PORTLAND
ATARI
CLUB

(Not affiliated with Atari, Inc)

FEBRUARY 1984

GENERAL MEETING: February 6th

BPA Auditorium
9th and Holladay, NE

PAC BULLETIN BOARD SYSTEM

24 hours   7 days
1-503-245-9405

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This newsletter is written and published by members of the Portland Atari Club (PAC), a group of people with a common interest; the Atari Computer. All articles are written and donated by members or are reprints of public domain material from other groups. Opinions expressed are those of the authors and do not necessarily represent the opinions of PAC or those of any other organization. Material appearing in this newsletter may be reproduced for non-commercial use, providing credit is given to the author and PAC or other originating group. Commercial use must be coordinated through the editor. Material for publication may be submitted in the following formats; Atari DOS II text files, LJK text files, Atari Cassette text files, printed, typewritten, or legible handwritten copy. Media may be sent to the editor at the address below and will be returned to the submitter. Contact the editor for instructions on uploading submissions to the PAC BBS.

Commercial Advertising rates are; full page (7x10) - $50, half page (7x5) - $25, quarter page (3 1/4x5)- $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 or contact the editor for other arrangements. Ad deadline is the 15th of the month prior to publication. Only Authorized Atari Dealers may advertise Atari brand products.

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 are held on the first monday of each month (second monday if the first monday is a holiday) on the date and at the time and location listed on the cover of this newsletter.

Exchange newsletters, articles, correspondence and advertising should be sent to the following address:

Portland Atari Club, Attention: (appropriate board member), P.O. Box 1692, Beaverton, OR 97005.

Printing done by SAME DAY PRINTING, 2528 S.W. Spring Garden Street, Portland -- 244-6255

Club Business and Activities

PRESIDENT'S COLUMN
Lloyd Suiter

Atari looks like it is headed in the right direction in making good its promise to 1200XL owners. Atari has just announced the availability of a program on disk called "Translator". This program will cause the 1200XL Operating System to become disabled and load in a version of the Operating System used in the Atari 800.

With this disk booted, you can load and run almost all commercial software that would not work on the 1200XL.

There also seems to be some software that will not load and run on the new 800XL. It looks like the operating system of the 800XL is closer to the 1200XL operating system than the old 800 as advertised. I believe that the same cure for the 1200XL will work for the 800XL. The Translator is the answer (or buying an 800).

You can get the Translator Disk FREE from Atari. That's right I said FREE. Now the catch. You must call Atari'S toll free number to order your disk, and if you can get through then you deserve the disk free. The toll free number for our area is 1-800-538-8543.

Atari is trying to get its name before the public in hopes of generating SALES OF its XL computer line. Atari is to be the Official Home Computer of the 1984 Olympics. Hopefully this will bring about major advertising on television and in the newspaper.

Atari is also starting a campaign with Post Cereals to introduce school children to the Atari Computer system. The event is called "Catch on to Computers". The program is part of a campaign to promote computer literacy among children and adults across the United States. This program will be held in San Francisco, Washington D.C., Los Angles, Denver, Houston, Chicago, New Orleans, Atlanta, Newark, and St. Louis. This effort is expected to expose more than 50,000 adults and children to the advantages of Atari Computers.

With the addition of Alan Alda, the Olympics, and General Foods (Post Cereals) I hope that the misleading advertisments of (what's its name) computer can finally be put in their place.

The club is moving forward in its goal to purchase a large screen television. We are planing to have another raffle in March. If you have any items that you now longer want and would like to help the club raise money we will be taking donations for the raffle at the next two meetings.

Our February meeting hopefully will have material from the Consumer Electronics Show at Las Vegas. This in the past has been one of the better meetings and should be very informative.

Remember if you have any questions, comments or concerns please be sure to use the suggestion box at the meeting.

Have a great one.   LLOYD

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PAC MAILING ADDRESS CHANGE
Clyde Pritchard

Effective immediately, please address all mail for the Portland Atari Club to the address at the end of this notice.

This includes membership renewals, exchange newsletters, letters to the editor, questions for The Help Key column, commercial advertising copy, requests for free unclassified (non-commercial) ads in the newsletter (members only), input to members of the board, bills, etc. The P.O. Box will be checked on a regular basis, and items will be distributed to the proper board member. If you have a "hot" item, call Lloyd or Sharon (they have the keys) to let them know something is coming.

The Official PAC address is:

    Portland Atari Club
    Attn: (Appropriate board member)
    P.O. Box 1692
    Beaverton, OR   97005

BOARD MEETING NOTES
Sharon Berry

The January board meeting was held January 16 at 7:00 in the home of D.J. Johnsen. Attending were: Lloyd, Ed, Dale, Dan, D.J., Sharon, Clyde, Gail, Gary, Russell, Chuck & Jean Hall, Jim Harton & Loren McKimmey. Next month's meeting will be in the PGE building at Scholls and Murray Road at 7:00.

The first order of discussion was the possibility of our being established as a non-profit organization. Lloyd is going to check on the specifics.

Lloyd has devised a large Program Planning Guide for the entire year. Any suggestions for general meeting topics will be warmly received by Jim. Anyone who envisions attending future events concerning Atari should contact Jim.

It was generally agreed that the January general meeting went quite well. An attempt was made to shorten the business end of the meeting to make room for less mundane topics. Sales people (yes, even Chuck Legg!) and attendants alike seemed to agree that the cafeteria locale was successful. It certainly made the auditorium quieter. The beginners group, steered by Mike Calvin, progressed well. Thanks, Mike. More volunteers to lead this group would be greatly appreciated.

Only eleven people signed up on the interest sheet for Graph Fix (see, I spelled it right this time) decals at discount. So, you're on your own as far as ordering them. The discount would have applied only in quantity of fifty.

OLD BUSINESS

Dan reported that the disk duplications came out perfectly. He sold out of card games last meeting. These games are very good- especially cribbage. Good work! Look for a few changes in our utility program in the near future.

A motion was made, seconded and passed to allow retired board members one year free membership for each year served. Gary and others feel that such a perk would encourage those who served to keep in contact with the club and discourage the effect of burnout.

Anyone who has news of new Atari clubs across the country, please let the board know. An exchange policy would be very beneficial.

There was some discussion about the fact that some people have been reaping the benefits of our meetings for months without joining. You know who you are. As a step forward against parasitism (is this a real word?), the newsletter price will now be $2, not $1.

Ed is going to work on determining which businesses are entitled to receive complimentary copies of our newsletter. A number of stores have helped us greatly in selling our software, including membership sign-up sheets in their mail-outs, and inviting customers to our meetings. Many thanks to them!

Gail said that the dues of approximately 142 members have expired and have not been renewed. For shame! She will be mailing reminders to these people soon.

Clyde had requests for quarter page ads in the newsletter. A quarter page will cost $15, a half page will cost $25 & a full page will cost $50. Where can you get such a deal? Advertisers will be offered three months for the price of two, if prepaid.

Ed will research possible future locations for general meetings. Clyde passed on a message from Walter that we have our regular space at BPA reserved for the rest of the year, but we could be pushed out at any time due to their upcoming construction project.

BIG SCREEN TV!

It was informally decided that 25% of each month's software sales revenue would be transferred to the big screen fund. A portion of January's revenue was reserved for this goodie.

Our bylaws state that we must have a three month reserve fund to cover regular expenses. The newsletter is our biggest obligation. With membership increasing (400 on mailing list), the old reserve fund was not adequate. Therefore, a portion of our membership fund has been transferred from our checking to our savings account.

NEW BUSINESS

Dan will be traveling to Boston next month. He will take slides of Parker Brothers' layout and

plans to write an article on his observation. He reported that blank disks are selling quite well at the meetings. A portion of money will be allocated for blank disk purchase. By the way, Dan will have some cute little goodies available at future meetings (clue: they chomp and they crawl).

RAFFLE

Lloyd announced that there will be another raffle in March (save up your money, folks). Dan is going to contact Bridget about a great deal on two 820 thermal printers, on of which will be used as a prize. The other printer will be put in the club's hardware inventory for use at meetings, etc. There will also be prizes for the runners up.

Lloyd said that someone is needed to write utility program documentation in the newsletter. Our friendly and capable Business Application SIG leader, Chuck Hall, kindly volunteered his services. Many thanks, Chuck!

GOOD IDEA

Lloyd brought up the subject of a PAC lending library. This would include people's seldom used programs for use by other members. Seasonal programs such as tax accounting programs would be especially useful. Any ideas?

ANOTHER GOOD IDEA

The idea of a clubhouse or coffee house for users classes was thrown into the ring. This could be located in the building of a non-profit group and be open several days per month. Several members felt that it might be worthwhile to charge a small admission to pay knowledgable people to man it. Again, any ideas?

TREASURER'S REPORT

As of this reporting, our checking account contains approximately $2000. January memberships amounted to $1220. Software sales came to $548. A big, but very worthwhile expense was for disk duplication. $400 will be transferred from our checking account to our savings account, bringing our reserve fund to slightly over $1000. Our big screen fund, once software money is included, will reach $387.
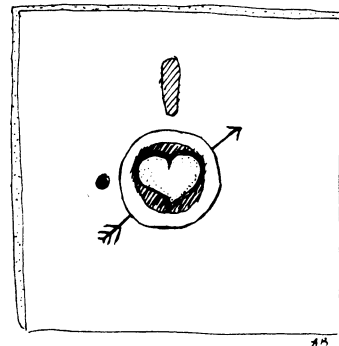
MEMBERSHIP NOTES
Gail Horner

A review of our current membership roster as of January 13, 1984 showed 142 members whose dues have expired, from a total of 400 members.

Following the decisions of the Board of Directors, these members will be dropped from the roster. We are hoping many will send their dues and remain with us. However, rather than purchase undue numbers of the February newsletter, our order will be adjusted according to the paid-up membership plus perhaps 75 extra copies. Members will be able to catch-up and receive the current newsletter, thus keeping their subscription gap-free, at the general meeting.

Come on back and join the fun. New members benefit from the beginner's section held in the cafeteria while more advanced members remain in the auditorium for their program, during the program section of the meeting. Something for everyone.

UTILITY DISK CORRECTION
Clyde Pritchard

Bob Greene has supplied me with the following correction to the program "TIMECLOK" on the PAC Utility I disk. Dan will be putting the fix on future copies of the disk shortly, but for now you will need this fix to make the program work right.

Line 160 should read:

160 DATA 6,173,240,6,105,0,141,240,6,6,201,19,144

The "19" was an "18", which caused the time to change from 11:59:59 to 01:00:00.

SPECIAL PROJECTS
Gary Hanson

As I hope you've heard by now, we have started a special project to build a fund for the purchase of a large screen TV. It will be for use at PAC meetings and special events like the annual OMSI Computer Fair.
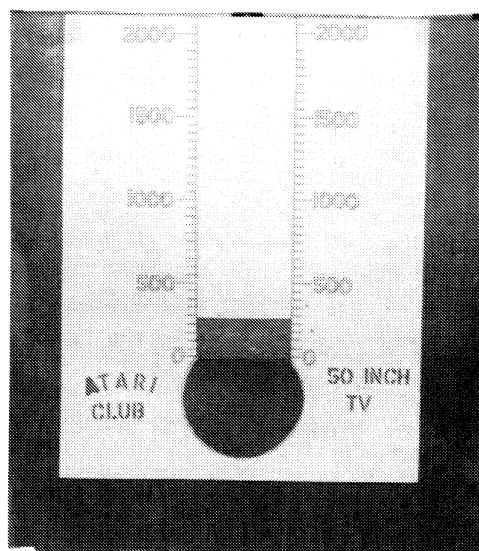
One of the primary sources for building up the fund are raffles that will be held as often as we have items to offer as prizes.

In addition to purchasing raffle tickets, you can help out by donating computer related items such as books, software and even hardware items that you have no use for and haven't been able to sell or trade.

The Club will acquire the "major" prize for each raffle, and the items that you donate will be used as "secondary" or "runner-up" prizes.

The next raffle is being planned for the March meeting, with a printer as the grand prize.

To donate items for the raffles, just contact any board member. Their names and phone numbers are listed on the inside front cover of the newsletter.

**BIG TV FUND DRIVE
CLEARS THE BULB**

JANUARY PACE MEETING
Trudie Mishler

The first half of the meeting was spent examining LJK Letter Perfect. The disk printer-editor for LJK allows you to set such things as the characters per inch, right and left margins, and the kind of type (e.g., bold face, italics, expanded etc.), for your printer and save them on a disk. When you want these settings for printing out something, you save the file on the disk with those settings. When you print it out it will be to those specifications. You don't have to select them each time! You may do superscript and subscript using Letter Perfect. Both Gemini and Epson printers work with Letter Perfect with very few differences. One of them will not do superscripts. We looked at some samples of various Gemini 10 Fonts.

Chris had typed in and embellished a word find puzzle generating program from Antic. Eagerly we suggested words to type in and watched with anticipation as the computer absorbed each word into the 10x10 letter grid we had specified. Those of us who teach were thinking of the possibilities for using this neat little program. It absorbed all our words the first time but spit one out when it tried to generate a second variation. It printed out one copy of each variation and a "cheat sheet" showing where the words were. The advanced version placed the words in horizontal vertical and slanted positions. The word finds allow 10 to 30 words apiece. What a great tool!

(Ed. Note: Chris has given me a copy of the word find program to use in creating filler items for the newsletter. We will try to make use of it when we have space to fill.)

THIS MONTH'S PROGRAM
Clyde Pritchard

This month's program is a number guessing game that I wrote when I first got my system. It can be fun for Atari users of all ages. It is just a simple little program that shows what can be done with your Atari with just basic BASIC. Hope you enjoy and maybe learn something from it. Next month I hope to be able to start getting small programs from our program librarians. The program listing is on the inside of the back cover.

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Clyde Pritchard

Just one thing seemed to be missing from the January newsletter, captions for the pictures. Sorry about that. For those of you who are unfamiliar with the people in the pictures, here is the missing information: Picture #1 - New board members, front row (L-R); Walter Germer - Advisor, Lloyd Suiter - President, Sharon Berry - Secretary / Treasurer, back row, left to right; Ed Kammerer - Vice President, Gary Hanson - Special projects Director, Dan Heims - Disk Librarian, Dale Chipman - Cassette Librarian, Jim Berry - Program Director, D.J. Johnsen - Special Interest Group Coordinator. Picture #2 - Old board members, (L-R); Lloyd Suiter, · Walter Germer, Dean Wagner, Dan Heims.

This month's issue is packed pretty tight. Because we are trying to limit the size of the newsletter to 20 pages, several items have been delayed until next month. The next issue should include reviews of the new Atari 800XL, BASIC XL from Optimized Systems Software (OSS), Spell Wizard from Datasoft, Spell Perfect from LJK, and using the Commodore 1701/1702 monitors with the Atari. The list may be too long, but we will try to get everything in. Other articles planned for upcoming issues are; Action from OSS, Video O/P for the 400, Tuning the 810 disk drive, Syn-Apps (SYNFILE, SYNCALC, SYNTREND, and SYNCHRON) from Synapse, Home Filing Manager and Family Finances from Atari, and reviews of programs for young children.

We would like to have reviews of the Atari 1050 disk drive, the Rana, Trak, Astra and Indus GT drives. Also, reviews of the new Atari (and non-Atari) printers, alternative printer and RS-232 interfaces, new modems like the Signalman Mark XII, new games like Encounter and Rainbow Walker, and the many other new (and old standby) products.

The largest item this month is a fantastic hardware modification for the 800 by Walt George. He has put several month's work into planning, building, testing, and describing how to add a built-in amplifier to the monitor output curcuit. This change allows monitor users to take advantage of the audio lead from the DIN socket without having to add an external amplifier, now all you need is a speaker. Pat and I are encouraging Walt to submit his article to one of the national magazines. Once you read it, I'm sure you'll see that it is very professionally

done and deserves the exposure.

Joeseph Richter sent me a great "how to" article that I'm sure everyone will enjoy. Steve Billings has done a fine review of Rally Speedway, and a news item on a Consumer Reports analysis of home computer systems for word processing. Lloyd Suiter submitted an interesting review on Combat Leader, and our regular columnists, Walter Germer, Trudie Mishler, Pann McCuaig, David Pelinka, and several board members came through with flying colors.

The masthead on the inside front cover has a new look. It now includes information on the content of the newsletter and how to submit material for publication. Also listed is information on commercial advertising rates, copy size, and deadline. There is also a summary of membership benefits and cost. The PAC mailing address is now listed at the bottom of the page.

Remember that members can place free "unclassified ads" for non-commercial sale of computer related items. Limit copy to 25 words or less and mail to me at the club address. Members can also submit questions for The Help Key column and letters to the editor. Also, as Lloyd mentions in his review, anyone who wants to submit reviews, essays, or whatever for publication is encouraged to do so. This is one of the best ways to share with fellow members, because you can take your time, you're not on the spot with a live audience, and the newsletter staff is available to help polish the rough edges (if any). So give it a try, you'll be surprised at how good it feels to share the spotlight.

The schedule for production of the March newsletter is:

2/09	- Newsletter Meeting
2/10	- Normal Article/Column Deadline
2/15	- Advertising Deadline
2/17	- Final Article/Column Deadline
2/18,19	- Rough Layout/Production
2/20,21	- Final Layout
2/22	- To Printer
2/27	- Mailing

The newsletter meeting is held at 7PM in the Round Table Pizza Parlor at the intersection of Barbur Blvd. and Capitol Hiway. All interested members are welcome.

News and Reviews

UP AND COMING
Walter Germer

With C.E.S. now behind us it's really hard not to write about all the new hardware and software coming for the Atari in the first six months of 1984. But as I promised last month, in this column I'll present the UP AND OUT AWARDS for 1983. These are my choices for the best (and worst) Atari software for 1983 based on dealer sales, recommendations from friends, and my own personal taste. Honk if you see your own favorite.

The ** MOST IMPROVED LINE OF SOFTWARE ** award goes to Atari for their recent cartridge software. DEFENDER, DONKEY KONG, DIG DUG, TENNIS, MS. PACMAN, POLE POSITION, and ATARIWRITER generated cheers from Atari owners and attention from other software developers. If you've been with the Atari from the beginning you will remember the early 4k and 8k game cartridges. Games like SPACE INVADERS didn't even come close to tapping the graphic potential of our machines. The great game CENTIPEDE became another of Atari's mistakes (8k design for the computer, then a 16k version for the 5200 that should have been released for the computer). Now in 1983 Atari has finally taken the computer out of the 2600 game machine category. Atari not only went with 16k game cartridges but game programs looked as good or better than some 48K computer games. 1984 holds some exciting surprises. The graphics and playability of these games will continue to improve. ATARI has firmly established themselves in the software market place and is now extending their marketing with the ATARISOFT line of translations for other computers.

** WILL THE REAL DONKEY KONG PLEASE STAND UP? **
The winners in this category are many and are all very good games. They are JUMPMAN, DONKEY KONG, MINER 2049ER, HARD HAT MACK, SPELUNKER and LODERUNNER. This is a hard one to call. MINER 2049ER is probably one of the top selling games of 1983 (being the first Donkey Kong variation). Atari's Donkey Kong is an excellent translation of the original. Loderunner (a late arrival) has almost unlimited screens and is getting a lot of time on my play list. All definately deserve to be in the top 10 of 1983. I'll go with MINER 2049ER, a game that was first written for the Atari, and then translated to other machines.

** WHAT'S A QUE BERT? ***
There were many Q-BERT look-alikes in 1983, but most were just average. The nominees are JUICE, PHARAOH'S PYRAMID and the real Q-BERT. And the winner is PHARAOH'S PYRAMID, a game which takes the concept of Q-bert and improves it.

** PLAY BALL! **
Sports games is an area that is just starting to grow. If not for Gamestar I might have overlooked this award. They came out with STAR BOWL FOOTBALL and STAR LEAGUE BASEBALL. A late entry was TENNIS by Atari. It's an excellent game and because of my love for tennis I was going to make it the winner, but the real winner has to be STAR LEAGUE BASEBALL. It's a brilliant 3-D simulation with excellent player control. The only thing missing is the hot dogs. 1984 might be a big year for sports games with Atari promising BASEBALL, SOCCER, FOOTBALL, and BASKETBALL.

** GENTLEMEN, START YOUR ENGINES! **
Road racing games were very popular in 1983 and were miles ahead of the old INDY 500 for the 2600. The top four are BAJA BUGGY, RALLY SPEEDWAY, POLE POSITION and PIT STOP. Their different approaches make it difficult to pick a winner. I'll take POLE POSITION for it's excellent 3D view.

** WHICH WAY TO THE FRONT? **
The best war game award usually goes to a game from S.S.I Software, but this year it goes to OPERATION WHIRLWIND from Broderbund. Its design is similar to Eastern Front in that the battlefield scrolls in four directions. This one is not a quick game to play; an average game takes three hours. But who said war was easy?

** BEST SKILL GAME **
The winner is the chess game from ODESTA. The program is just what the serious chess player needs.

** BEST EDUCATIONAL GAME **
The winner in this category is MASTER TYPE. It was released in 1982 but it grabbed a lot of sales 1983. I never thought learning to type could be so much fun. The best software company for educational software was SPINNAKER.

** BEST APPLICATION PROGRAM **
In years past the Atari has been only thought of as a game machine, but the number of good application programs is growing. The two programs I put on top are B-GRAPH (graphing utility) from Inhome and THE HOME ACCOUNTANT (home finances) from Continental . Both are very useful and provide a great deal of flexibility.

** LANGUAGE OF THE YEAR **
This is a pick which could be thrown one way or another. The language which I pick is LOGO. My reason is that it's easy to teach and forms good programming habits. Atari's LOGO is one of the most advanced implementations available for any machine.

** BEST ADVENTURE PROGRAM **

This is not the type of game I play a lot of, but I do watch and listen to others that do. I also believe that there are a lot of different types of adventure games and because of that I have many winners. ** Best text adventure ** (tie) SUSPENDED, THE WITNESS, PLANETFALL, ZORK III and ENCHANTER all from Infocom. (Next year Infocom may have some competition from Synapse.) ** Best text and graphics ** is GRUDS IN SPACE. ** Best D&D ** ULTIMA I,II,III (all worth the wait) ** Best adventure game which uses a joystick ** MURDER ON THE ZINDERNEUF. ** Best arcade adventure game ** THE PHARAOH'S CURSE. Those are just a few of the great adventure games released in 1983. Look for more companies and players to go adventuring in 1984.

** BEST GAMES OF 1982 WHICH ALSO REMAIN ON TOP IN 1983 **

If you looked at a top 20 list of software for 1982, you would have seen CHOPLIFTER, FROGGER, ZORK I and II, SHAMUS, NECROMANCER, and CASTLE WOLFENSTEIN. All are classics and will be around for a while.

** THE GAME WHICH SHOWS THE MOST POTENTIAL FOR 1984 **

It could only be DROL from Broderbund. A fantastic game which has game characters you'll just have to see.

** MOST UNUSUAL GAME **

Last years winner was NECROMANCER from Synapse and they win again for DRELBS. It's a maze game with good graphics but beyond that you'll have to see it to appreciate it.

** MOST OVERRATED BIG SELLER **

ZAXXON is the winner of this award. The arcade game was fun and the first of its type. It could have been a good computer game but the translation was badly botched. The blame must go to Datasoft. (Synapse will be releasing Zaxxon for the Commodore 64 and it will blow our Datasoft version away.) The runner-up in this category is GORF.

** WHEN IS AN 800 LIKE A 2600? **

Atari's past mistakes for some reason didn't register with some other game makers. They are the winners of the 2600 look-alike award. The games are MONSTER MAZE, PLATTERMANIA, FAST EDDIE, FIREBIRD, EMBARGO, ATLANTIS, DEMON ATTACK, SQUISH'EM, DEADLY DUCK and so on. Software companies like Sirius, Epyx (which has improved), Fox Video, Gebelli and Imagic all thought that they could make some quick bucks by cloning 2600 games into computer cartridges. If they thought

Atari owners wouldn't know the difference they were wrong.

** GAMES WHICH DESERVE AN AWARD **

PINBALL CONSTRUCTION SET (create your own pinball game), MULE (economic simulation) ARCHON (a cross between a strategy game and an arcade game). Another winner without a category is CAPTURE THE FLAG, a great 3-D maze game in only 8K of programming. And let's not forget BLUE MAX, a game which showed Datasoft what Zaxxon could have been.

** HONORABLE MENTION **

PREPPIE I,II, SUPER CORBA, REPTON, A.E., and FORT APOCALYPSE.

And finally, ** THE WORST GAMES OF 1983 ** ZAXXON (the tape version), the 2600 look-alikes I mentioned above, LAZER MAZE, and CONGO BOGO (a terrible version of a good arcade game). These are just a few of the worst games of the year. I'm losing interest in them again...

So there you have it. I guess it shows that I found it difficult to narrow the list down to a top 10 or 20. We can count ourselves lucky that the choice is so hard. Let's hope 1984 is even harder.

To my surprise ATARI again showed the 1450XLD at C.E.S. There are some good rumors about that machine. Oh no, I've run out of memory for now so we'll talk about C.E.S. next month. See you then.

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SIGnificant TOPICS
DJ Johnson — SIG Coordinator

This is the first of a new monthly column to help promote the various PAC SIG Groups. Its purpose is to help match up people who share the same interests.

Because I am new at this job, I will need help. My first request is that all of the current group leaders see me or give me a call. I will be helping the disk/tape sales at the next meeting, so catch me there, or call me at 245-8063 during the evening. You may also call me at 245-4374, at 300 baud. (BASBBS should be back up real soon, they promised a disk this week).

With the help of the group leaders, I can send the inquiries I am receiving to the proper people.

Below is a list of known or suspected SIGs. If you do not see the interests that you have, let me know! I can't try to match people up until I know that the people exist.

Special Interest Groups at PAC: EDUCATION (PACE) - Trudi Mishler, ASSEMBLER - Pat Warnshuis, BUSINESS APPLICATIONS SOFTWARE - Chuck Hall, FORTH - Pann McCuaig, ATR8000 - Leroy Baxter/Dave Dillner, TELECOMMUNICATIONS - Russ Schwartz, BEGINNERS - Mike Calvin, GEMINI PRINTERS - Gail Horner, NEWSLETTER - Clyde Pritchard, LOGO - ??, AMATEUR RADIO - ??, GAMES - ??

The last three have been requested, but do not have a group leader. These are not all of the possible SIGs that we can have at PAC, these are just the ones that have had an interest shown in them. If you are interested in joining any of these groups, in forming a new group, or in becoming a group leader of one of the orphans, it is really very simple.

To join a current group, just find the person listed, and let them know that you are interested. They will tell you about the meeting schedule, if any, and the other functions of the group.
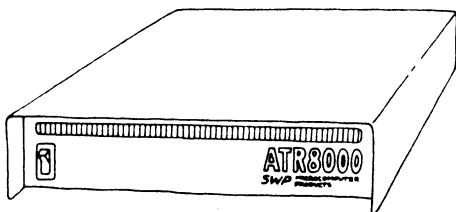
To form a new group, or take over one of the orphans, call me at the number above, and let me know. The only repsponsiblilities of a grop leader are to know when and where the meetings are to be held, if there are any, and to be available as a contact person for the group. I would appreciate it, also, if you could let me know when and where your meetings are. Then I can direct people to the right place when they call. (and they do call)

The other thing that a group leader may do, if desired, is proselytize new members by giving a short blurb at the general meeting, (or in the newsletter).

The responsibilities are small, but the rewards in learning and friendships can be great. Give it a try, the worst you can do is get your name in the newsletter!!

Next month, I will print a questionaire to see what other interests exist in the club. (There will be a drawing of the entries for a piece of software, so you will want to enter). After the results are in, I will tabulate the results for all to see and wonder at.

CONSUMER REPORTS
Steve Billings

ATARI CRUSHES COCO
ATARI CREAMS C64
ATARI ANNIHILATES ADAM

Yes sir Atari fans, once again Atari shows its stuff. Consumer Reports magazine in their February issue dived into the subject of home word processers. Guess who got the nod.

In an effort to keep the systems tested under a $1000 price limitation the Consumer Reports staff purchased four systems based on an Atari 600XL, a TRS 80 Color Computer (Coco), a Commodore 64, and the Coleco Adam, with peripherals and software of comparable value.

Each system was then compared as to ease of use, available software, and quality of the printed results. The Atari computer won on all counts.

The printers selected were of the respective manufacturers name brand. The Atari 1027 printer was judged to have excellent type, be moderately quiet, and fast enough for the average home user. The Adam printer was found to have good quality type, but very noisy and bulky. The C64 and Coco printers (both dot matrix, since a letter quality printer was not available within the cost limitations) were both determined to be of poor quality type.

Atari's AtariWriter word processing program was found to be by far the best software tested. The Adam built-in word processing software was poor for several reasons, including not always working.

Consumer Report's recommendation for the best system for home computer word processing was the Atari 600XL and Atari Writer word processor with an Atari 1010 cassette recorder for storing files. Make sure your friends, considering buying an inexpensive home computer system intended for use as a word processor, pick up the February issue of "Consumer Reports" before spending their hard earned money on an inferior product. (P.S. Tell them Atari Basic is A-OK and is not necessary for word processing use.)

(Ed. Note: In talking to other people who have read the report, it looks like Atari could have won even if the 800XL had been used in place of the 600XL. One of the C64 set-ups included a disk drive, and it still lost.)

XL TRANSLATOR PROGRAM DISK
Clyde Pritchard

As Lloyd mentioned in his column, the Atari Translator disk is now available. You can get it from Atari as he said and also from some of the local Atari dealers. The disk actually contains two programs, one per side. Each is an auto-boot program, and the directory has been modified to display a message that says "ATARI TRANSLATOR - PLEASE BOOT THIS DISK". The two dealers that have the disk are Computers, Etc. and IB Computers. I don't know how Computers, Etc. is distributing it, but if you take two blank diskettes to IB Computers, they will swap you for two of theirs with the Translator programs on them. No documentation comes with the programs.

I tried the programs on my 800XL (yes I kept my trusty 800), and program "A" took care of the problems that I was having. It seems that all of the XL computers have the same operating system, rather than the 600XL and 800XL having something new (or old as was rumored at one time). The translators will not correct problems with cartridge based versions of programs like LJK's Letter Perfect because cartridge initialization takes place after the disk boot process.

The APX Advanced Music System (AMS) would not work with the translator alone, I had to use my old Atari BASIC cartridge to get it running. This means that even though the built-in XL BASIC is upward compatible with the old Atari BASIC, there have been some changes. The problem with AMS must be similar to the OS problem; usage of illegal entry points.

To use the translator programs, boot system with the translator disk, and at the prompt, put in the disk you really want booted and press "SELECT". The translator program then boots your disk. Also, if the program doesn't use BASIC, hold down the "OPTION" key (600-800XL only) to prevent the built-in BASIC "cartridge" from causing problems. The translator programs let you know if a cartridge is present. If the first translator program doesn't work, try the other side. If that doesn't work, it looks like you're out of luck.

The other place to get the translator programs is at the February PAC meeting. We will have a system set-up to make copies onto your disks. So if you need the programs, bring two formatted disks (or one formatted on both sides) with you.

RALLY SPEEDWAY
Steve Billings

Have you ever imagined watching a Grand Prix road race from the Goodyear blimp? You have? Well have you ever wondered what it would be like to have a remote control over one of the racing cars? If so, Rally Speedway was written for you.

Rally Speedway is from Adventure International, a Scott Adams company. Scott Adams is more famous for text adventure games, but for some time has been distributing some good arcade style games such as Preppie (I & II), Stratos and Sea Dragon. Rally is another arcade style game and it puts you high overhead and in control of a race car.

Controlling the car takes some practice, steering is touchy, and the track narrow at times. Trying to control a car racing down screen by pushing the joystick left to move right and right to move left is at first confusing (remember the overhead view) and this game does not allow for tentative decisions or you end up knocking down trees and getting thrown from your car on fire. Whew!

The graphics are good. The track scrolls smoothly, and the roadside scenery is detailed and interesting if a little repetitive (you're better off to keep your eyes on the car and road anyway). Houses and trees offer fiery crashes and puddles slow things down for the unwary off-roader.

As long as you stay on the track things are fun. You have three options for road conditions: dry roads, wet roads, or icy. There are also options for rates of acceleration and top speed. Stick to slower acceleration and lower top speed for beginners or you will spend more time in the trees then on the track.

With a little practice you will soon be doing four wheel drifts through hairpin corners and accelerating into the straight aways.

The cartridge comes with two race courses in memory. Both are rather long and tortuous. The object is to complete the course in as little time as possible. A clock at bottom screen keeps track of the lap times. There is also an option to play two racers who race for a predetermined number of laps. If one car crashes or falls too far behind, a penalty is assessed and the two cars are reset side by side on the track ready to go again.

Another feature of the game is the ability to create your own course layouts. Calling up this feature from the menu presents you with an overview of the entire track and gives you another menu of track pieces, similar to pieces you would find in a slot car race set. Using two joysticks you can select a piece of track and place in on the course wherever you want. This sounds easy, but the shapes of the pieces are a little ambiguous as to their function and it takes some work to fit them together in a continuous, even flowing course. You can then put in whatever road side obstacles you wish so that things do not get too easy. Your own creations can then be saved to either disk or cassette.

My first attempt to build a track took a couple hours, but the finished track was fun to drive (lots of straights and whoop de doo corners).

Like I said previously, once you start to get the hang of remote control driving and start to anticipate the corners you can really get going and slide through corners complete with squealing tire noise. However, once you get fairly adept at running the course the competition becomes one of trying to trim tenths of seconds off your best time. Then its time to increase the acceleration and top speed or build a new track, but what's missing is any kind of big finish. It's like you're stuck in the twilight zone of trying to qualify for the Indianapolis 500 and are never going to make the field.

What would be fun would be to race against a computer controlled opponent, since it is not always easy to find a human opponent of similar skill level to play with in the two player option.

Overall the game plays well, offers some unique features, and will take a long time to master at the highest difficulty levels, especially since you can make some real killer track layouts.

(Ed. Note: Adventure International provided PAC with a review copy of Rally Speedway, and we greatly appreciate it.)

COMBAT LEADER - Rapid Fire/SSI
Lloyd Suiter

With the passing of the Christmas season there are I'm sure many new programs that made their way into club members homes. This is an excellent time for club members to share their knowledge with others in the club. Please feel free to write a review of any software and submit the review to Clyde Pritchard for publication in our newsletter.

Christmas at my house was again a computer Christmas with several new programs for both my children and myself. The program for this review is Combat Leader by Rapid Fire/SSI. Combat Leader is a combat tactical game that simulates combat between elements of tank and mechanized infantry companies on the modern battlefield. It is a flexible game that can be played on many different levels and can include elements such as tanks, infantry fighting vehicles, infantry, machine guns, rifles, anti-tank weapons (LAW, DRAGON, TOW) and mortars. With this game it is possible to simulate tactical combat in a wide variety of scenarios.

This game really caught my interest due to the fact that I was in the Oregon National Guard for 10 years and spent part of that time as a commander of an Anti-Armor Company. Having been involved in several war games with regular Army units I thought this game would be a good test of my knowledge. I was very surprised to find that this game comes very close to the real combat simulation. In fact the game is based on the US Army Field Manual 71-1 (Tank and Mechanized Infantry Company Team).

The game can become very involved very fast. Each side can have up to 3 tank platoons consisting of 5 tanks each.

Each side may have 2 infantry platoons consisting of 16 two man teams. An infantry platoon is then divided into 4 squads (one machine gun squad, one anti-tank squad, one rifle squad and one mortar squad).

You also have an infantry carrier platoon consisting of 4 APC (armored personnel carriers each mounted with an m-60 machine gun). A scout platoon may be added which includes 4 scout vehicals.

As you can see Combat Leader is a very large program with over 18,000 lines of programing instruction. A quite a bit can go on all at once, especially when 120 separate tanks, carriers, and infantry teams are involved in a battle. With this information I suggest 2 things : 1- start with the novice game and 2- don't use a 13 inch TV screen.

The menu that is presented after a stirring military musical introduction lists 7 selections; 1- novice, 2- intermediate, 3- build your own game, 4- attack enemy, 5- seize and hold position, 6- mobile defense, 7- reconnaissance.

With the selection of the novice game 5 tanks will appear on the screen (the graphics could be better). In this scenario you are a tank platoon leader and must guide your platoon over all kinds of terrain and them engage an enemy platoon of equal strength and destroy it. Be prepared to spend a couple hours before you win.

With the selection of the intermediate level you now control an infantry platoon that is mechanized. Now you have added another learning situation to the game. In the novice game all weapons were direct fire weapons (tank cannon and machine gun), but at this level you now have indirect fire weapons (mortars). Also you must be very concerned about fire suppression (when you are being shot at you spend more time under cover and not returning fire) and the use of movement modes (traveling, traveling over-watch, and bounding over-watch (if you were in the infantry you know what I mean, it'S also covered in the manual).

I'm just getting into the build your own game aspects of the program. You can design everything from desert warfare to specific battles from the past.

My first design your own game battle was to pit the US M1 Abrams tank backed up with TOW anti-armor units in the new XM2 Bradley APC against the Soviet Union T-62 medium weight battle tank and light equipped anti-armor infantry. After about an hour of hard fighting, small arms fire, mortars, machine guns, tank cannons, smoke, and large amount of battle field confusion, I was victorious. I had one 2 man rifle infantry team left. My score for that battle was 000 but I still had 2 men alive out of a company of approximately 85 men.

Let me end this review by saying the SSI added a couple of very nice touches to the game. One of the things that I especially like is that you must have a member of your company in a position to see the enemy before you can see it on the screen. For example if the gun barrel on a tank points to the west that tank will not be able to see the enemy approaching from the east and neither will you. Second, if you receive incoming fire and get under cover you will not be able to see the enemy until you raise your head. The more incoming fire, more you keep your head down, the longer the enemy is invisible to you. The confusion of battle is very real. Not being able to tell who is who is very common in battle and friendly fire has killed more than its share.

This is the type of game that could easily become a SIG activity and if anyone is interested in talking strategy, give me a call.

If you long to be the commander of a mechanized infantry company and still be in the safety of your own home then this is the game for you.

Thank goodness its only a game!
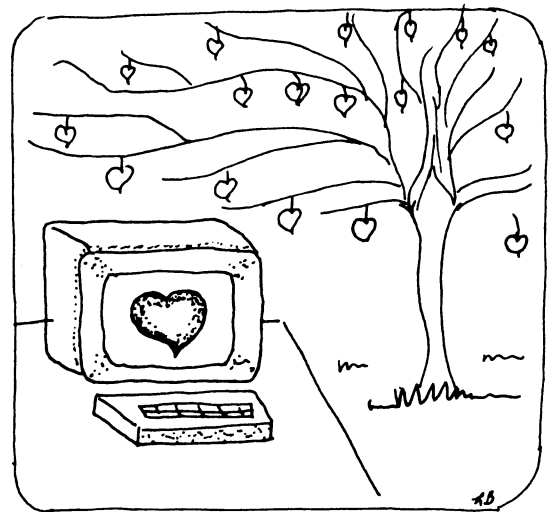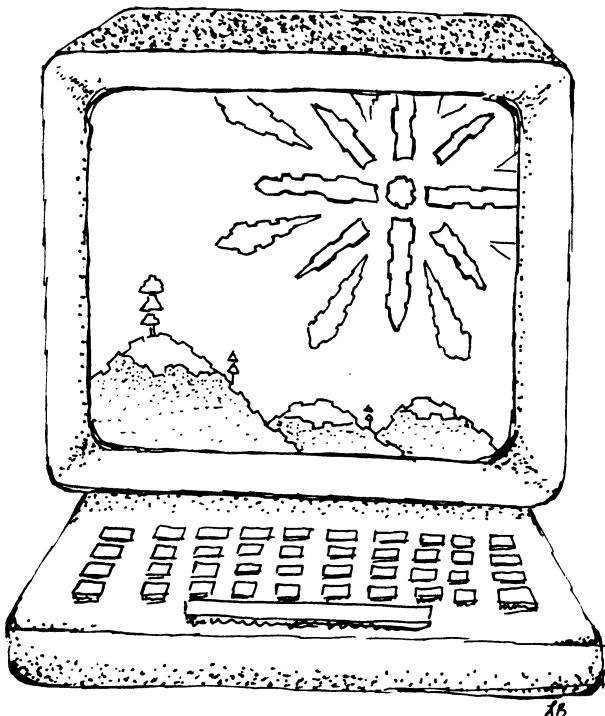
—VIDEO VALENTINE—

PACE REVIEW: THE MOST AMAZING THING
Trudie Mishler

THE MOST AMAZING THING is by Spinnaker and sells for about $35.00. It is a text and picture adventure and uses a joystick to move the character and the vehicle around. The program comes with a book telling the story of the planet on which the adventure takes place. It also has a demo and quick description in a booklet of the things you need to know to operate.

You have been invited to search for the most amazing thing by your Uncle Smoke who also gives you artifacts which you can sell for chips. You can buy and trade to your heart's content at the Metallica auction. You have a remarkable vehicle at your disposal. The B-Liner is a combination of a mobile home and hot air balloon. You have to keep it fueled and navigate it out onto the surface of the planet and back. The B-Liner has its own computer with which you can compose musiks to trade to the tribes you meet in your travels.

There is enough to this program to keep you playing for hours. It, like Snooper Troops, is more fun if played in a small group. Ages 10 to adult will enjoy this. The pictures are well done and detailed. My 12 and 13 year olds enjoy this game a lot. Using our PACE criteria, this program would review very much like Snooper Troops.

How To Do It . . . .

FORTH REPORT
Pann McCuaig

A question came up during my Forth class: "What is the Forth equivalent of BASIC's INPUT statement?" That's a very good question! In FIG-Forth, there is no equivalent.

One possible solution has been suggested which uses the Forth interpreter to handle user input:

```
: INPUT ( -- n )
   QUERY INTERPRET ;
```

This approach has one very good feature -- it will handle any data type which has been defined; if you're using strings or floating point, this INPUT won't even blink. It will also execute any word in the dictionary which the user types in; this is great for debugging, but is a real problem in a turnkey system.

And finally, the way this INPUT handles errors is a real disaster for turnkey systems -- any error in data entry causes causes QUIT to be executed, which calls ABORT, and a trap to Forth occurs. In case it isn't obvious, this takes you back to the "ok" prompt; you are no longer running your program!

The following is often used:

```
: DINPUT ( -- d )
   QUERY
   BL WORD
   HERE NUMBER ;
*
: INPUT ( -- n )
   DINPUT DROP ;
```

This approach removes the dictionary search from INPUT by using the standard Forth word NUMBER to convert from a string to a double precision binary. However, it still traps to Forth on an invalid entry.

The approach I prefer is:

```
: DINPUT ( -- d )
   BEGIN
      PROMPT  ( ask the user )
      QUERY   ( accept text until CR )
      BL WORD ( put chars at HERE until space )
      HERE    ( put adr of string on stack )
      ?VALID  ( is it ok? )
      DUP 0= IF CR ENDIF  ( CR if n.g. )
```

```
   UNTIL    ( hang in loop until it is! )

      HERE NUMBER ;  ( now convert it )
*
: INPUT ( -- n )
   DINPUT DROP ;  ( NUMBER yields a double )
*
```

"PROMPT" is optional --
```
*
: PROMPT ." ? " ;
*
```
will make your INPUT look like BASIC's.

QUERY, BL, and WORD are standard Forth words. ?VALID is a word which you define to lock the operator into INPUT until he does it right! A simple ?VALID is defined below.

The following ?VALID uses ?DIGIT to verify that each character entered is a digit in the current base. Enter ?VALID with the address of the string on the stack.

```
: ?VALID ( adr -- bool )
   TRUE SWAP  ( assume the best )
   DUP C@  ( bool adr len -- )
   1+ 1 DO  ( test each char in string )
      DUP I + C@  ( bool adr char -- )
      ?DIGIT  ( bool adr bool -- )
      ROT AND SWAP  ( bool adr -- )
   LOOP DROP ;
```

?DIGIT is a word which checks to see if an ASCII character is a valid digit in the current base. It makes use of the standard Forth word DIGIT, which does the check and, if the character passes, converts the ASCII digit to binary.

```
: ?DIGIT ( asc -- bool )
   BASE @  ( use current base )
   DIGIT  ( n 1 -- or 0 -- )
   DUP IF
      SWAP DROP  ( binary )
   ENDIF ;
```

Please notice that in this article I've not discussed the words in the order in which they must be defined. Forward dictionary references are not allowed!

SOUND FOR YOUR ATARI 800
Walt George

Most video monitors do not provide sound, so their use with the Atari deprives you of the super sound the computer generates. Here is a relatively simple and inexpensive (less than $20.00) audio amplifier than can be added inside the computer to free you of the necessity of using the television sound system. A small internal speaker is added inside the computer and provisions for driving a larger external speaker (for better quality sound) are also included.

This modification to your computer is not without risk, and if done carelessly could result in the untimely demise of your functioning computer. Unless you are familiar with "do-it-yourself" electronic projects, I do not recommend that you attempt this project. I have done my best to write this article clearly and concisely, but do be careful. Double check everything, keep solder splashes, wire clippings, pizza crumbs, etc, out of the computer!!!

The modification consists of building up a small audio amplifier based on a single integrated circuit (the LM380), plus a handful of miscellaneous parts. A volume control and external speaker jack are mounted on the rear apron of the 800, and the rest of the parts (including a small internal speaker) are easily fitted inside the computer. The amplifier also includes a tone control, but I did not make provisions for this to be externally adjusted. The "pot" chosen is mounted on the audio board, and adjusted for the most pleasing sound before final assembly.

The first step is to build the amplifier. I built mine on a piece of perforated "Grid Board" (see parts list below). The board, as purchased from Radio Shack, is 2 3/4 by 3 3/4 inches. I cut it to 1 3/4 by 3 3/4 before starting the component assembly. The circuit values are not critical, so I chose those that are available and advertised in the Radio Shack catalog. The component layout is not critical, but if it helps, Photo #1 will give you an idea of how I arranged mine. Note: the photo shows a heatsink bonded to the LM380 I.C. that is not really required (and not discussed further in this article). Assemble the components described in the parts list and connect them as shown in the schematic diagram below.

REMOVAL OF CASE AND COVER
1.) Disconnect all the cables from the computer and set the 800 on a clean work surface with the keyboard facing you.
2.) Open the cartridge door and remove any cartridge present, leaving the door open. The open door exposes two plastic fasteners that secure the cartridge door in place. It is not necessary to remove these fasteners, just turn them. (Turn the left one clockwise, the right one counterclockwise). Lift the cartridge door up and pull it forward at the same time and it will slip free of the cover. Set the door aside in a safe place. Turn the door fasteners back to their original position.
3.) Turn the computer over and set it upside down with the keyboard still facing you. Remove the five screws visible from the bottom (three across the front, and two near the rear). Lift the rear edge of the plastic bottom while pulling the bottom toward you. It will slide forward and lift off the computer. Set the plastic bottom aside.
4.) Unplug the loud speaker wires from the power supply board and remove the loud speaker. Refer to Photo #2 and remove the three screws indicated. Note that these three screws are slightly smaller in diameter, and have a finer pitch thread than those previously removed.

Position the computer toward the back of the work area to provide room for the Keyboard/Cover assembly which will fold forward in the next step. Now lift the main PC board with the keyboard attached, and fold it onto the work bench as shown in Photo #3. Carefully unplug the interconnecting cable from the main PC board and set the Keyboard/Cover assembly aside.

REMOVAL OF THE POWER SUPPLY BOARD
1.) Refer to Photo #4 and disconnect the coax cable from the power supply board where it plugs into J203. Disconnect the four conductor cable near the left edge of power supply board at J202. Remove the three short screws indicated and carefully lift the power supply board free from the mother board. Note: this involves disengaging the twenty two pin connector that interfaces the power supply to the mother board - use caution to avoid bending or damaging these pins.

INSTALLATION OF VOLUME CONTROL AND SPEAKER JACK
The Volume Control and Speaker Jack are mounted by means of holes drilled in the rear apron of the Atari 800 as shown in Photo #1. If you use the Radio Shack parts in the parts list, a 3/8 inch hole is required for the volume control, and a 1/4 inch hole for the speaker jack. Caution - make sure the parts are really going to fit before you drill these holes! Before mounting the volume control, use a hack saw to cut the shaft off so that it is approximately 3/8

inch long.

WIRING TO POWER SUPPLY BOARD

In this operation, the goal is to bring a source of +12 Volts, Ground, and the Audio signal to the previously assembled audio board. It is not necessary to do it in exactly the same way I did, but here's my suggestion.

1.) I began by preparing three pieces of 24 guage stranded wires loosely braided into a 25 inch long cable. It is preferable to use three different colors to avoid confusion when making the electrical connections. My choice was red, black, and white. (RED carries the +12 volts, BLACK is ground, and the WHITE carries the audio to the new amplifier board.)

Refer to Photo #5, and drill a 1/8 inch diameter hole through the power supply board in the area shown. (I drilled right through the "-5v" lettering on the board. Caution: Use extreme care not to drill through a component, any circuitry, or otherwise damage the traces on the PC Board.

Pass the red and white wires through this hole from the top side of the board, and on the opposite side ("solder side") connect the red wire to the trace going to pin #21 of J201. Gently scrape the green "Solder Resist" from the trace in the area shown in Photo #5 and solder directly to the trace. In a similar manner, connect the white wire to the trace going to pin #2 of J201. On the top or "Component" side of the board, connect the black wire to the Ground trace adjacent to the drilled hole as shown in Photo #6. I used hot melt glue to support the wires in several places on the board to add support and minimize any mechanical stress on the solder joints.

REINSTALL POWER SUPPLY BOARD

1.) Carefully position the power supply board over the mother board and lower it into it's original position. Use caution to see that all the pins from the mother board enter the sockets of J201 on the power supply board and none get bent over. Replace the three short screws, reconnect the coax cable to J203 and the four conductor cable at J202 (NOTE: the Violet wire should be nearest the board edge.)

FINAL CONNECTIONS

1.) Connect the volume control, speaker jack and loud speaker to the amplifier board. Refer again to Photo #1 to get an idea of how I routed the wires, positioned the Amplifier Board, and the loud speaker.

2.) Connect the three wire cable from the power supply board and the wiring is complete. Note: The speaker shown in the photographs is not the same one shown in the parts list (I used one from my junk box collection).

3.) Secure the Amplifier Board and the loud speaker in place (again, I used "hot melt" glue to perform this function).

REASSEMBLE COMPUTER

1.) The modification is finished, so reassemble your computer in the reverse order of the above steps up to the point of replacing the bottom cover. Carefully check to see that all connections are properly mated.

2.) Turn the computer right side up (without the bottom) and you should now be able to connect the power supply transformer and your peripheral equipment and turn on the computer. You should be able to hear the newly added speaker, and by plugging in an external speaker test that the complete job is wired and functioning correctly. Adjust the tone control on the audio board for the sound that is most pleasing to you, and then finish up by installing the bottom cover.

PARTS LIST

DESCRIPTION	QTY. REQD	RADIO SHACK PART NO.
GRID BOARD	1	276-158
LM380	1	276-706
14 PIN IC SOCKET	1	276-1999
PHONE PLUG/JACK	1	274-336
3 INCH SPEAKER	1	40-248
KNOB	1	274-415
R1 4.7K OHM	1	271-1330
R2 10K OHM POT	1	271-1721
(AUDIO TAPER VOLUME CONTROL)		
R3 10K OHM POT	1	271-218
(PC MOUNT TONE CONTROL)		
R4 10K OHM RES.	1	271-1335
R5 10 OHM RES.	4	271-1301
(FOUR RESISTORS CONNECTED IN PARALLEL TO EQUAL 2.5 OHMS)		
C1 .047 MFD. CAP	1	272-1068
C2 1.0 MFD. CAP	1	272-1434
C3,C5 0.1 MFD. CAP	2	272-1069
C4,C6 220 MFD. CAP	2	272-1017

(Ed. Note: Photo credits for this article go to Walt's son.)

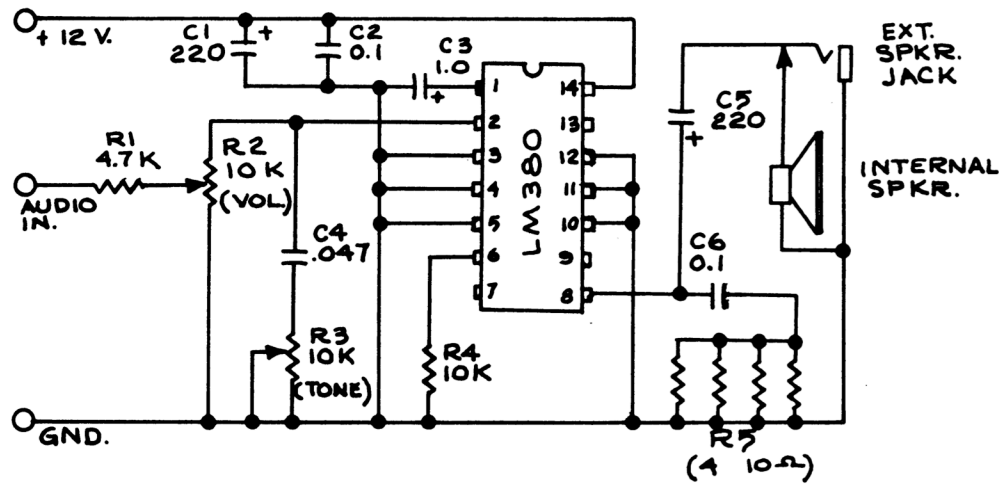PHOTO #1 SHOWING LOCATION OF SPEAKER JACK,
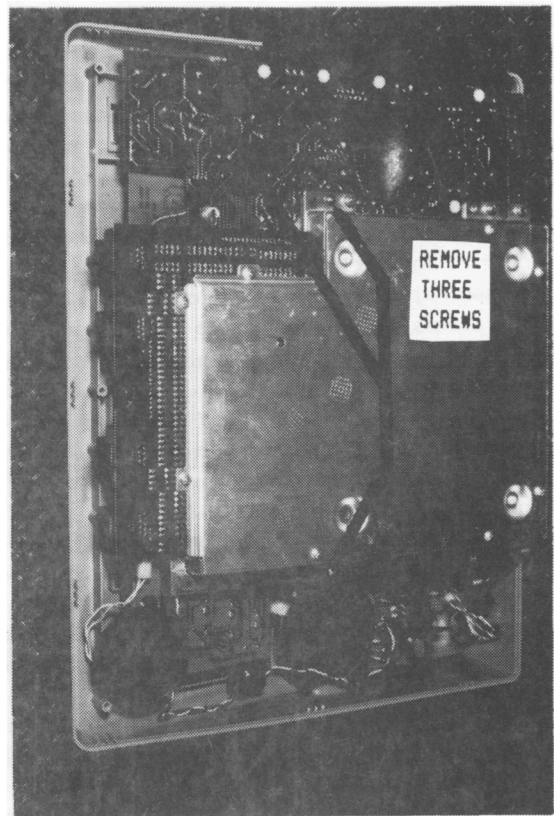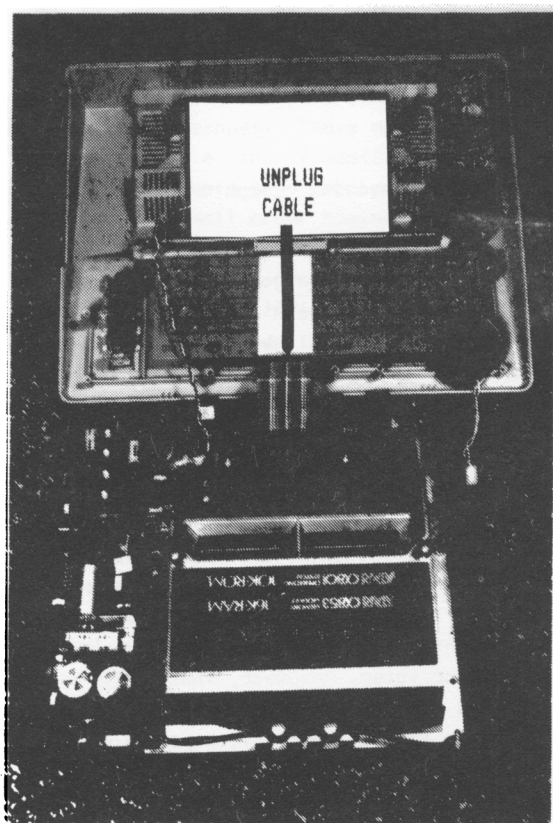VOLUME CONTROL, AMPLIFIER BOARD AND SPEAKER

PHOTO - 2

UNPLUG
CABLE

PHOTO - 3

REMOVE
THREE
SCREWS
AND
CABLE

PHOTO - 4
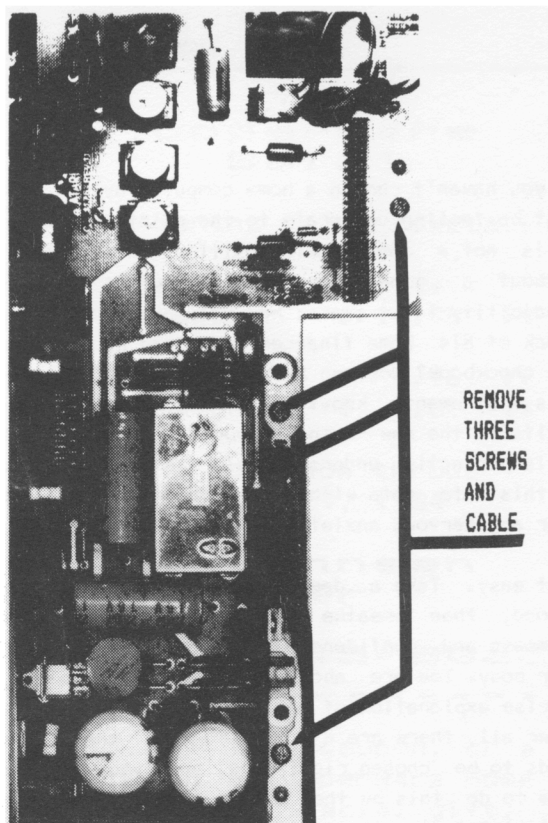

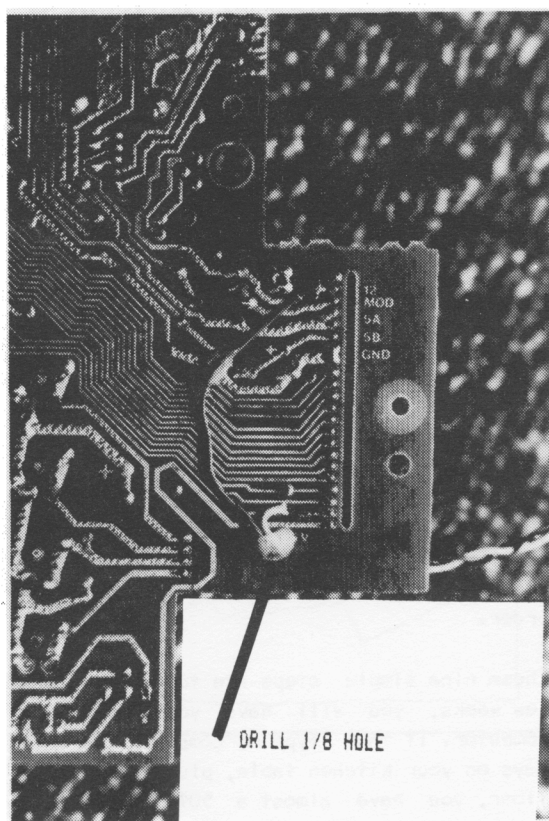DRILL 1/8 HOLE

PHOTO - 5

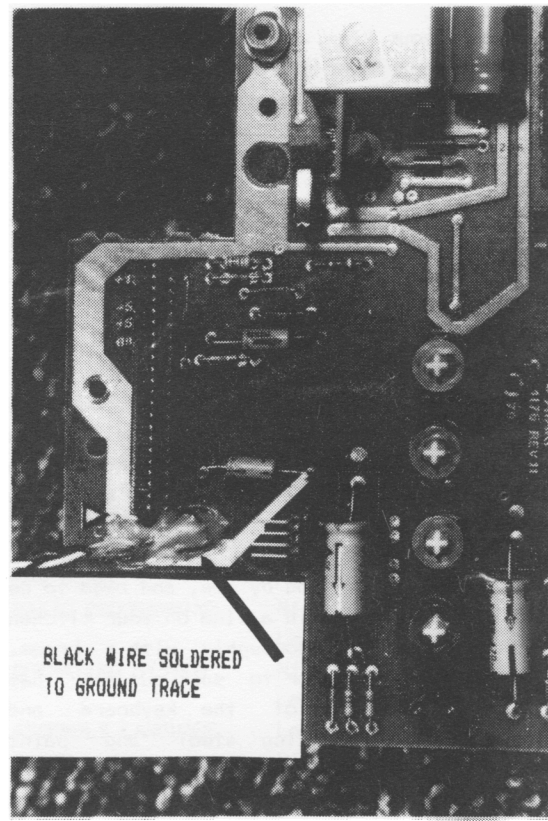BLACK WIRE SOLDERED
TO GROUND TRACE

PHOTO - 6

HOW TO REALLY CHOOSE A HOME COMPUTER
(in 9 easy steps)

Joseph A. Richter

If you haven't chosen a home computer by now, you must be feeling desperate to the point of panic. It is not a comfortable position to be caught without a home computer. A person's very credibility is at stake; how can this person keep track of his home finances? How can he balance his checkbook? How can he deprive his children of this instrument, knowing they will be lost as adults in the new 'computer world' of the future? It is perfectly understandable that to be found at this late date without a computer can cause fear and nervous anxiety.

Rest easy. Take a deep breath, hold it for a second, then breathe out slowly. Feel the calmness and confidence start to flow through your body. You are about to experience a clear, concise explanation of how to choose a computer. After all, there are a lot of them out there. One needs to be chosen right now, and you will be able to do this by the end of the article. The following instructions will tell you how to do this in the easiest possible way. To achieve these dramatic results, you need to follow the instructions exactly, no matter how strange or ridiculous they may seem.

I. Get out your Visa, Master Charge, American Express and department store credit cards and go out and buy four different brands of home computers. Do not worry about the money, we will handle that later.

II. Unpack the computers and put them on your breakfast table and just let them live with your family for three days. Do not plug them in or read any instructions.

III. Notice the amount of spilled coffee, toast crumbs, orange juice, and jam that has accumlated on the machines. This is the way they look in real life. Play with the keyboards and notice that many of the keys will not spring back once depressed.

IV. The machines look bad by now, and need to be cleaned. Place them all in a line on your kitchen floor, and sweep them thoroughly with a broom. Then use a vacuum cleaner to suck out all that stuff in the cracks of the keyboard and ventilation grills. Using steel and paint remover, it should now be easy to make the computers look almost new. Now, prop them on edge, so that any spilled liquids will drain out of them. Leave the computers in this position overnight.

V. By now you are eager to plug the computers in and see what they can do. Ask one of your many computer owning neighbors to do this for you. Anybody that owns a computer loves to show off their knowledge, and you will have the computers all set up and ready to go in ten minutes.

VI. You will not be surprised to learn that some of the computers are dead. Cover them with a white bed sheet. Take the remaining working ones and place them back on the kitchen table. Push them off onto the floor. Do not feel squeamish about this, it's bound to happen to the machine sooner or later. Remember, these are solid state devices we are talking about, and the kitchen floor is just an ordinary composition of wood or plastic based material.

VII. If one or more of these computers still works, set it aside. Examine these survivors and choose the machine that looks the cleanest and most professional. Write the name of this computer in your notebook. If there were no survivors, lower your table and go back to step I.

VIII. Put all the computers in their original packing and take them back to their place of purchase. Explain that your nephew had surprised you with a new computer from his factory in Silicon Valley, California. The sales clerk will immediately give you a refund slip for your bank card. Repeat this procedure until all the computers are gone.

IX. After all this fun, you now have a name of a computer in your notebook. Go to the store and buy any magazine on computers, write down the phone numbers from every mail order house and call them, asking for the price of the computer you have written in your notebook. Order the least expensive one. You will be surprised to find how much less the computer costs by mail order.

These nine simple steps are foolproof. Within a few weeks, you will have your very own new computer. If that type of computer survived the days on your kitchen table, plus the fall to the floor, you have almost a 50% chance that the machine will survive the mailing system. Now all

you have to do is spend about a week shut in your room, studying the manual. These masterpieces of confusion can cause a lot of mental anguish, so you may want to have a good supply of sedatives at hand. Remember, mail order houses will pretend they never heard of you once they get the cash. It will be up to you to repair the CPU and the ROM and all the other little gears and pistons that make a computer work. Fortunately, this is not difficult, and can be done with a magnifying glass, tweezers, and blowtorch. Details will be covered in another article. Following that, there will be an informative discussion on how to tap into bank accounts with your modem. This allows you to write off the modem as a business expense, but more on that later. Until next time, remember that if you get 'garbage out' of a computer, it is the computer's fault and not because you put 'garbage in'.
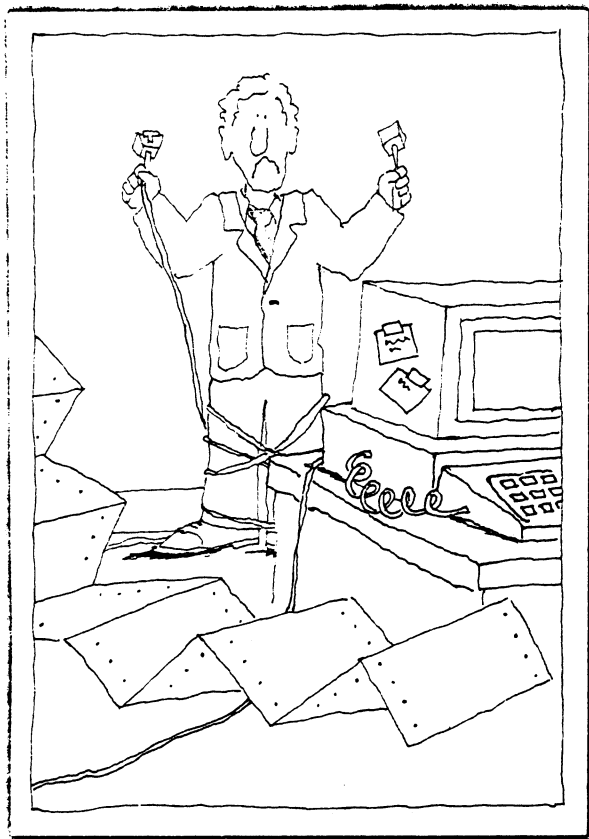
PAC HELP HOTLINES

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

HARDWARE OPERATION	Steve Deutsch	648-2017
CASSETTE OPERATION	Lee Gassaway	642-2455
DOS OPERATIONS	Steve Deutsch	648-2017
MODEM OPERATIONS	Gary Lippert	233-7069
BBS USAGE	Russell Schwartz	643-1089
BASIC PROGRAMMING	Nick Yost	981-0838
	Lee Gassaway	642-2455
OPERATING SYSTEM	Nick Yost	981-0838
	Leroy Baxter	653-1633
ASSEMBLY LANGUAGE	Leroy Baxter	653-1633
FORTH	Ricky Wooldridge	224-7163

THE HELP KEY
David Pelinka

This month I will discuss printer interfaces and buffers. The two can be related as we shall see.

A printer interface is a device that permits your Atari to communicate with a printer. There are two types of interfaces, serial and parallel. The serial type sends one bit of data at a time to the printer until it has sent all 8 bits that make up a character. Thus the name serial comes from the method of sending data in a series. The more popular parallel (or Centronics) interface sends all 8 bits of the character at the same time over separate wires, hence the name parallel. Do not confuse an interface with a cable. The cable connects the interface to the printer. You have to have a printer interface or you have no way to connect the printer cable to the computer.

Unfortunately, the Atari does not have a built in printer interface. This makes connecting a printer a little more complicated and you have several ways to go about it. If you have an 850 Interface you're in great shape because it has a parallel connector or "port". (It also has 4 serial connectors which may be used for various purposes.) All you need is a cable to connect the 850 to your printer and you're ready to print. Your second choice is to buy a printer interface from a third party. The new Microbits Parallel Interface connects directly from the Atari serial port (in daisy chain fashion) to the printer. A similiar solution is to buy a disk drive with a built-in parallel interface. Currently, some Percom and Trak drives have this feature. Finally, you can choose a printer that has the interface built in. In this case you simply connect the printer to the Atari serial port. The Atari 1027, Alphacom and Axiom are examples of printers with this capability. As of the moment however, you have a better selection of printers and features if you have either an 850 or other parallel interface. By the way, see the January issue of Antic magazine for articles on building your own printer cable and a survey of 9 different printers.

A BUFFER is an area of RAM memory dedicated for a special task. Buffers are used to temporarily store data that is being communicated from one place to another. They may be part of your computer's RAM or in a separate device like a printer. (What did I tell you?).

With a printer buffer, when data is sent to the printer it goes into the buffer in the printer and then is printed on the page. Why bother you say? Well, printers usually can't print as fast as a computer can send data. This means that the printer has to tell the computer to wait while it prints. If there is no buffer, the computer might have to wait after each character! This never happens though, because most printers have a one line buffer. Thus, the computer sends a whole line and waits while the printer prints it. Now, if the printer had a big buffer, say 16K, the computer could send out a whole document without stopping. When the whole document had been sent, the computer would come back to you. Meanwhile, the printer would keep chugging along, printing from the buffer until the buffer was empty. If you had a big document it might take 10 minutes to print it, but you could be playing PAC-MAN. Printer buffers may be built in to a printer or you can get outboard buffers that connect between your computer and printer that hold anywhere from 16 to 256K.

There are many other kinds of buffers too. Your computer RAM uses a 128 byte area disk buffer to communicate with the disk drive. Whenever data goes to or from the disk drive it passes through the buffer. This is more efficient than sending or receiving one character at a time. Similarly, the file buffer holds data for a particular file. In a modem program, another buffer is used to store a file being uploaded or downloaded. The Atari even has a one character keyboard buffer that saves the last character you typed on your keyboard if it isn't immediately sent to the screen. Believe me, data without buffers would be next to impossible.

Next month, I will present a semi-complete list of books about the Atari. You'll be surprised at all the new titles that are available.

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UNCLASSIFIED ADS
PAC Members

GUESS A NUMBER
Clyde Pritchard

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200 GRAPHICS
2+16:CONSOLE=53279:OPTION=3:SELECT=5:START=6:FIRE
=0:NOFIRE=1:UP=14:DOWN=13:RANDOMNBR=53770
210 REM
220 ? #6;"  GUESS A NUMBER":REM "GUESS A NUMBER"
in INVERSE video
230 ? #6:? #6:? #6;"   A GAME BY:"
240 ? #6:? #6;"  CLYDE PRITCHARD":REM "CLYDE
PRITCHARD" in INVERSE video
250 ? #6:? #6:? #6;"   start to play":REM "start"
in INVERSE video
260 ? #6:? #6;"  option for help":REM "option" in
INVERSE video
270 IF PEEK(CONSOLE)=OPTION THEN GOSUB 690:GOTO
290:REM Display instructions, play game
280 IF PEEK(CONSOLE)<>START THEN 270:REM Repeat
console switch test until OPTION or START is
pressed
290 ? #6;CHR$(125):GUESSES=0:GUESS=0:REM Clear
screen
300 THENBR=PEEK(RANDOMNBR):IF THENBR<1 OR
THENBR>100 THEN 300:REM Get the number to be
guessed
310 GOSUB 600:REM Display Players guess
320 IF STICK(0)=UP THEN GUESS=GUESS+1:GOTO
310:REM If joystick is up, increment player's
guess, repeat cycle
330 IF STICK(0)=DOWN THEN GUESS=GUESS-1:GOTO
310:REM If joystick is down, decrement player's
guess, repeat cycle
340 IF STRIG(0)=NOFIRE THEN 320:REM If fire
button is not pressed, repeat cycle
350 SOUND 0,15,2,15:FOR I=1 TO 50:NEXT I:REM Make
buzzing sound when fire button is pressed
360 SOUND 0,0,0,0:FOR I=1 TO 100:NEXT I:REM Buzz
off, delay to prevent unintensionable guess
370 GUESSES=GUESSES+1:REM Increment number of
guesses when button is pressed, then test against
the number
380 IF GUESS>THENBR THEN 410:REM If the player's
guess is high, tell him the number is lower
390 IF GUESS<THENBR THEN 440:REM If the player's
guess is low, tell him the number is higher
400 IF GUESS=THENBR THEN 470:REM If the player is
right, tell him he wins
410 POSITION 4,3:? #6;"      ":REM Clear "higher"
display
420 POSITION 4,7:? #6;"LOWER":REM "LOWER" in
INVERSE video
430 GOTO 320:REM Try again
440 POSITION 4,3:? #6;"higher":REM "higher" in
INVERSE video
450 POSITION 4,7:? #6;"      ":REM Clear "LOWER"
display
460 GOTO 320:REM Try again
470 POSITION 4,3:? #6;"      ":REM Clear "higher"
display
480 POSITION 4,7:? #6;"      ":REM Clear "LOWER"
display
490 SOUND 0,6,12,8:REM Start beeping sound for
win
500 FOR I=1 TO 10:NEXT I:POSITION 1,0:? #6;" YOU
GUESSED IT!":REM "YOU GUESSED IT!" in INVERSE
video
510 POSITION 3,2:? #6;"in ";GUESSES;"
guesses":REM "guesses" in INVERSE video (the
second occurance)
520 SOUND 0,0,0,0:REM Beeping sound off (will go
on/off until action below)
530 POSITION 1,0:? #6;"              ":REM
Clear message (will cause it to flash)
540 POSITION 0,8:? #6;"button TO PLAY AGAIN":REM
"button" in INVERSE video
550 ? #6:? #6;"  SELECT FOR MENU..":REM "SELECT"
in INVERSE video
560 IF STRIG(0)=FIRE THEN 290:REM If the fire
button is pressed, play a new game
570 IF PEEK(CONSOLE)<>SELECT THEN 490:REM Repeat
win message and beep until fire button or SELECT
is pressed
580 TRAP 590:RUN "D:MENU"
590 TRAP 40000:END :REM Menu not found
600 IF GUESS<1 THEN GUESS=1:REM Disallow guess
less than 1
610 IF GUESS>100 THEN GUESS=100:REM Disallow
guess greater than 100
620 POSITION 1,5:? #6;"  GUESS? ";GUESS;"   "
630 S=INT(GUESS/2-100+1):REM Set sound value
based on value of guess
640 FOR I=1 TO 5
650 SOUND 0,S*SGN(S),10,8
660 NEXT I
670 SOUND 0,0,0,0
680 RETURN
690 ? #6;CHR$(125);"THE OBJECT OF THIS"
700 ? #6;"GAME IS TO GUESS A"
710 ? #6;"NUMBER FROM 1-100.":? #6
720 ? #6;"USE THE JOYSTICK TO"
730 ? #6;"CHANGE YOUR GUESS:"
740 ? #6;"'UP' TO GO HIGHER,"
750 ? #6;"'DOWN' TO GO LOWER."
760 ? #6;"TO GUESS, PRESS THE TRIGGER":? #6
770 ? #6;"START TO PLAY":REM "START" in INVERSE
video
780 IF PEEK(CONSOLE)<>START THEN 780:REM Display
instructions until START is pressed
790 RETURN
```

PORTLAND ATARI CLUB

PUBLIC DOMAIN SOFTWARE

GAMES I (16K)

SMASH * TIC-TAC-TOE * BOMBERS * TOWERS * GALLERY * ROBOT WAR * ROCKET * PRICE * CONCENTRATION * HORSE RACE * ALIEN

GAMES II (32K)

CLEWSO * STARSHIP * ELECTRIC * GUNNER * MAXIT

GAMES III (32K)

FROGGIE * MYRIAPEDE * GOBBLER * GRUBS * BATS

GAMES IV (32K)

MANIAC * HARVEY * DEFEND * LIVEWIRE * FILL-ER-UP * VULTURES * CHICKEN * MAZE * UXB

CARD GAMES (??K)

BINGO * BLACKJACK * BRIDGE * CRIBBAGE * STUD POKER * YAHTZEE

EDUCATION I (16K)

BIORHYTHM * BIOCHART * MATHDRILL * MATHPACK * MATH-2 * METRICS * CALENDAR * TYPING * STATES * AMERICAS * SIMON * LIGHT DEMO

UTILITY I (Disk only)

MENU * TIMECLOCK * DISASSEM * ERROR TRAP * SUPER COMPARE * PEEKER * DISK/TAPE * AUTORUN CREATE * RPM TEST * FILE INDEX * VARIABLE LIST * RENUMBER * EXAMINE * STRING CREATE * CASS. AUTORUN * JOYSTICK MENU * TRANS/PRINTER * DATA STATMENT GEN. * MEMORY CHECK * BOOT COPY * BACKUP

DEMO I (16K)

CHOPSTICKS MUSIC * ELLIPSE * ETCH-A-SKETCH * GIGGLE * JAZZ * LOGO * MESSAGE GEN. * MAGIC * PUFF MUSIC * DIALOG * NIGHTMARE * VEGAS * SCROLL * FUGUE * STARSHIP PIC. * SOUND STICK * STRING ART * DIGITAL CLOCK * STARWARS MUSIC * BIOGRAPH * CHRISTMAS TREE

DEMO II

GTI GRAPHICS * HYMN * MAGIC * MESSIAH MUSIC * NUTCRACKER MUSIC * SUPER GRAPHICS DEMO * SHUTTLE PIC. * SUNSET PIC. * TITLE GEN.

MODEM DISK

COMMUNICATIONS PROGRAMS, UTILITIES AND DOCUMENTATION

BULLETIN BOARD SYSTEM DISKS

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