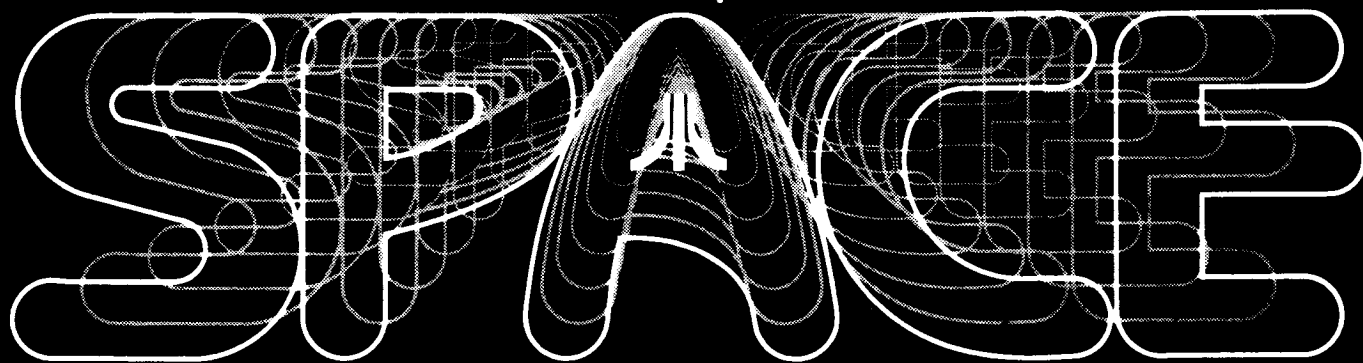


Saint Paul ATARI Computer Enthusiasts



An independent computer user group

MAY - 1985

BYTES FROM THE PRES. by Bob Floyd

130XE at meeting: Those of you who didn't make it to the last meeting missed the SPACE debut of the Atari 130XE. Phil Seifert brought one to the meeting from User Friendly - thanks Larry! The machine is very impressive and I have to admit that I am tempted to get one.

Beginner's Group: The Beginner's Group had a large turnout (>20). I was a little surprised to see a consistently high turnout for this group. I am glad that we are providing this service. Jon Nelson has been contributing his time, 800XL and Indus drive to this effort for some time and should be thanked by all. The group will again meet immediately after this month's meeting.

New Club Equipment Purchase: Now that I have the above two subjects out of the way, I'd like to brief you on a subject to be covered at the upcoming meeting. I think that the club should buy another 8-bit computer, either an 800XL (must be on sale cheap), or preferably a 130XE. I think we also need another disk drive and monitor. We need this equipment for the following reasons:

- 1) The club needs to stay current.
- 2) We need a second TV or monitor for better viewing at the meetings. A monitor is preferred in case of a future ST purchase. should be large enough for good viewing.
- 3) The club needs a second system for special interest groups, like the Beginner's Group. This will alleviate the burden on members from uprooting their own systems from home.

4) The 130XE is preferred because it may be compatible with the new 3.5" drives used on the ST series. We should delay purchase of a disk drive until this is clear.

So, for the moment, I am proposing that SPACE buys a 130XE and monitor. Let's discuss this at the meeting.

Schaak Shocker: The Schaak "deals" were very disappointing. About a dozen of you called me to check these out. There was no hardware of any kind for Atari. The software was too expensive, but there some golden oldies. Examples would be Missile Command, Pacman and Space Invaders for \$27.00. I'll bring the listing to the meeting for those interested.

Discounts: It occurred to me after the meeting that some of our newer members may not know that Wizard's Work and User Friendly offer a 10% discount at their stores to SPACE members. You must identify yourself with a current membership card. This may be why Larry at User Friendly says he doesn't see many of our members. Incidentally, all software at the meetings is already discounted.

Disk Exchange: We just received 3 double sided disks from ACE in exchange for software of our own. DOS 2.5 (with RAMDISK, etc.) was on one of them. Look for these programs on a DOM in the near future. Also, MACE has sent us a catalog that we can choose 4 disks from as well. We will try a few other clubs as well.

CONTINUED -->

Spartan Software: I think that Mike Gustafson from Spartan Software will be at our meeting. Mike is the designer/author of The Chip/Archiver and SpartaDOS/US Doubler. He will clue us in to upcoming products and answer questions about existing products.

SPACE Pirates: I saved the worst for last. I noticed last meeting that a lot of members kept offering advice to Steve Pauley while he was demo'ing Ballblazer and Fractalus. I was a bit surprised to be among the few that was not familiar with these games. Since these were just released, it is safe to assume that many members have the pirated versions that have been floating around. I hope you know that these games were almost cancelled. I'm sure that Lucasfilm has a bad taste in their mouth for Atari after this first bad experience. And, I'm sure the rest of the industry has noticed this as well as other cases. It all boils down to this: **IF WE WANT PEOPLE TO WRITE SOFTWARE FOR, AND SUPPORT, OUR COMPUTERS, WE MUST BUY THEIR PRODUCTS!** I'd like to suggest that the pirates among us go out and buy those games. Let's make an honest hacker out of everyone! 'Nuff said!

ANALOG D.O.M.
Bob & Joanne Floyd

We received enough interest in the ANALOG Computing disk of the month that the club has sent in for a disk subscription. At the upcoming meeting, we will be offering DOM's from issues #29 & #30 of ANALOG. You must prove (or already have proven) that you are a subscriber to ANALOG by bringing in a recent issue with the mailing label intact in order to purchase a disk. You must also be a SPACE member. We will maintain a list so you only need to bring in an issue once per year. We will also take orders for back issues (all the way back to #10) for those interested - just bring in 1 or 2 old issues to qualify. Incidentally, these requirements are to please ANALOG which has been generous enough to make this offer to user groups. We will sell the DOM's for \$4.00 each, before & for a short while after the meeting. See Joanne. She will handle sales for a while, at least until the November elections. We will also need a volunteer for a few months (we have a baby due around June 1) to sell disks at the meetings.
(Editor's note: The baby's here already. Congratulations Bob and Joanne!)

Experiences Debugging
a Copied BASIC Program
by John Norotry

Being a programmer but never having used BASIC, I acquainted myself with the language by writing simple loops and skimming over various examples. This got me to a fair understanding of the more common statements, but weak in applying them in a major undertaking. The next logical course of action for me was to copy a program and find out how it worked; so one evening after 10 PM I opened a book of Atari games to a well known game where opponents take turns firing at each other across a hill, the players INPUTting the angles and charges for the shots. At 12:30 (AM), the program was "safe" on the disk (there is another true story here which I may share with you some day!).

I started the game and things appeared to proceed normally until the first shot. The game generated a trace of the trajectory from one combatant up over the top of the hill, then disappeared! The first shot from the other combatant appeared to work fine. I fired again. This time the trajectory went off the top of the screen, and the program got in a loop, repeating solicit for powder charge, but never acting on it. Since I wanted this to be a learning experience, I was somewhat glad that there were bugs to be found, a task for tomorrow.

The program was laid out in a fairly easy to follow structure, with REMarks identifying the building of the various objects on the screen, and routines for messages and player input. The logic of the shots was soon isolated to a section approximately one-tenth of the code. I checked my code against the book, and it appeared to be the same. REMarks were non-existent in the shot code. The trajectory generation seemed overly incumbered by calculations for each point of the trajectory that needed to be performed only once per shot, so new variables were added to keep these calculations, then used throughout the course of the trajectory. A test run showed a much quicker shot, with the problems unchanged. Further evaluation of the code showed the functionality of two separate PLOT statements, the first to clear the previous visible point followed by an update of coordinates (based on a change in time), and the second to plot the updated coordinates. There were two IF-THEN statements between the PLOT statements to check the updated coordinates. One, if the

trajectory went off the right, left, or bottom of the screen then the shot was done. The other, if the trajectory went off the top of the screen. Then don't plot the point, advance time and return to check the next point of the trajectory. Good logic, but this seemed to be the culprit. I looked at the line and it looked perfectly good (IF Y<2 THEN 500). I took the statement out and GADS!, both trajectories completed. I gave it a big charge value to put the trajectory off the top off the top of the screen, and crash (ERROR - attempt to plot negative coordinate). Obviously the statement removed was needed, but what was its problem? I changed the offending statement to IF Y<2 then STOP and ran the program to the STOP. My wife just happened into the room, so, needing an ear for my frustration she stopped and stared blankly as I explained my predicament, showing her the statement where the program was stopped and the value of the Y-coordinate (using PRINT Y1). Y1? That's right! This darn code uses X,Y for the change of the X,Y coordinates X1,Y1. I changed the offending statement to IF Y1<2 THEN 500 (exactly as it was in the book), the program ran perfectly, my wife continued to the closet for the vacuum cleaner, and I relearned a major lesson, the computer is always right.

SERVICE & TROUBLESHOOTING

by Wayne Tyrrell

In this article we'll look at two basic system problems. One is the computer system that has never worked from the start. The other is the system that worked fine yesterday, but won't work today. We'll look at some troubleshooting hints and discuss how to figure out which major component is causing your problems.

If you are installing a new computer system and experiencing problems, it sometimes helps to hook up one thing at a time. Make sure each unit is working before hooking up the next. Once the computer and monitor working, then hook up the disk drive, then the printer, then the modem, and ect. As soon as you find the bad device, take it back to the store and get a new one, or have it fixed under warranty.

If the problem is on a used computer, you could go through the previous steps, but you may save a lot of time by asking yourself one simple question. What has changed since the

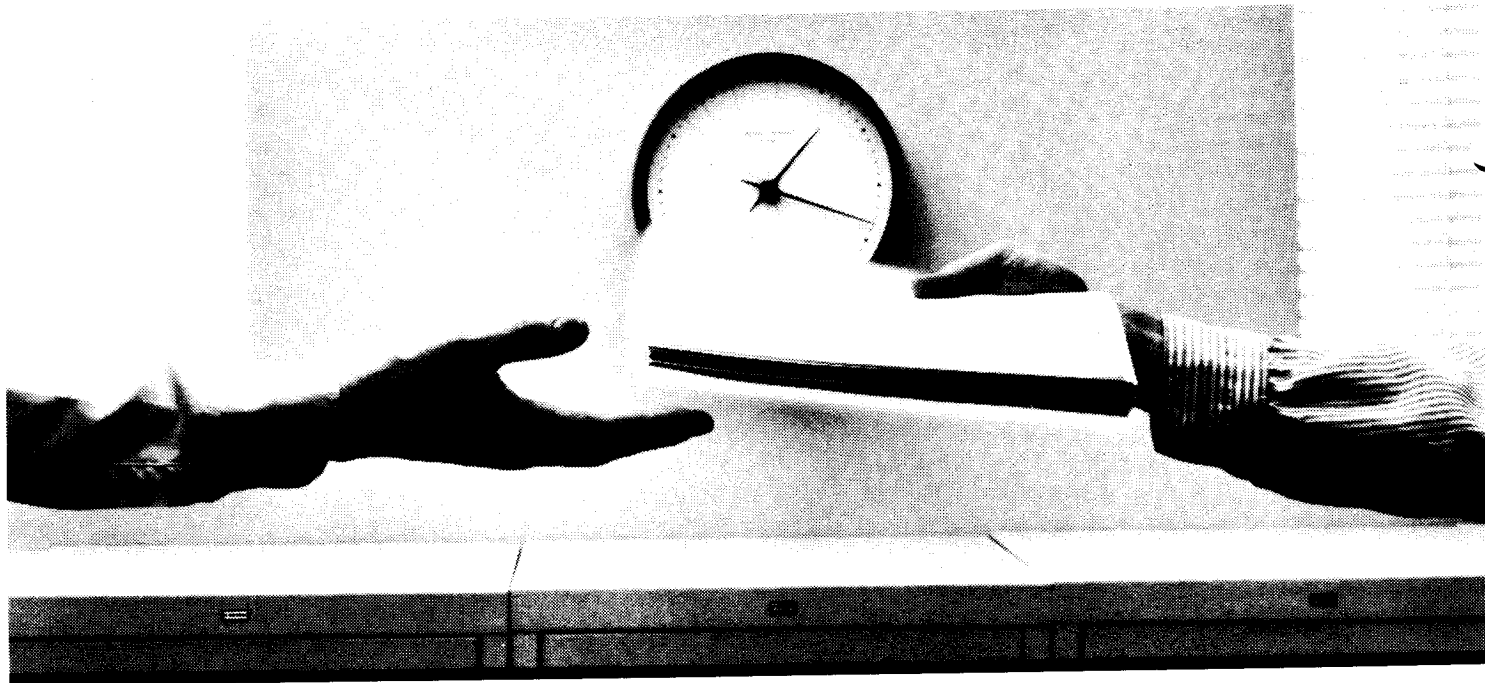
last time it worked? Did the kids use the monitor as a TV last night? Maybe you loaned your disk drive to a friend, or maybe someone clean the table that the computer sits on. It's very possible that someone may have bumped a cable, changed the disk drive unit number, or disconnected the video cord. If the problem is more serious, you might want to try the following steps.

First, disconnect everything from the computer except the power supply and the monitor. If the red power indicator on the computer is working, then the power supply is probably OK. Next, see if BASIC will put the 'READY' on the screen. If not, try another TV or monitor if you have one. If you have an Atari 800XL, running the built in diagnostic may tell you if the computer checks out OK.

The second step is to hook up the disk drive (or tape drive if that's your main program device) and see if the unit has power. Most disk drives should have a red power indicator. If it comes on, check to see if the disk spins. If not, look inside the disk door for anything that may be jammed and causing it not to spin. If the disk seems to work OK but won't spin when you turn on the computer, check the disk address switches and the cable to the disk drive. If you are getting 'BOOT ERROR' on the screen, make sure you are using a known good disk. It sometimes helps to clean the disk heads on the drive.

If you have a tape drive, see if you can move the tape forward and backward. Does the tape start to move when the computer requests it to. Most of the tape drive problems I've seen are caused by bad tapes, tapes that are too long, or I/O cables not seated properly. The rest of the equipment (printer, modem, ect.) in your computer system can be checked out the same way. Look for power indicators and normal unit operation. Here are a few hints I use to make troubleshooting a little easier.

First, I keep a known good disk (tape or cartridge) handy to use when checking a problem. It helps eliminate the possibility of bad media messing up my troubleshooting efforts. Second, I'm very careful when I do a unit swap of devices. It's usually the fastest method of troubleshooting, but it might cause additional equipment problems. Third, if the problem is intermittent, I write down on a sheet of paper exactly what the computer was doing at the time of the



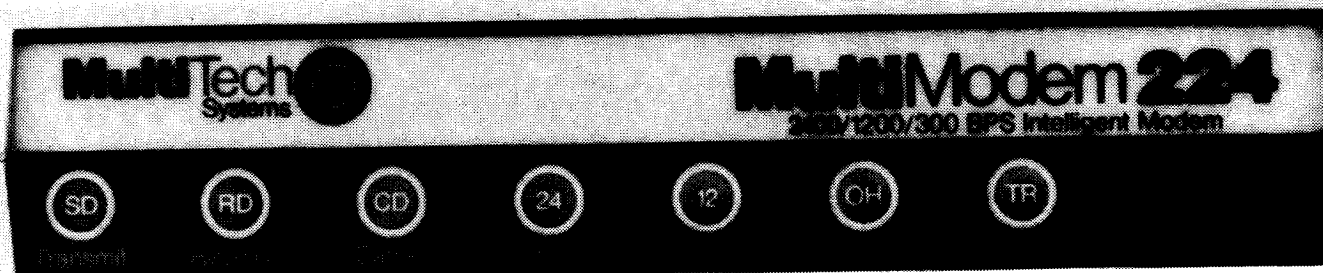
2400 bps modems: Do you Really need another speed?

- Is the shift from 300 to 1200 bps going to repeat itself at 2400 bps? The answer is both yes and no. There certainly are applications for 2400 bps asynch dial-up modems, but we shouldn't expect 1200 bps to die overnight.
- 2400 bps modems can improve throughput, thereby getting tasks done quicker and more economically. However, 1200 bps has become the virtual standard for professional dial-up communications, and most users are satisfied with it. So why consider a 2400 bps modem at all?
- One reason is flexibility. If the modem you select operates at all three speeds (300, 1200 & 2400) in accordance with accepted industry standards, it will serve virtually all dial-up applications now and in the foreseeable future.
- The modem you select should be the MultiModem224. It is Bell 212A and 103 compatible at 1200 and 300 bps, and CCITT V.22bis compatible at 2400. It is also 100% compatible with the Hayes command set, meaning that it will work with virtually all communications software packages, at all three speeds. Other features include both synchronous and asynchronous operation, full intelligence and a phone number memory.
- The MultiModem224 is available in both desktop and IBM PC™ internal card versions. (There is also a rack-mounted version for central sites.) And as a bonus, we provide free offers from ten of the most popular on-line information services, including CompuServe™, Dow Jones™ and The Source™.
- A 2400/1200/300 bps modem is just a plain good investment. Why not let the MultiModem224 provide your communications for both today and tomorrow?

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April Meeting Minutes

by Joanne Floyd

problem. The next time it fails, I do the same thing. Then I look to see if there is any correlation between the first and second time. If there is, it may point me in the right direction towards solving the problem.

I've found there's no cut and dry, sure fire method of troubleshooting a problem. Some methods may take longer on one problem, but take less time on another. If you use a logical, step by step method when troubleshooting, you will have little difficulty finding the problem unit. In the next few articles, I'll be describing how the different units work and troubleshooting inside the units. If you have any suggestions on service related articles, please feel free to let me know at one of the next meetings.

D.O.M.

by Frank Haug

This month's disk has the Atari 2.5 DOS. Unfortunately, we do not have instructions for it yet, but should soon. If anyone wants tape of the month, they should notify us at the meeting, and we will mail it to you.

These are the programs on the MAY '85 D.O.M.

- 1.SPMENU
- 2.BLACKBRD.BAS -- You must avoid missiles and bomb targets in this arcade type game
- 3.SYNPRINT.BAS -- A program written by a S.P.A.C.E. member (our Pres.) to be used with the SYN-FILE program.
- 4.SYNPREP.LST - Used with SYNPRINT
- 5.SYNPRINT.DOC - The text file for SYNPRINS.BAS
- 6.SYNPRINS.BAS - Use this program to print the instructions for SYNPRINT.
- 7.TITLE.BAS - A neat program that can be used to make a title screen.
- 8.RUNSHOOT.BAS - An interesting target-shooting game. NOTE for some reason you MUST TURN OFF YOUR DISK DRIVE (TAKE OUT THE DISK FIRST!!!!) BEFORE YOU CAN PLAY IT. Turn it OFF when the prompt tells you to.
- 9.GRUBS.BAS - Another arcade type game. You use the trigger to dig and fill holes. First dig a hole, then let a 'grub' fall in and fill it up on 'em.
- 10.HIDNMAZE.BAS - Try to escape the invisible maze as fast as you can.

That's the disk of the month.

The last SPACE meeting was held April 12, 1985 with 85-90 people in attendance. Phil Seifert, the president of TAIG, brought one of the new 130XEs to the meeting. This new model, which is not yet widely available, has 128K RAM, an expansion interface, and a better keyboard than the XLs. It will retail for \$150-\$200. Bob Floyd added that K-Mart has purchased all of the first shipment of 130XE's and that the shipment is due for delivery in late April. In the "rumors" department, a recent Infoworld report suggested that ATARI may be selling a "Fat Jack" package composed of a 520ST computer, a monochrome monitor, and a 3.5" disk drive for only \$799. Bob also mentioned that ROM magazine will merge with The Atari Explorer as of June, 1985.

Bruce Haug, the vice president, described the new bylaws which have been written for the club. (These bylaws were printed in the last issue of the newsletter.) The club members unanimously approved the bylaws by voice vote. Bruce also described a new AMS music disk with 32 popular songs. The music disk can be purchased for \$6 and the accompanying player disk for \$4. Max Feuer, the treasurer, reported that the club has a bank balance of \$973.81. He also mentioned that he has transferred the membership list from Textwizard to Synfile+ and may have "lost" a few members in the transfer. Contact him if your name appears to have been dropped from the list.

Under "New Business", Bob announced that an Analog disk of the month would be offered for \$4/disk to Analog subscribers who are club members if enough people signed up to show interest. He also mentioned that Steve Hopper has been talking with the group of ATARI owners in Cloquet who were interested in becoming affiliated with SPACE. The group has now decided to become an independent club but to exchange public domain software with SPACE.

Several new programs were shown at the end of the meeting. Joe Danko demonstrated the Enhancements to Basic program. The program includes many extra DOS commands such as a deleted file directory, a trace mode, macro keys and the ability to build in your own macro commands, a very fast renumber routine, the ability to do a global search on variable tables, and many other features. It can be purchased mail order for \$15 including shipping from FirstByte Software. Bob Floyd demonstrated Activision's Ghostbusters game, in which you buy a ghostbusters car and equipment and tool around trapping ghosts and foiling the Marshmallow Man. Steve Pauley demonstrated Lucasfilm's Rescue on Fractalus and Ballblazer. Both programs have excellent graphics. In Rescue, you are flying a rescue craft that must locate and retrieve people stranded on a planet. In Ballblazer, you are in an airfoil playing a soccer-type game in which you try to capture the ball and move it through your goal. The game can be played 1-player against droid (with droids of varying difficulty) or 2-player. Todd Burkey demonstrated Microleague Baseball, a game where you can choose famous teams from the past and recent present and pit them against one another. You can also choose the starting lineup and statistics on the players available. At the end of the meeting, Jon Nelson led a beginner's group session.

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HANDS-ON WITH ANTIC'S DEVELOPMENT 520ST

by JACK POWELL ANTIC TECHNICAL EDITOR

Our Atari 520ST just arrived in the Antic offices. This is the \$5,500 development package, and it includes the computer, two 3 1/2" disk drives, one medium-resolution (640 X 200) RGB analog monitor, and one mouse.

The software in the package is the "C" compiler, machine language assembler and debugger by Digital Research, the Mince screen editor by Mark of the Unicorn, Kermit -- a modem protocol program for file transfer, CP/M-86, and, of course, GEM -- which is in ROM in the machine.

On back order -- but expected soon -- is a high-resolution (640 X 400) monochrome monitor and a ten-megabyte hard disk.

Along with all this came 1000 pages of documentation and since it will take some time to digest all of this, we thought you might like a first impression of this new, high-level Atari computer.

The development 520ST is a preliminary model and there will be some changes between now and the time you see it in the stores, but all parts of this machine were factory made in the same manufacturing plants as the final product will be. The only real difference -- besides the price -- is that these machines were hand assembled.

The first thing you notice when taking the ST out of its box, is that it's very light. Although somewhat larger in size than the 800XL, it feels lighter. This may be because the shielding has not yet been added.

It looks exactly like the ST on our May cover, but there are some details you can't see from the photograph. On the right edge of the machine, to the rear, are two joystick ports identical in appearance to current Atari joystick ports, except they are also used for the mouse.

On the left edge, rear -- opposite the joystick ports, is the cartridge slot. This will accept a 40-pin board -- 20 upper and 20 lower.

In back of the computer are various switches and ports, each labelled beneath and with an indicating icon etched in the plastic above. From left to right they are:

- 1) Reset - a small, square button.
- 2) Power - identical to previous Atari power switches.
- 3) Power In - 7-pin, male DIN.
- 4) MIDI Out - 5-pin, female DIN.
- 5) MIDI In - same as above.
- 6) Television - RCA, female.
- 7) Channel - mini-switch, labelled "L" "H".
- 8) Monitor - 13-pin, female DIN.
- 9) Printer - female D-25, IBM-PC/Centronics compatible.
- 10) Modem - male D-25, IBM compatible.
- 11) Floppy Disk - 14-pin, female DIN.
- 12) Hard Disk - female D-19.

Besides the standard keyboard and ten-key pad, are ten function keys, labelled F1 to F10. The isolated cursor section is particularly well designed with the lower

three keys representing Left, Down and Right, and the Up arrow centered above them. On either side of the Up key are Insert and Ctr/Home. The top two keys in the cluster -- which are enlarged -- are Help and Undo. The Undo key may become particularly useful.

The drives accept Sony 3 1/2" disks. To boot the machine, first turn on the drives and insert both disks before turning on the computer. A disk must be in a drive for the computer to later access that drive.

When booted, the GEM desktop appears as a light green background with pale blue border and black-outlined icons. In the upper right corner of the screen are two disk icons, one over the other, that look like file cabinet drawers. In the lower right corner of the screen is a trash can.

In the border area, above the upper left section of the green background, are the words, "DESK FILE VIEW OPTIONS." In the middle of the screen is a thin, black arrow-cursor which is moved by the mouse.

We'll save details on GEM for later articles. Suffice it to say, it is fast! It can redraw an entire screen of icons in the blink of an eye.

DISK OF THE MONTH

The disk/tape of the month contains programs from the club library. The tapes can be purchased for \$3 and the disks for \$4. The group makes a small profit from the sale of these which go toward supporting some of the things the group does. Each disk/tape usually contains eight to twelve programs. Most of these programs are games with some utilities and demos mixed in. The programs are obtained from trading with other user groups and from submissions from local members. Members who submit a program will receive a disk or tape of the month free! What a deal!!

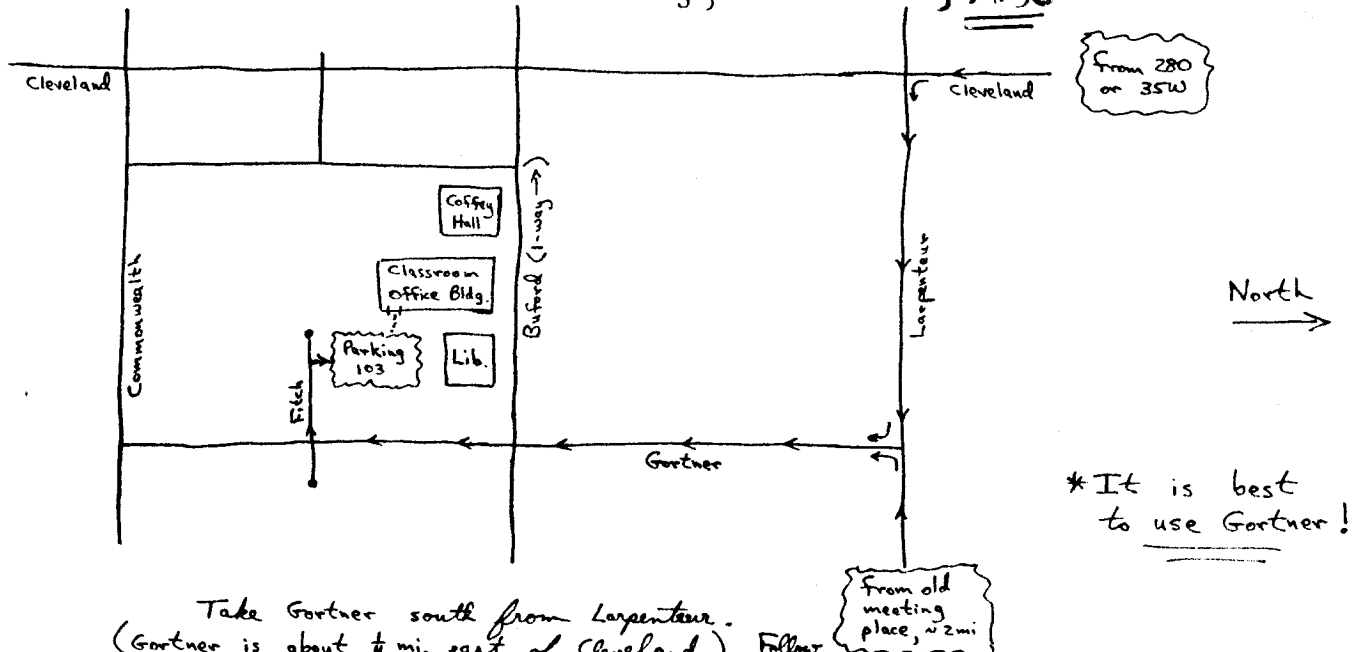
For those of you who are new to the D.O.M. here are some operating hints. After you are finished with one program and you want to bring in another, simply hit the break key, and then type in RUN "D:SPMENU". This will return you to the space menu.

Not all of the programs on some of the older D.O.M.'s work I would like someone to make a list of these, and then ask for a volunteer to fix the problems and then I will make up a new disk.

SPACE Meeting Place

U of M St. Paul Campus

Office Classroom Bldg., rooms B-35 + B36, **7:30**



Take Gortner south from Laarpenteur. (Gortner is about 1/4 mi. east of Cleveland). Follow Gortner to the second stop-sign. This is Fitch. Turn right + go into Parking Lot #103 (The # will be hard to find). Don't park in the "contract" lots numbered 158. You can go in the back door of the Classroom Office Bldg. The rooms are on the ground floor to the right.

WANT ADS

It is possible for members to place 'Want Ads' in this newsletter. The ads may be for selling used hardware, used software, tutoring services, or just about anything that has to do with Atari. The rates are as follows:

6 Lines \$1.25 216 Letters
1 Line .25 36 Letters

The following is a list of advertising rates for vendors or individual members.

Full page \$18.00 7-1/2" X 10"
Half page 10.00 3-5/8" X 10"
Half page 10.00 7-1/2" X 5"
1/4 page 5.50 3-5/8" X 5"

All advertisements must be paid for when they are submitted. Deadline for ad placement is the last Friday of each month. To place ad or for more info, call the editor.

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SPACE/TAIG Bulletin Board . . . 544-9058

St. Paul ATARI Computer Enthusiasts
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J. P. Scheib
3944 24th Av. S.
Minneapolis, Mn. 55406

Next SPACE Meeting:
Friday, May 10, 1985
7:30 P.M.

U of M St. Paul campus
Classroom Office Bldg. rooms B-35 +
B-36
St. Paul, Minnesota