?", "Do people like it?", I like to go directly to the users and ask them those questions. Like I am trying to offer you the 520ST first... to find out what is going on. If a retailer needs help, we don't want to go out and hire some models, but to find a way how to give this money to your club so that you can really help each other and at the same time to try to help that retailer to sell the product. And as you know who he is selling to, you will get that many more members and we will pay you for that effort so you can use that money for improving your club. That is what I was trying to tell Jamie (James Copeland) and now he is trying to go forward on it.

JJW: I was asking David (David Duberman, Atari's User Group Coordinator) about the same thing. He said that the plans are not really

continued...

defined just yet.

Tramiel: I am giving you what the aim is. The aim is that you people in the next 2 or 3 years, with the computers coming out, can help the people that do not know computing by bringing them to the users groups.

JJW: I agree. I was in a store about a month ago where a man just bought an 800XL, 1027, 1050, AtariWriter, etc. While the sale was being written up, I introduced myself and asked if he knew anyone that could help him with any questions or problems he might have in getting his system up and running. He said no, so I gave him my name and number and told him about a couple of the user groups I belong to and invited him to attend our meetings. I don't want to take up much more of your time, in concluding this interview... do you have a message that you would like to convey to the Atari users that will be reading this interview?

Tramiel: The message I have for them is a very simple one. I appreciate all the patience they have had over the years. Now we are here, we are producing the best products and I hope they will be as proud of us as we are of them.

JJW: Thank you.

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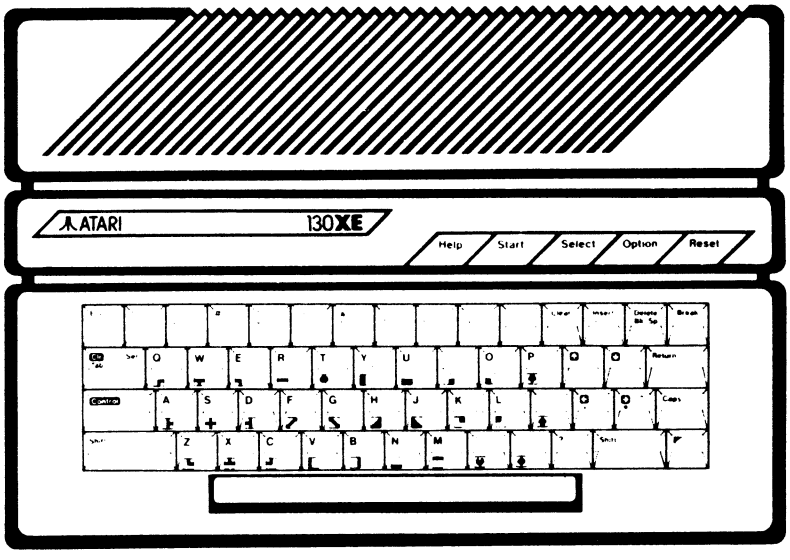
*** Computers Etc. seems to be getting out of the Atari business, give them a call before making a long trip there.



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STRIKING BACK AT BOUNTY BOB

Larry Layton

Getting totally frustrated over Big Five's new game "Bounty Bob Strikes Back"? Do you find yourself staying up late at night trying to finish just one more level? Having problems with Acid Rain, Hydraulic Lifts, Pulverizers or The Super Energy Food Bars? Well fear no more... relief is on the way!

After massive hours of playing time (or was that days? weeks? Who knows... I just kept playing rain or shine, morning to night), through untold numbers of "System Resets", and with sincere thanks to my loving wife (who slipped my meals under the door to me while I was locked in battle with Bob)... I am proud to say "Victory is mine".

Yes, Bounty Bob has finally been beaten (and so have my eyes! Looks like I'll be needing to make a eye doctor appointment for some glasses). And now this tired adventurer has decided to share his treasures with all of you P.A.C. Newsletter readers!!

So just how do you spell Relief? Well when it comes to Bounty Bob, I spell it- H I N T S !

---------- Bounty Bob Hints ==========

From level 1, get the flowerpot. Then press and hold the number 1 button. Then press the START button. This will transport you to level 4.

From level 5, get the coffee pot. Then press and hold the number 8 button. Then press the START button. This will transport you to level 8.

From level 10, get the pitchfork. Then press and hold the number 5 Button. Then press the START button. This will transport you to level 14.

From level 3, get the goblet. Then press and hold the number 4 button. Then press the START button. This will transport you to level 15.

From level 16, first set the #1 suction tube to point to the left. Then get the pie. Then press and hold the number 9 button. Then press the START button. This will transport you to level 19.

From level 2, first you must kill all of the aliens (except the one right next to the paintroller, and the one just above the paintroller). Then get the paintroller and then kill the two last aliens. Then press and hold the number 3 button. Then press the START button. This will transport you to level 22.

If you finally beat old Bob... the owners of Big Five Software have a special treat in store for you, in the way of a super special last graphics screen to congradulate you on your fine efforts!

One last note: Have you ever noticed how mad old Yukon Yohan gets when you have filled up the "High Score" screen, and then add one more high score... he seems to really love his work! Also, if you have not seen the birds go to work on the high score screen when it is completely full of names... well, all I can say is try it, you'll like it!!

Editor's Addendum: I really debated with myself over whether to print this set of hints. As you can see, I decided to go ahead and do it. If you decide to try them out, it won't really help you win the game anyway, because even if you get to the higher level, you still have to get through it. Also, once you see some of them, you may like the lower levels better.

Also, a note on my Bounty Bob article last time. It seems that I forgot to mention one thing about the secret codes on the option menu. You need to press the OPTION key after setting the secret code number to cause the actions I wrote about. This is in the documentation for the game, so I gusess that's why I didn't hear any screams of rage at the meeting.

I have managed to get beyond the infamous level 12, "Acid Rain", and am now working on level 15, "Yohan's Revenge". Get good at those short jumps before you get to this one.

I did hear from a couple of people in response to my article, but only one of them had made it all the way through. His name is Dave Jackson, so I guess he and Larry will have to share the honors for now.

By the way, I didn't welcome Larry to the Newsletter SIG earlier, so I would like to do so now. I think that he has done a great job on this article, and he has a large list of ideas for future issues. Please join me in thanking Larry for his efforts on the newsletter.

BASIC KEYWORDS PUZZLE

Larry Brigman

This is a new kind of puzzle for the newsletter. If you do puzzles very much, you have probably seen this kind before. The way it works is that you are given a "seed" word, and then you have to fit all of the other words on the word list into the spaces on the puzzle. The instances where only one word exists for a particular length give you a further head start on the puzzle. Some of the words on the list are really BASIC commands rather than keywords, and some of them are from BASIC's other than Atari BASIC, but that really isn't a problem, fitting them all in is. Hope you enjoy this one. Good Luck!

P.S. The solution will appear somewhere else in this issue.

2 Letters
ON
RA
TO

3 Letters
ABS
ASC
ATN
BYE
CLR
COE
DIM
EOF
FRE
FOR
INT
KEY
MIN
MOP
NEW
REM
RND
RUN
SGN
SIN
SPC
SQR
STR
TAG
TAN
USR
XIO

4 Letters
DATA
KILL
LEFT
LOAD
NEXT
NOTE
OPEN
PEEK
READ
STEP
STOP
TRON
WAIT

5 Letters
CLOSE
ENTER
ERROR
GOSUB
INPUT
MERGE
PRINT
RENUM
RIGHT
STACK
TROFF

6 Letters
STATUS
STRING
UNLOCK
VARPTR
VERIFY

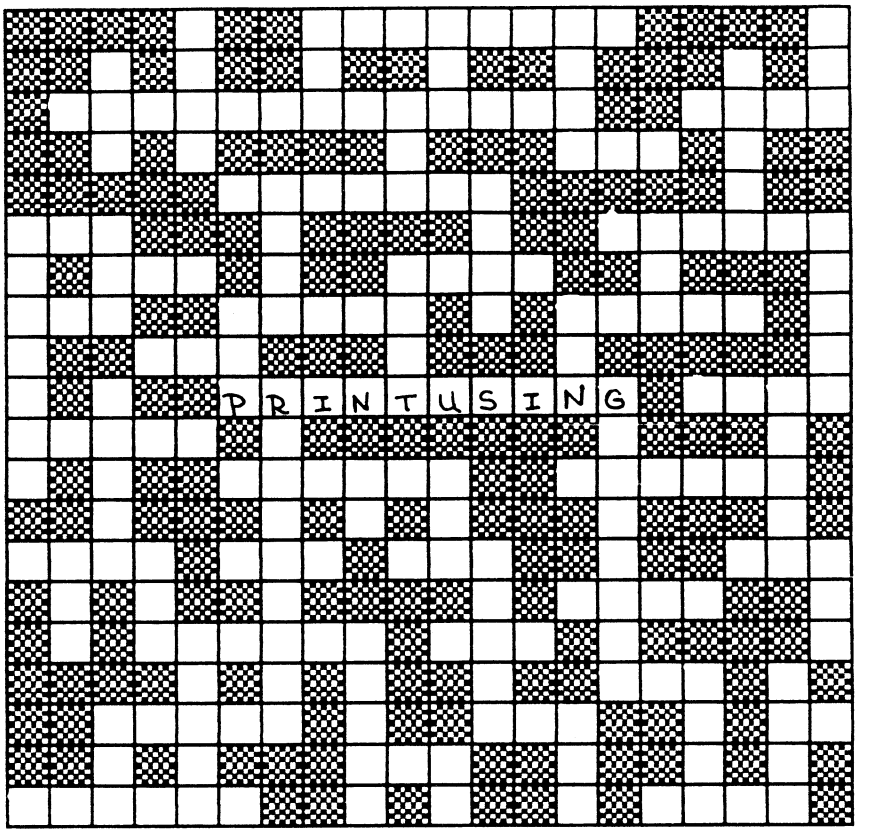
7 Letters
ON ERROR
RESTORE

8 Letters
GRAPHICS
SET COLOR

9 Letters
RANDOMIZE

10 Letters
PRINT USING

13 Letters
OPTION RESERVE



130XE UPGRADES

Chuck Hall

As I promised at the last meeting, I have some information on possible upgrades to the 130XE. This info was passed on to me by Gene Sothan, one of our members. He downloaded it from a board in Utah, which is run by the person making the upgrades available. The Board is UPGRADE and its number is 1-801-485-6311. The following are extracts from the download. I am not a technical type so I hope what I include makes sense.

"130XE w/192K - The 192K has an additional 64K bank that is selected with the PIA bit 6. That allows the ATARI translator to be loaded and modified at the operating system level to support a complete single density ram disk. The address assigned to the ram disk is selectable through the keyboard while a program is running if it returns to the OS on a vertical blank interrupt. The ramdisk and system disks are table mapped and accessed by the keyboard. All drives are addressed by the OS as the next higher drive and this is transparent to the calling program."

"Works fine with MYDOS and the address displacement is valid. It fails to work with most high speed transfer (warp drive) systems that rely on the program code to be extracted from the OS as it has been modified to enable the ramdisk code."

"The unit you're logged onto is 576K configured as 5 single density ramdisks. The BBS is only using 2 of them."

"2 DD and 1 SD or any other combination that will support 512K of ram can be used. Price is yet undetermined on it. The 192K is $80 installed with parts and software."

"I have been trying to get ATARI to produce the upgrade in production XE's."

"The Ramdisk XE offers format in less than 2 seconds, and a full disk read or write in less than 4 seconds. Also has the ability to boot a program from physical dirve 1 and then switch the Ramdisk in as drive 1 and allows you to process data from Ramdisk rather than physical drives."

"Options include a selected warm or coldstart with or without Basic at any time under vertical blank processing, or you can even do a cassette boot with the translator ramdisk modifies OS still in the system. Flip a switch and hit reset and you are a stock XE with an extra 64K bank."

That is about all I have for now. If you are interested I suggest you call the board number listed above. Atari has been sent one of the units for evaluation, and I have heard that there is some interest in it. Lets keep our fingers crossed.

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PRINT TYPE
F = Enhanced print
G = Italics print
H = Double Width
I = Enlarged (one line)
J = Double Strike

LEFT MARGIN
K = 3
L = 5
M = 7
N = 10
O = 12
P = 15

RIGHT MARGIN
Q = 5
R = 10
S = 15

LINE SPACING
T = 4 LPI
U = 6 LPI
V = 8 LPI
W = 12 LPI

PRINT DIRECTION
X = Uni-Directional
Y = Bi-Directional
Z = Uni-Direct (1 line)

PRINT MODE
0 = Logic (default)
1 = Incremental
2 = Quiet Mode

MISC PRINT CODES
3 = Form Feed
4 = Underline print
5 = Cancel Buffer
6 = Skip Over Perf
7 = Skip Perf OFF
8 = Software RESET

(C) 1985 PSD --- Enter all BEFORE C/R --->

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How to do it...

THE X: HANDLER

Ken Alexander, M.A.C.E.

Using the XL's Extra Memory As a Device

From the June 1985 issue of the M.A.C.E. (Michigan Atari Computer Enthusiats) Journal.

The Atari XL computers have an extra 16K of RAM hidden beneath their ROM. This is why the XL's boast 64K RAM while the 800's have only 48K. However, this extra memory almost always goes to waste. There are many new products coming out soon that will use it, but currently there are very few programs besides the Translator Disk and DOX XL that utilize it; most don't even know about it. In BASIC and all other languages the XL's still have the same amount of free memory as a 48K 800. What good is the extra memory if it is not used?

This program allows you to access 14K of the extra 16K as device X: (2K is always allotted to I/O space). You can do most things with it that you can do with any other device; you can SAVE "X:", LOAD "X:", PRINT to a channel opened to X:, GET from a channel opened to X:, etc. You can also NOTE and POINT as with a disk drive. The X: device will not be killed by (RESET). Anything saved to it will be completely invisible to everything except the X: handler itself. Do not use X: when the DOSXL.XL file of DOS XL is in use, or DOS will be clobbered.

To use the program, type in the BASIC listing. It will ask you for a filespec (D:AUTORUN.SYS or C:) and then create that file. An alternate way to do it is to type in the assembler version and save it as AUTORUN.SYS. After rebooting the computer or loading the file from DOS, you will have device X: at your disposal. From BASIC try LIST "X:" when there is a program in memory. The screen will flicker as the ROM character set is switched on and off. This flicker serves the same purpose as the beeping of the disk drive. Type NEW and then LIST the program to verify that it is gone. Now type ENTER "X:" and LIST again. Ta da! It's back. If the X: handler should lock up the computer and leave a bunch of squiggly lines on the screen, press (RESET) and try the operation again. Check to make sure you typed in the program correctly.

How it Works

CIO, the Central Input/Output utility in the operating system, organizes I/O by devices. Each device has its own handler (or driver), which is a program that has the routines necessary to communicate with that device. There are five device handlers resident in the OS ROM: the screen editor E:, the display handler S:, the keyboard handler K:, the printer handler P:, and the cassette handler C:. Each has a vector table with pointers to five routines: OPEN the device, CLOSE the device, GET a byte from the device, PUT a byte to the device, get the STATUS of the device, and do a device-dependent or special XIO command. Some of the routines in each handler are not used, because you cannot input (OPEN #chan, 4,...) from the printer or output (OPEN #chan,8,...) to the keyboard. The five resident handlers have their vector tables in order in ROM starting at $E400 (58368), each having 16 bytes allotted to it. There are the six vectors of two bytes each, a JMP to the power-up initialization of the device, and a spare byte. CIO keeps track of where the vector tables for the handlers are by keeping a handler address table, HATABS, which starts at $31A (794). Each entry in the table takes up three bytes: the designation letter (E,S,K, etc.) and the two-byte address of the handler's vector table. Additional entries can be added to the table; the D: handler is added upon booting DOS, and the X: handler is added upon loading this program. Whenever I/O is done, a call is made to CIO, which tracks down the device handler and takes care of everything.

At the beginning of the program there is a routine that makes X: reset-proof. It steals the DOS re-init vector and changes it to point to the X: re-init routine, which restores both the D: and X: entries to HATABS after each reset. Following this is the X: vector table, and then the actual routines. These routines are similar to ones used by Bill Wilkinson for his program that used ordinary memory as a device from the September 1982 COMPUTE! magazine. Near the end of the program there are two routines that manage the OS ROM while bytes are being read or written to the RAM underneath it. Before disabling the ROM to expose the RAM underneath, all interrupts that use the ROM must be disabled, because if an interrupt happens when there are no ROM interrupt routines the system will crash. Bit zero of PIA chip locaton $D301 (54017, formerly PORTB in the 400/800) controls the state of the OS ROM, and bit one controls the state of the BASIC ROM. There is also a routine that makes sure all reading and writing of data skips over the I/O chip region from $D000 to $D7ff (53248 to 55295).

The X: device is useful as a RAMdisk. It is much faster than floppies and can contain up to 14K of data without giving an error. This is the equivalent of over 100 single density sectors.

continued...

Random access can be obtained after opening X: by using NOTE and POINT with the low and high bytes of the desired address instead of the sector and byte numbers of a disk. X: can be opened for append by OPEN #chan,9,0,"X:". X: is perfect for temporary fast storage. Have fun.

PAC Editor's Note: I entered this program and tested it on the club's 800 XL. It does work quite well, and offers several interesting possibilities. With DOS 2.0S and 2.5 you will need to set it up as an AUTORUN.SYS file, otherwise you need a MEM.SAV file to load it. Also, do not try to access it from either of these DOS's; it will probably crash your system. I don't understand this yet, because the program seems to follow all the rules, but it just doesn't seem to work when accessed from the DOS menu. It works great with DOS/XL, whether under BASIC or at the DOS/XL Command Processor level. If you are going to try it out, experiment a bit before staking your life, programs or data on it. Good Luck. Clyde.

Program Listing

```
5 REM *** X: Creator Program ***
7 DIM F$(15)
10 GRAPHICS 0:? "X: Creator":? :? "Checking
Data..."
15 LINE=1000:TRAP 90
20 FOR X=1 TO 10:READ BYTE
30 TOT=TOT+BYTE
40 IF TOT>999 THEN TOT=TOT-1000
50 NEXT X:READ CHKSUM
60 IF TOT<>CHKSUM THEN ? "Data error in line
";LINE:END
70 LINE=LINE+10:GOTO 20
90 IF LINE<1300 THEN ? "Missing a data line":END
100 ? :? "Enter DEV:FILENAME";:INPUT F$
105 ? :? "Creating file..."
110 RESTORE 1000
120 OPEN #1,8,0,F$
130 TRAP 200
140 FOR X=1 TO 10:READ BYTE
150 PUT #1,BYTE:NEXT X
160 READ CHKSUM:GOTO 140
200 IF PEEK(195)<>6 THEN ? "Error ";PEEK(195):END

210 CLOSE #1:? :? "Awesome...file completed!":END

1000 DATA 255,255,0,34,251,34,165,12,141,60,207
1010 DATA 34,165,13,141,61,34,169,59,133,12,28
1020 DATA 169,34,133,13,169,31,141,231,2,169,120
1030 DATA 35,141,232,2,160,0,185,26,3,240,144
1040 DATA 8,200,200,200,192,34,144,244,96,169,631
1050 DATA 88,153,26,3,169,66,153,27,3,169,488
1060 DATA 34,153,28,3,96,32,65,34,32,10,975
1070 DATA 34,96,77,34,97,34,119,34,132,34,666
1080 DATA 150,34,174,34,189,74,3,201,9,240,774
1090 DATA 86,169,0,141,26,35,169,192,141,27,760
1100 DATA 35,76,171,34,189,74,3,41,8,240,631
1110 DATA 66,173,26,35,141,28,35,173,27,35,370
1120 DATA 141,29,35,76,171,34,32,151,34,176,249
1130 DATA 42,32,233,34,177,224,76,255,34,172,528
1140 DATA 27,35,240,29,72,32,216,34,104,32,349
1150 DATA 233,34,145,224,76,255,34,172,27,35,584
1160 DATA 32,216,34,204,29,35,208,9,205,28,584
1170 DATA 35,208,4,160,136,56,96,160,1,24,464
1180 DATA 96,189,66,3,201,37,208,16,189,77,546
1190 DATA 3,201,192,144,24,141,27,35,189,76,578
1200 DATA 3,141,26,35,173,26,35,157,76,3,253
1210 DATA 173,27,35,157,77,3,76,171,34,160,166
1220 DATA 171,96,173,26,35,133,224,192,208,208,632
1230 DATA 5,160,216,140,27,35,132,225,96,172,840
1240 DATA 1,211,140,30,35,160,0,140,14,210,781
1250 DATA 140,14,212,160,252,140,1,211,252,34,197
1260 DATA 30,35,160,0,96,172,30,35,140,1,896
1270 DATA 211,160,64,140,14,212,164,16,140,14,31
1280 DATA 210,238,26,35,208,3,238,27,35,160,211
1290 DATA 1,96,0,0,0,0,0,224,2,225,759
1300 DATA 2,0,34,0,0,0,0,0,0,0,795
1310 REM * 310 BYTES
```

* * * * * E n d o f L i s t i n g * * * * *

```
.....................
. W SETCOLOR T.
. S A T O P A.
. OPTIONRESERVE TRON.
. C T Q NEW I .
. ONERROR N .
.REM O E STATUS.
.E INT T LOAD A T.
.SGN MERGE D RIGHT A.
.T XIO F U C.
.O I PRINTUSING PEEK.
.RENUM A R R .
.E P UNLOCK VARPTR .
. U D N E P O .
.DATA FOR BYE H FRE.
. S B M N KILL O.
. C STRING ATN C F.
. R Z O E SIN S .
. CLOSE S RND E TO.
. L F USR I X E .
.VERIFY B A M STOP .
.....................
```

ANSWERS: BASKEY

DOS 2.5 RAM DISK FOR THE 800XL

Clyde Pritchard

If you liked the X: device handler for the extra memory in the 800 XL, you may like this even better. To use it you need two things; an 800XL and DOS 2.5. If you don't have an 800XL, you know where to get one, but you will be better off with a 130XE and its "real" RAM Disk. If you need DOS 2.5, it is available from the club library.

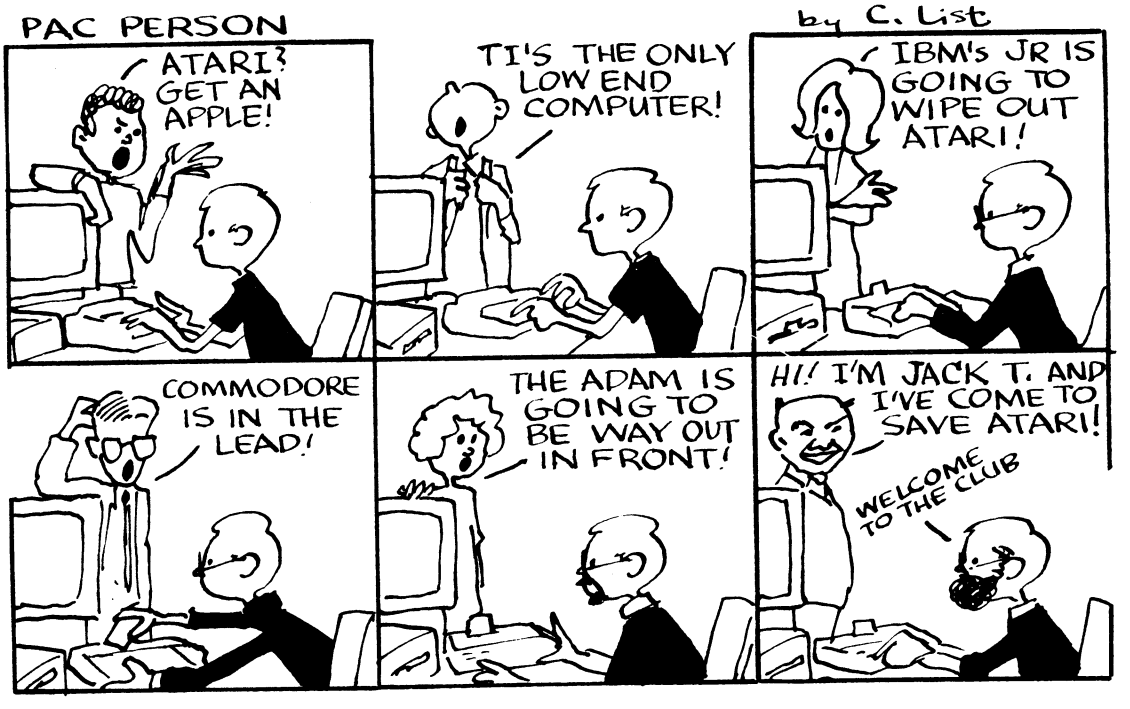
Once you have the 800XL and DOS 2.5, use the following steps to create a mini RAM Disk. This information comes via a message from Rich Reed (72466,2136) to Jonathon Smith (72177,2755) on CompuServ. I tested it on the club's 800XL, and it seems to work fine. You have to be careful to not overfill the RAM disk, but other than that, it's fine.

1. Boot your system with DOS 2.5 and BASIC.
2. Type "POKE 1802,PEEK(1802)+128" and press RETURN. This adds Drive 8, the RAM Disk to the list of active drives.
3. Press SYSTEM RESET.
4. Type "DOS" and press RETURN.
5. Check the directory for D8: by entering "A", pressing RETURN; then enter "D8:" and press RETURN. It should say "000 FREE SECTORS".
6. Format D8: with option "I".
7. Check the directory again. This time it should say "499 FREE SECTORS". This is the amount that would be available on a 130XE, but you will have only about 110-115.
8. Write DOS to D8: with option "H".
9. Delete DOS.SYS with option "D".
10. Return to BASIC with option "B".
11. Type "POKE 5439,56" and press RETURN. This tells DOS to look on D8:, the RAM Disk, for DUP.SYS and MEM.SAV.
12. Type "DOS" and press RETURN. The DOS menu should come up immediately.
13. Create a MEM.SAV file with option "N".
14. Return to BASIC.

Now when you switch between BASIC and DOS, everything is transferred almost immediately between RAM and the RAM Disk! You don't need to save your program before going to DOS, it will be saved in the MEM.SAV file. As long as you reply "N" to the message "OK TO USE PROGRAM AREA?" when you do copy and duplicate disk functions, your program will be restored from the MEM.SAV file on the RAM Disk when you return to BASIC.

The big problem is that DOS tries to format the RAM Disk for more memory than is available on an 800XL. There is no error checking to see if the extra memory exists. If you try to write more than there is actually room for, the RAM Disk destroys itself (and your data). Once again, you need to try this out until you understand how it works before you risk anything valuable.

If you don't want to use MEM.SAV, just omit the steps dealing with it. That way you will have a little more room on the disk for some data or program files. The key words are **"Be careful"**. Happy Computing.



ASSEMBLY LANGUAGE CLASS LESSON 1

Chris Crawford

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Chris Crawford Assembly Language Course
For Worldwide Users Network - 5/28/85

Why Learn Assembly Language?

Assembly language is the great barrier that divides the professional programmer from the amateur. It is the most powerful language available for a microcomputer.

There are four reasons for learning to program in assembly language. First, the speed of execution of assembly language is very high -- about ten time higher than BASIC on the average, perhaps a thousand times faster on certain operations.

Even ACTION, the fastest high-level language, is only about half as fast as assembly language. Second, assembly language tends to be more compact than many languages. Again, ACTION! provides a good comparison. Code produced by ACTION! is about twice as large as equivalent assembly language.

The third reason to program in assembly language is that assembly gives you access to features of the machine that simply are not available in high-level languages. Interrupts are the most notable examples.

Finally, the most important reason for learning to program in assembly language is that it will help you to understand the machine better. And that is a very good place to begin, for you cannot learn assembly language unless you know a little bit about computers.

How Computers Work

I am now going to describe how computers work, in very rough terms. Computers operate on a hierarchy of concepts that spans a great range, rather like the hierarchy that starts with protons and electrons, moves through atoms, molecules, cells, people to civilizations.

A civilization is composed of protons and electrons, but to understand how it is so composed one must know a great deal about the intermediate steps. So too is a computer composed of transistors. There are four intermediate steps between the transistor and the computer.

A transistor is an electrically operated switch. We can assemble transistors into gates that will turn circuits on or off depending on the states of other circuits. There are a variety of gates reflecting the various Boolean operations: AND, OR, NOT, NAND, NOR and EOR.

Gates can be assembled into latches, decoders, and adders. A latch is the simplest memory element: it remembers one bit of information. A decoder translates a number encoded in binary form on a few wires into a selection of one of many wires. An adder will add two one-bit values, with a carry, and generate a carry of its own.

We can next broaden each of these devices into an eight-bit device by simply slinging the devices side by side. Eight one-bit latches slung side-by-the side give one byte of RAM. Eight adders make an eight-bit adder.

We can thus create a RAM module by building many butes of RAM. We access this RAM module with three buses: a data bus, an address bus, and a control bus. The data bus carries information between the central processing unit and the RAM module.

The address bus is sixteen bits wide; a decoder in the RAM module. The address bus is sixteen bits wide; a decoder in the RAM module takes the numeric value on the address bus and decodes it to select the single byte of RAM that is indicated by the address. The control bus establishes the direction of the data flow on the data bus and the timing of data transfer.

The central processing unit (CPU) represents the highest intellectual level of the computer. It is composed of four parts: the Arithmetic and Logic Unit (ALU), the registers, the address bus controller, and the instruction decoder. The ALU is composed of adders and gate arrays that crunch numbers. The particular device to use is selected with a decoder.

The registers are simply on-board RAM. The address bus controller is a device that puts the desired RAM address onto the address bus. The real heart of the CPU is the instruction decoder, a very complex decoder that takes the program instructions out of RAM and translates them into

continued...

action. It does this by feeding the instructions (which are numbers) into decoder circuits that activate the desired gateways in the CPU.

Programming a Microprocessor

Machine code is nothing more than a bunch of numbers that mean something to the CPU. It's hard to work with pure numbers, so we use a little code that makes it easier for us to understand the codes that the computer uses. This programmer-friendlier code is called assembly language, It is a direct, one-to-one translation of machine code. Here is an example of the two side by side:

```
Machine Code   Assembly Language
  A9   05        LDA #FINGERS
  133  $9C       STA COUNT
```

The code on the right may not look very readable, but you must agree, it's far more readable than the code on the left. And they both mean exactly the same thing.

Unfortunately, the computer cannot read the assembly code, only the machine code. Therefore, we need a translator program that will translate the easier-to-understand code on the right into the impossible-to-understand code on the left. This translator program is called an assembler.

A program that goes in the reverse direction, translating machine code to assembly, is called disassembler. It may seem like a bother to go through all the hassle of using an assembler, but it is actually much easier.

Assembly language is not only more readable than machine code, but it is also assembly-time relocatable; this means you can move it around in RAM freely before you start the assembly process. A good assembler also offers a number of extra features that make it easier to keep track of your program or modify it quickly.

Using an Assembler

There are three steps involved in writing an assembly language program: editing, assembling, and debugging. Editing is the process of typing in your assembly language statements. Assembling is the invocation of the assembler. Debugging is the process of running your program and analyzing why it doesn't work. Thus, the entire process of writing an assembly-language process can be described by a fictitious BASIC program:

```
FOR 1= 1 to 1,000,000,000...
  Edit program
  Assemble program
  Debug program
NEXT 1
```

The 6502 Microprocessor

The first item in the 6502 that I will describe is the accumulator. This is a single one-byte register in the 6502. It is the central workbench of the microprocessor; almost everything happens in the accumulator. Your first three instructions on the 6502 are:

LDA address (Load the Accumulator with the contents of address). This instruction loads the accumulator with the contents of the memory location specified by the value of address. The address can be specified by either an outright value, such as $0600, or a symbolic reference, such as FISH, where the value of FISH has been previously declared by, say, an ORG statement or an equate statement.

LDA #value (Load the Accumulator with value). This is much like the earlier statment; it loads the accumulator with a number, only the number loaded is specified immediately rather than stored in a memory location. Thus, the command LDA # 9 will put a 9 into the accumulator.

STA address (Store the Accumulator into address). This command will store the contents of the accumulator into the RAM location whose address is specified in the command. It is just like the first command, except that the direction of data motion is reversed. The LDA command is like a read, which the STA is like a write.

You are now equipped to move data around inside the computer. These commands will allow you to read data from one area of memory and store it into another. LDA and STA are the two most common instructions used in any 6502 program.

Exercise: Write a program that will read the contents of address $FE00 and store the result into addres $680. Your biggest problem here will be just getting your assembler to work. Therefore, I will give the answer away:

```
ROMADD =   $FE00
RAMADD =   $680
       *=  $600
       LDA ROMADD
       STA RAMADD
       BRK
       .END
```

That's the program. Try to get it running with your assembler.

PAC MINI MENU PROGRAM

Clyde Pritchard

The following BASIC program is a pretty good modification or re-write of the "standard" PAC Menu Program. I downloaded it from the PAC BBS the other day, and was somewhat intrigued by it. I thought that some of you without modems might enjoy it and maybe learn something by examining its code, so I made some modifications (removed inverse video and control characters, and changed the machine language routines from strings into data statements) to it so we could print it in the newsletter for you to type in. The program was uploaded to the BBS by Larry Saunders, but I'm not sure if he wrote it, because there was no author listed in program remarks. Anyway, thanks to Larry and the author too, if it's not Larry.

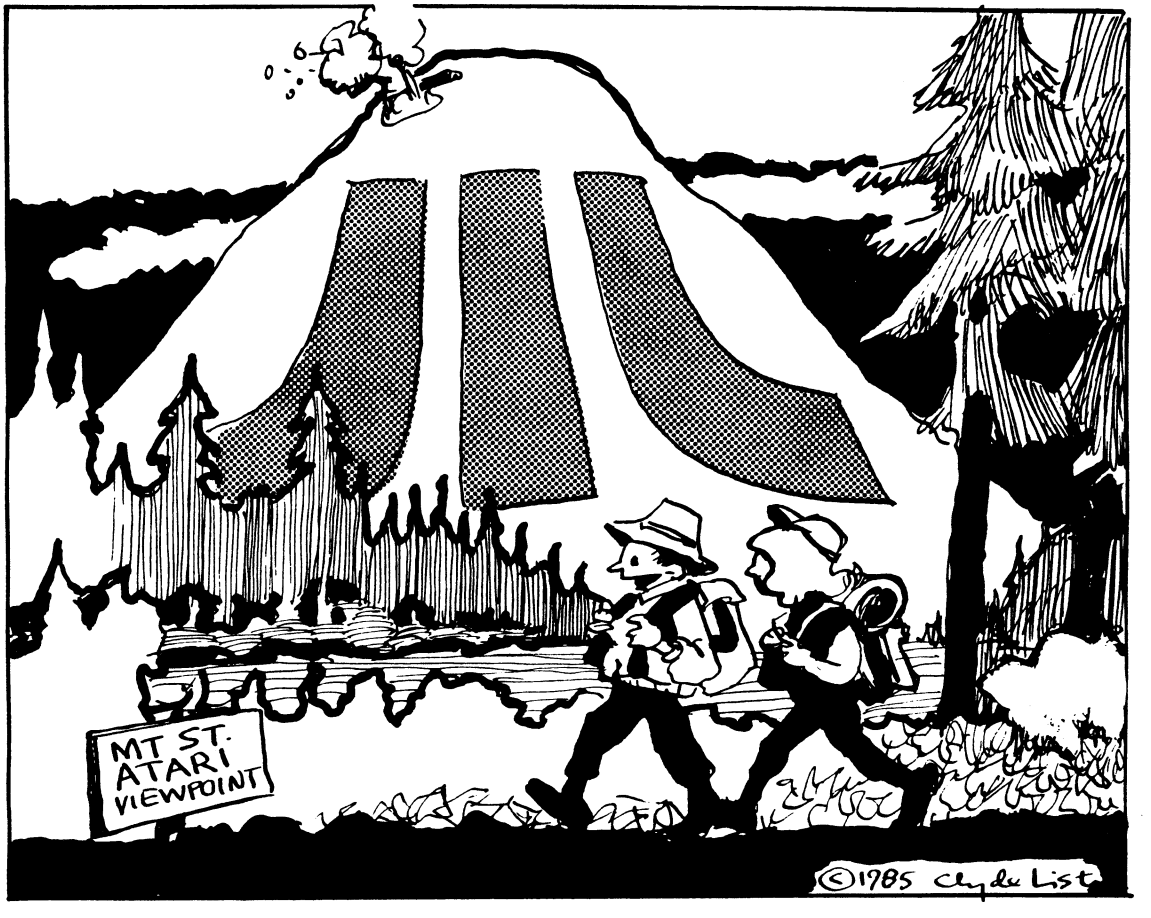
The program starts out by modifying the display list to allow for a mixed mode heading, then displays one or two columns of file names from the disk directory depending upon the number of files on the disk. Each column will handle only 13 files, so you may want to modify it to have longer columns if you keep more than 26 files on a disk. To the left of each filename is a letter or special character. When you press the character next to a filename, it will be loaded by the menu program. It the filename's extention is "SYS", DOS will be called, and the DOS menu will appear. If the file is a SAVED BASIC program, it will be RUN. If the file is a LISTED BASIC program, it will be ENTERED, then you can LIST it or RUN it. If the file is a binary/object program, it will be loaded by the machine language subroutine in the string ML$. To view the directory of a new disk in drive 1, swap disks and press RETURN. To view a directory for drive 2, hold down START, SELECT or OPTION when running the program or before pressing RETURN when the program has already executed and is displaying a directory. The program has been tested on and 800 and an 800XL, and with Atari BASIC and BASIC XL from OSS. Hope you enjoy the program.

* * * Program Listing * * *

```
1 REM Uploaded to PAC BBS by Larry Saunders.
Modified for PAC Newsletter by Clyde Pritchard.
5 GRAPHICS 0: DL=PEEK(560) + 256 * PEEK(561) +6:
X=1: Y=3: POKE DL,6: POKE DL+1,7: POKE 709,0: POKE
710,166: POKE 712,96
10 POKE 752,1: POKE 82,0:? CHR$(125): POSITION
10,0: ? "Portland Atari Club"; CHR$(127); "
mm1.0";
11 ? "    *** mini ***"; CHR$(127); " *** MENU
***": REM Enter '*** mini ***', '***' & '***' in
inverse video
12 ? "  Filespec Ext Sec  Filespec Ext Sec ";:
REM Enter literal within quotes in inverse video
20 DIM DR$(6), F$(20), BUF$(500), ML$(183),
MOV$(27): DR$="D1:*.*": CLOSE #1: IF PEEK(53279)
<> 7 THEN DR$(2,2) = "2"
30 OPEN #1,6,0,DR$: TRAP 60: FOR I=1 TO 64: INPUT
#1,F$: IF Y=16 THEN X=20: Y=3
40 IF F$(5,7)="FRE" THEN POKE 82,2: POSITION
X,Y+1: ? F$: POP: GOTO 60
50 LTH=LEN(BUF$): POSITION X,Y: ? CHR$(64+I);
F$(1,1); F$(3,10); "."; F$(11,17): Y=Y+1:
BUF$(LTH+1, LTH+1+LEN(F$))=F$: NEXT I
60 TRAP 40000:CLOSE #1:POKE 82,2: POSITION 1,20: ?
" Press a letter to Run ";: MK=64+I-1: OPEN
#2,4,0,"K:"
65 REM Enter literal within quotes on line 60 in
inverse video
70 GET #2,K:IF K>MK OR K<65 THEN ? CHR$(125):RUN
80 F$=DR$(1,3):K=K-65:
F$(4,11)=BUF$(K*17+3,K*17+10): FOR I=4 TO 11: IF
F$(I,I)>" " THEN NEXT I
90 TRAP 95: F$(I,I)=".": F$(I+1,I+3) =
BUF$(K*17+11, K*17+13): POSITION 24,20: IF
F$(8,10)="SYS" THEN DOS
92 GRAPHICS 0: POKE 709,8: POKE 710,0: POKE
712,244: ? CHR$(29); CHR$(29); "RUN"; CHR$(34);
F$: RUN F$
95 OPEN #1,4,0,F$: GET #1,A: GET #1,B
96 IF A=255 AND B=255 THEN ? CHR$(125); CHR$(29);
"Binary Load"; CHR$(34); F$: GOTO 110
100 ? CHR$(125);CHR$(29);CHR$(29);:? :? "NEW";
CHR$(29); CHR$(29): ? "ENTER"; CHR$(34);F$
105 ? :? CHR$(29);CHR$(29);"POKE 842,12": POSITION
0,0: POKE 842,13: STOP
110 FOR MLI=1 TO 183: READ MLD: ML$(MLI,MLI) =
CHR$(MLD): NEXT MLI
120 FOR MLI=1 TO 27: READ MLD: MOV$(MLI,MLI) =
CHR$(MLD): NEXT MLI
130 A=USR(ADR(MOV$),ADR(ML$),183): TRAP 100:
A=USR(1536,ADR(F$)): GOTO 100
200 DATA 162,16,32,173,6,134,207,104,
104,157,69,3,104,157,68
210 DATA 3,169,4,157,74,3,169,3,157,
66,3,32,86,228,16
220 DATA 3,76,166,6,169,203,157,68,3,
169,0,157,69,3,169
230 DATA 2,157,72,3,169,0,157,73,3,169,
7,157,66,3,32
240 DATA 86,228,16,6,192,136,240,92,208,
96,169,255,197,203,208
250 DATA 4,197,204,240,210,169,205,
157,68,3,169,0,157,69,3
260 DATA 32,86,228,16,2,48,69,165,207,
```

continued...

```
240,14,165,203,141,224
270 DATA 2,165,204,141,225,2,169,0,133,
207,165,203,157,68,3
280 DATA 165,204,157,69,3,165,205,56,
229,203,157,72,3,165,206
290 DATA 229,204,157,73,3,254,72,3,208,
3,254,73,3,32,86
300 DATA 228,16,137,192,3,240,133,76,
166,6,32,173,6,108,224
310 DATA 2,152,133,212,169,0,133,213,
169,12,157,66,3,32,86
320 DATA 228,96,32,104,104,133,204,104,
133,203,104,133,206,104,162
330 DATA 206,160,0,177,203,153,0,6,200,
202,224,0,208,245,96
    *** End of Listing ***
```



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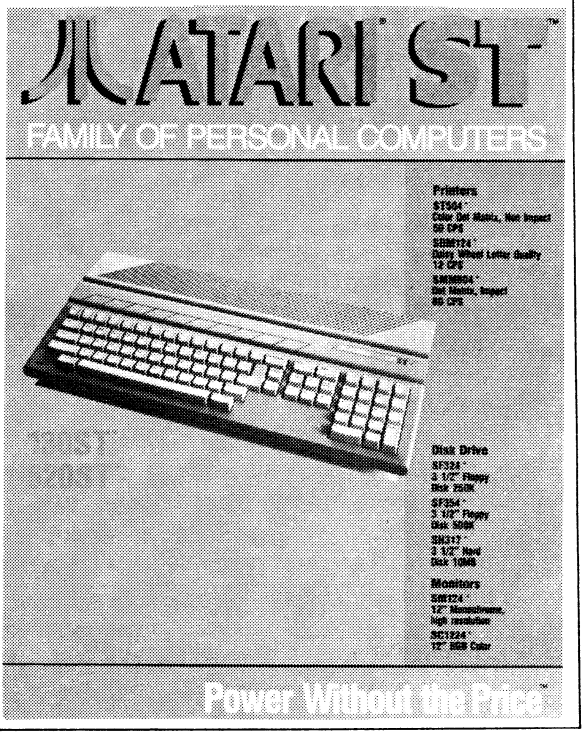

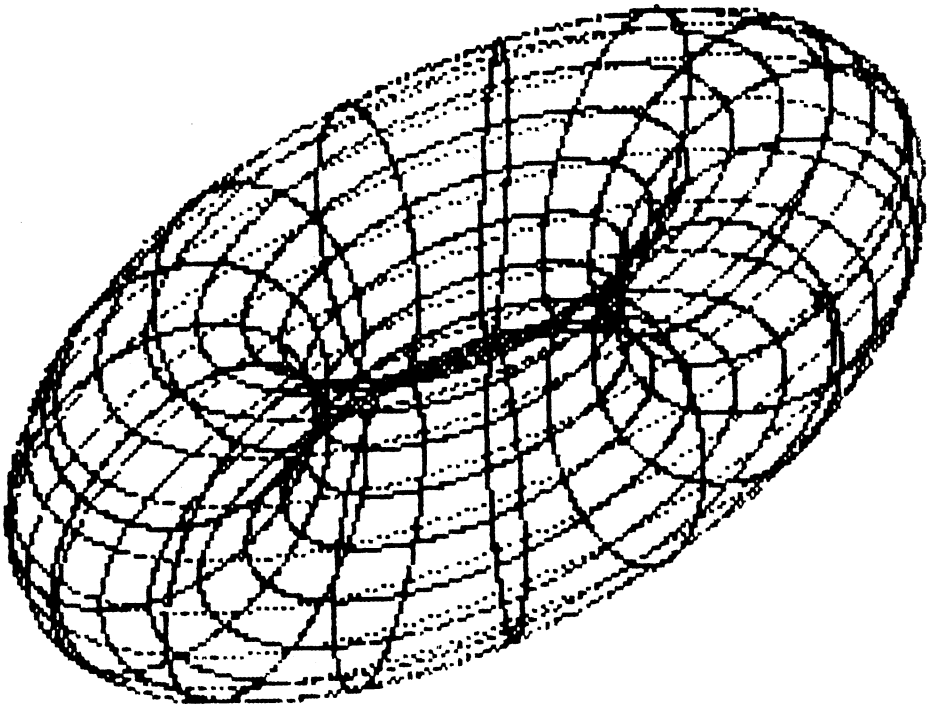

A SPRING FEVER SALE FOR YOU!

WHO SAYS YOUR ATARI CAN'T DO WHAT OTHER COMPUTERS DO?

For less than $975 you can enhance your ATARI system AND add a complete 64k CP/M and 256k MSDOS computer to it!

The ATR8000 is both a complete ATARI interface and a CP/M computer. It runs up to four disk drives that can be a mixture of 5 1/4" (40t and 80t) and 8", single-sided and double-sided. It also has ports for a parallel printer and a modem. With the ATR8000, you can connect normal computer components to your ATARI system AND use these same devices for CP/M computing. Using standard disk drives you can operate in a double density ATARI-like operating system called MYDOS. It even includes modem software!

Even the novice computer user will find ATR8000 CP/M friendly. It includes a program that lets you read disks from over 40 other CP/M computers! SWP provides several utility programs, including a versatile modem program.

You don't have to stop at CP/M! With the addition of one of SWP's CO-POWERs the ATR8000 system can be expanded to include an 8088 processor with up to 1024k of RAM and the MS-DOS operating system! CO-POWER also provides a program to let you use CO-POWERs memory as a high-speed disk drive for CP/M (RAMDISK). There are two CO-POWERs to choose from: CO-POWER-88 has 256k of memory and CO-POWER-Plus is expandable from 256k to 1024k!

BEST OF ALL, buy now and take advantage of SWP's SPRING FEVER prices. Buy the components separately or as a package:

64k ATR8000 w/ CP/M	~~$499.95~~	$399.95
16k ATR8000 (no CP/M)	~~$349.95~~	DISCONT'D
256k CO-POWER-88, MS-DOS, RAMDISK	~~$586.00~~	$399.95
256k CO-POWER+, MS-DOS, RAMDISK .	~~$650.00~~	$549.95
512k CO-POWER+, MS-DOS, RAMDISK .	~~$762.00~~	$629.95
768k CO-POWER+, MS-DOS, RAMDISK .	~~$874.00~~	$709.95
1024k CO-POWER+, MS-DOS, RAMDISK .	~~$986.00~~	$789.95

PACKAGE DEAL #1: ATR8000 and CO-POWER-88 System

64k ATR8000 w/ 256k CP88	~~$999.95~~	$749.95
1 DS 5 1/4" Drive	~~$329.95~~	$159.95
1 2-Drive Cable		$ 25.00
AUTOTERM80 (80-Col Option)	~~$ 29.95~~	-FREE-
MYDOS (DD ATARI OS for ATR)		$ 29.95
		$964.85
UPS GRND (Cont. US)		10.10
WOW!		$974.95

PACKAGE DEAL #2:
Get the Ultimate with ATR8000 and CO-POWER-Plus

64k ATR8000 w/ 256k CP+ ...	~~$1149.95~~	$ 899.95
1 DS 5 1/4" Drive	~~$ 329.95~~	$ 159.95
1 2-Drive Cable		$ 25.00
AUTOTERM80 (80-Col Option).	~~$ 29.95~~	-FREE-
MYDOS (DD ATARI OS for ATR)		$ 29.95
		$1114.85
UPS GRND (Cont. US)		10.10
WOW!		$1124.95

EVEN BETTER:

PACKAGE #3: #2 w/ 512k CP+	$1204.95
PACKAGE #4: #2 w/ 768k CP+	$1284.95
PACKAGE #5: #2 w/ 1024k CP+	$1364.95
PACKAGE #6: #5 w/o drive, cable, MYDOS	$1150.05

CALL SWP SALES: 817-924-7759

SWP MICROCOMPUTER PRODUCTS, 1000 W. FULLER, FT. WORTH, TX 76115

PAC CALENDAR OF EVENTS

JULY

TUE 07/30 - PACE SIG Meeting

AUGUST

MON 08/05 - PAC General Meeting
THU 08/08 - Newsletter SIG Meeting
THU 08/08 - ST SIG Meeting
FRI 08/09 - Articles due for N/L
SAT 08/10 - Newsletter Production
MON 08/12 - Final Layout
MON 08/12 - Communications SIG Meeting
TUE 08/13 - Beginner SIG Meeting
WED 08/14 - Newsletter to Printer
WED 08/14 - Assembler SIG Meeting
TUE 08/20 - Mail Newsletter
TUE 08/20 - Beginner SIG Meeting
WED 08/21 - Board Meeting
THU 08/22 - ST SIG Meeting
MON 08/26 - Communications SIG Meeting
WED 08/28 - Assembler SIG Meeting

SEPTEMBER

MON 09/09 - PAC General Meeting
TUE 09/10 - Beginner SIG Meeting
WED 09/11 - Assembler SIG Meeting
THU 09/12 - Newsletter SIG Meeting
THU 09/12 - ST SIG Meeting

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