Saint Paul ATARI Computer Enthusiasts

SPACE

An independent computer user group

SPACE Meeting Friday, Dec. 11 at 7:30pm

MAST Meeting Friday, Dec. 18 at 7:30pm

At the Falcon Heights Community Center
2077 Larpenteur Avenue West

MAST+ Programmers Meeting
Monday, Dec. 21 at 7:30pm

At First Minnesota Bank Building - second floor
Lexington and Larpenteur, in back of building

MAST Minnesota Atari ST

DISCLAIMER

SPACE/MAST BULLETIN BOARDS

SPACE/MAST East (XE) - BBS Phone: (612)-774-0135
Sysop: Bruce Haug (Home Phone: 774-6226)

SPACE/MAST West (ST) - BBS Phone: (612)-560-9254
Sysop: Steve Pauley (Home Phone: 560-5529)

S○P○A○C○E

President	
Larrry Vanden Plas	636-2415
Vice President	
John Novotny	699-2422
Secretary	
Joe Danko	777-9500
Treasurer (SPACE/MAST)	
Bob Siede	489-3982
Disk Librarian	
Joe Danko	777-9500
Paper Librarian	
Jim Scheib	721-4185
Newsletter Editor (SPACE/MAST)	
Steve Pauley	560-5529

M○A○S○T

President	
Jim Schulz	537-5442
Vice President	
Phil Seifert	(W) 559-4690
Secretary	
Dan Stubbs	433-3708
Disk Librarian	
Jim Schulz	537-5442
Paper Librarian	
Neil Palosaari	646-1272
Membership Chair	
Allen Frink	482-7911
Demo Coordinator	
Phil Seifert	(W) 559-4690

NEWSLETTER ADVERTISING RATES:

S○P○A○C○E

BYTES from the SPACE Pres
by Larry Vanden Plas

THANK YOU for the opportunity to be your president for a year. Thanks to Bruce Haug, Bob Floyd, Jim Schulz, Joe Danko, Bob Siede and all those who made this last year an enjoyable learning experience.

I am really excited to work with the new SPACE/MAST officers. There is a wealth of ideas and energy. Joe Danko has started to improve the DOM's and make them easier to buy. We were able to get a low priced hard disk for the BBS. If all goes well, the BBS will soon offer more. More info at the meeting.

WHAT would you like to see featured at the meetings? Using a RAM disk? Using a RAM disk to spell check? Modem use? Spreadsheet construction? Word processing solutions? Hardware that makes life easier? The portable Atari? Let us know WHAT you want and we will work to get it for you. We want to hear about what is bugging you.

Demo's of Fight Night and Pawn are scheduled for Friday, Dec 11th. The popular AMS (Advanced Music System) and Christmas Music will be available. We also plan to have blank DS/DD disks for sale (about 30 cents each with jackets and write protect tabs).

A special thanks to Jim Scheib, who offered to be the reinker as well as SPACE Paper Librarian and to Greg Peasley who offered to dupplicate and sell the DOM's.

Merry Christmas, See you Friday,
Larry Vanden Plas

Notes from the Vice President
by John Novotny

As generally has been the case per my observations over the last 2+ years as a SPACE member, the newly elected offi-cers deserve an extended respit to allow their arms to recover from the arm twisting by the Nominating Committee. Fortunately because there wasn't much need of a campaign staff, there isn't the problem of returning after election favors. Anyhow, off to the tasks of VP. Having been given a copy of the club bylaws, I find that theoretically the VP should have an easy time fulfilling his designated duties. There are basically two: be a member of the Executive Board, and help seek out volunteers for the various positions in the club that actually have to do the work. (Any volunteers out there?) Did I miss anything, Larry? Beyond that, I'd say its to support the stated objectives, and start rehersing saying 'NO!' to next years nominating committee.

As you well know, last years VP (Jim Schulz) certainly is a tough act to follow. Many of our newsletters over the past year and more were filled almost single handedly by Jim, as well as his major involvement in MAST DOM and whatever else. Let's face it - the office of VP has been handled in a superhuman way, and now has been returned to a mere mortal.

Being a relative newcomer to the ATARI community, I can't say that you will be getting a lot of expertise from this office. (If some of you have some questions about the UNISYS 1100 series of computer...) Actually, I've been making some efforts in getting up to speed here; dabbling with BASIC and MAC65, RAM disks on my 800XL, mostly programming - still weak on many aspects of the operating system and ATARI unique hardware. Most of my efforts have been with printed graphics using the Epson RX-80. There are many more things I want to do with my ATARI (not bored with it yet!), and as the year goes on, maybe we can all share some of our enthusiasm.

ℹ️ SPACE Disk Of the Month News for Dec.
By Joe Danko

Allow me to introduce myself. I am Joe Danko, a member of SPACE since December of 1982. I own a 400, an 800 and an 800XL, all much modified, 3-1050's, a STAR SG-10, a 410, a UDS FATSTALK 1200 baud modem, a burned-out APE-FACE and 2 burned-out 1030's. As you can see, I am committed to life in the slow lane with my 8-bit stuff. I have been SPACE secretary for the last year (when I've been in town) and I am also committed to SPACE as a successful ATARI user group. I have volunteered to take over the Disk Library and my goal for the first month or so is to survive.

If everything goes OK the December offerings will be:

DECEMBER SPACE DOM -

DOS	SYS	039
DUP	SYS	042
AUTORUN	SYS	001
MENU		051
SANTAGAM	COM	201
HAPMOD71	BAS	036
SYNDAT	DOC	077
MOUSE	DOC	007
MOUSE	COM	009
LITLIST	DOC	019
LITLIST	COM	058
SPEECH	DOC	062

105 FREE SECTORS

SANTAGAM.COM - Machine Language game that requires a joy-stick. The real name is SPECIAL DELIVERY. You assume the role of Santa in your sleigh and catch presents in the sky, land on a house, delivery the presents, find the key and get back to your sleigh. HO! HO! HO!

HAPMOD71.BAS - Basic utility for Happy version 7 owners to run the sector copier with 256k XE/XL expansions. Even if you don't have a HAPPY it's fun to watch the unusual way text is displayed when RUN.

SYNDAT.DOC - A text file that defines the format of SYNFILE data files.

MOUSE.* - A machine language handler and docs for the use of a mouse on the 8-bit Atari.

LITLIST.* - Machine language utility for printing data in columns. SPEECH.* - Text file for constructing a hardware speech synthesizer.

• At least 6 new items that are still in the works.

• A repeat of the Christmas AMS II music disk from last year which has both sides nearly full with 46 nice XMAS tunes. A seperate player program is required which is sold separately.

•DOS 4.0 - ATARI's 'new' DOS for the 1450XL which cost a ton to develop and has little practical value now but it does handle all densities and even double-sided disks and has a lot of nice utilities and help screens.

ANALOG-SEPTEMBER - for sale to registered ANALOG subscribers.

🖱️ SPACE November Meeting Minutes
Recorded by Joe Danko

1. The meeting was called to order November 13th at 7:30 PM by President Bruce Haug. Approximately 38 members present.

2.Vice-president's report and ATARI news: Jim Schulz.

Jim reported on the latest rumors concerning releases of new products. The $149.95 65XE GAME SYSTEM is available at CHILDREN'S PALACE. It uses an operating system modified to prevent ram access beyond 128K. Atari's $99.95 SX212 300/1200 baud modem is also available to dealers but is usable with 8-bit systems only with the RVERTER modem handler. DD/DS 8-bit disk drive is waiting for FCC approval with hopes of Christmas availability. Word is that the new ADOS for the drive uses RAM under ROM and will not work with 400/800 systems. ICD has a new line of hard disks and controllers.

New Software: VOICEMASTER, $39.95 speech synthesizer which is also hardware. FLASHBACK by ICD for hard disk and ramdisk archiving. SPARTADOS TOOLBOX, $29.95 disk utilities.

3. President's report: Bruce Haug. Bruce read a letter from Poland from the Atari user we assisted last year. It sounds like he has a lot of software and is looking for more.

4. Treasurer's Report: Bob Siede.
   SPACE BAL.= $ 562.26
   MAST BAL. = $ 610.14
   TOTAL BAL.= $1172.40
   YTD REV. = $7926
   YTD EXP. = $8179

5. Secretary's report: Joe Danko. I am now deeply involved with 8-bit DOM and I a new SPACE secretary will be needed as soon as possible.

6. Newsletter Editor: Bob Floyd. Bob didn't make it this month. The combined SPACE/MAST newsletters to come will be edited by Steve Pauley, a past editor and designer of our official SPACE and MAST logos. Members are urged to write articles, especially hardware and software reviews and opinions. The deadline is the Monday 11 days prior to the next meeting for submission of input for the next newsletter. Contact any club officer if you can't upload your article to the SPACE BBS.

7. PAPER LIBRARY: Jim Sheib, Librarian. Larry announced that he has a new bunch of educational software to lend.

If any member needs old magazine issues, call Jim at home. His phone number will be on the front of the August newsletter. Jim will bring current newsletters and magazines. Please return any borrowed materials by the following month.

8. BBS NEWS: Bruce Haug is the new supreme SYSOP. Please assist him as much as necessary. As this goes to press he is attempting to install a 5 megabyte hard disk. The BBS date is frozen in 1955! This is due to logging to the ramdisk. If logs go to the printer it works ok, to a ramdisk and you get 1955. *(ED. As this goes to press the problem seems to be* fixed. Watch the BBS for more info.)

A hint to new users: don't forget to leave a message in <E-MAIL> addressed to <SYSOP> the first time you sign on with your name and phone number otherwise you will not get any privileges on the BBS. The SYSOP needs to call to verify your existence as a human being.

9. Ribbon Re-inker: Larry Vanden Plas. Larry has a new adapter for the small PANASONIC ribbons that turn counter clockwise. Larry also showed some examples of nice printing with a well-inked ribbon in case anyone at the meeting was unaware of what good printing looks like. *(ED: After the meeting was over, Jim Scheib volunteered to take over the duties of ribbon re-inking. See the article at the end of the newsletter for more info.)* Most ribbons can be re-inked for $1, large ribbons for $2.

10. DOM: Disk Librarian, Frank Haug. Last month's DOM featured best selections from years past again and Frank officially tendered his resignation.

Frank stayed long enough to demo Bob Floyd's BLAZING PADDLES pong game.

The club's 810 disk drive has been fixed by lubricating the head actuator rails with a lead pencil!

It seems that ANALOG is having distribution problems as July/August was the last disk received. *(ED. As this goes to press we have received September).*

Anyone interested in helping with DOM duties in the future please contact Joe Danko at the meeting, by phone or via the BBS EMAIL.

11. Proposed Bylaw Changes: Changes voted on passed and approved as proposed.

12. SPACE wants to get together a couple 8-bit systems for CHILDREN'S HOSPITAL of St.Paul with software and assistance as a volunteer project. If anyone has hardware, software or time to contribute please contact Larry Vandenplas.

13. CURRENT NOTES is available at

a group subscription rate of $17 for 6 or more subscribers in a user group. The regular rate is $20. Interested parties can contact Joe Danko at the meeting or on the BBS.

14. Nominating Committee report and elections: The nominating committee members are John Mitchell and Larry Vandenplas. Nominations as of 11/13/87: There were no nominations from the floor.

President: Larry Vandenplas
Vice President: John Novotny
Tresurer: Bob Siede of SPACE

No other candidates from MAST.

President and Vice-President elected by acclamation. Treasurer, Bob Siede, received 24 votes and must also run at the MAST meeting for final election.

The new officers were immediately compelled to take over and assumed control of the meeting at this point.

15. Offers and deals: Larry V. brought in some flyers from a surplus store called ENDLESS ELECTRONICS, 824 Hampden Ave, St. Paul, 646-3487.

There is general interest in another mass disk purchase.

◆ **8 Bit Bits**
By Jim Schulz - Your VP Emeritus

I had no intention of writing anything this month until I stopped by B. Daltons today over lunch. A new magazine/book is out for the 8 Bit Atari owners. Compute! has just published Compute!'s Best of Atari. If you want this, I would start looking right away. At Southdale, they had three copies at B. Daltons, but none at Software, Etc. So be on the lookout.

This magazine comes with a disk of all of the programs and includes games, Speedscript, and utilities. Here is a rundown from the table of contents. The games include Chess, Chain Reaction, Euchre, Beehive, Space Dodger, Prisonball, The Hermit, Climber 5, Miami Ice, Switchbox, Laser Chess, and Worm of Bemer. The Speedscript stuff includes the Speedscript 3.0 wordprocessor,

Speedscript customizer, and Speedcalc spreadsheet program. The utilities include Atari Fontmaker, DEBUT Atari BASIC debugging tool, a best of letters to the editor and four Bill Wilkerson articles on programming. Since I just got the magazine today, I can't tell you much more. All programs have been previously published in Compute!. A strange aside, there is only one advertiser for the complete magazine Computer Mail Order with both the front and back cover and 11 pages in the center of the magazine. Also included in this issue is a list of book closeouts. The one book closeout of interest to Atari owners is COMPUTE!'s First Book of Atari, COMPUTE!'s Second Book of Atari, COMPUTE!'s Second Book of Graphics, and Mapping the Atari all for only $9.95. This is a great deal especially considering that each of these originally sold for at least $12.95 each.

So that's it. I'll bring the magazine along to this month's meeting, but be on the lookout for this one since it seems like its another sleeper like ANALOG Xtra. Until the SPACE meeting, happy computing.

◆ **8 Bit Xtra**
With Comments by Jim Schulz

This month's 8 bit Xtra looks at a series of miscellaneous notes. This file is from Compuserve and include some information which I thought all would find interesting. While the information about Indus might be a little old, I have read anywhere in print about the XE keyboard exchange. This isn't all the most interesting of news, but I'm sure that it will come in handy for someone. So read on and pick and choose. Next month, we look at the 80 column options for the 8 bit computers. So read ahead...Your VP Emeritus

130XE KEYBOARD

Here's an update concerning the 130XE nickleprint keyboard problem: Most important, Atari Corp. HAS a FREE

exchange on XE keyboards. I found this out talking to an out talking to an Atari service rep at the Detroit Atari Magicshow. Contact At Atari Corp. for more details. To my knowledge, this exchange is NOT supported by Atari Canada. As usual, Atari didn't publicize this exchange, but it is there. (so much for these nay-sayers who were sure that Atari would do nothing about this problem, a-la commodore) Second, earlier XE keyboards DID have Silverprint (the good stuff), so your XE may not be affected by the problem. I have no information as yet on when the changes were made relating to serial numbers, but I have seen Silverprint used in an XE keyboard with the SIO capacitors soldered directly to the SIO plug.

I have two suggestions for files to be added to DL0. First, I've noticed that some of the messages on the SIG are requests for information on how to get in touch with manufacturers or repair facilities for various products, including those which are no longer in production (e.g. the ChalkBoard PowerPad). Occasionally the addresses or phone numbers change, so that the product owner is left frustrated when trying to obtain repair or technical information. How about a data file listing the addresses & phone #s of as many Atari product manufacturers and repair facilities as we can locate? I'll start it off with 2: For the ChalkBoard Power-Pad, this company still sells software/hardware at a heavy discount and answers questions regarding the device. ChalkTalk c/o Practical Atlanta, Inc. 3025 Manning Drive Marietta, GA 30062 no phone listed For the Indus disk drive, there is a $60 repair fee out of warranty. Call them, with your drive serial # handy, for a return authorization # before returning the drive. Indus Systems 9304 Deering Ave. Chatsworth, CA 91311 818-882-9600 My second suggestion concerns hardware incompatibility problems. Perhaps the most common examples concern the

XM301 modem and either the 1200XL or the Indus disk drive, or the 1200 and various printer interfaces. From what I've been able to gather from the SIG, the Indus has some sort of grounding incompatibility with the modem which prevents the use of tone dialing, and possibly other modem functions. The problem with the 1200 is already well publicized, although the fixe(s) might not be. How about a DL0 entry which lists hardware configurations which are known to cause problems, and suggested fixes

Prospective new owners of INDUS disk drives should know that they are no longer in business. All operations have been taken over by: Future Systems, Inc. 9811 Owensmouth, Suite 9 chatsworth, CA 91311 (818) 407-1647 FSI has mailed brochures to all registered INDUS owners (I am a former owner) announcing the above, and that all warranties offered by INDUS are no longer valid. They sell a service contract for $24.95, as well as the 64K RAM board, CP/M BIOS, and Synchromesh II (DOS XL 2.35l.2) for $99.95. While it looks as though they will now be offering full (better they claim) support for INDUS drives, you should all just be aware.

▽ **Machine Language:**
What's It All Mean?
by Dr. Warren G. Lieuallen

This is the third in the continuing series of machine language tutorial articles. This month, we ask the ask question: What do all those codes mean??? Maybe this will give you a better understanding on those long, rather cryptic listings in ANALOG each month.Your VP Emeritus, Jim Schulz

In previous discussions, we have examined both how to load and store a machine language program, and a simplistic view of how the hexadecimal codes produce any meaningful results. This article will now deal with the specific commands availab̶l̶e̶ ̶i̶n̶ ̶t̶h̶e̶ assembly language, and how̶ ̶t̶h̶e̶y̶ work to comprise

a complete, working program.

To make machine language programming a little easier for human beings, it was decided that the numerical codes which represent the actual commands would be given an associated "mnemonic" word, or label, describing the command. A mnemonic is simply something which makes remembering easier, due to associations which may be made between the mnemonic itself and the item being remembered. In other words, the command which is represented by the number 76 (or "4C" in hexadecimal) is also indicated by the mnemonic label "JMP", which stands for "jump". This JMP command is very similar to the GOTO command in BASIC, which is essentially a "jump" in the program's execution. So, by remembering "JMP", you can remember how this command functions (just like remembering "GOTO" in BASIC.).

All the mnemonic labels have been reduced to three letters in length for the sake of consistency. Therefore, it's not too difficult to create a program which will accept the three-letter mnemonics, and convert them into the appropriate numerical codes, thereby saving us the trouble of looking all of them up in a table and performing the conversion ourselves. This is exactly what the various assembler/editor programs do (of course, they also do a lot more, but that's another story, or at least another article!). In this way, all we need to remember is the mnemonic labels, and not concern oursleves with the actual numerical, hexadecimal codes.

Previous newsletter articles by Charles Brown have discussed that everything your Atari does is the result of changing certain memory locations, either with PEEK's and POKE'S, or just with other BASIC commands, which alter the memory locations for you (whether you realize it or not!). Machine language is no different; everything happens because of changes in the memory locations. The only difference is that in machine lan-

guage, you do have to be aware of these changes, because it is your machine code which will produce these changes. BASIC's extra "helping hand" is no longer available, and much of the housekeeping functions must be dealt with by you directly. In actuality, this is not as bad as it sounds.

The simple screen-fill routine we discussed last month will serve as a good example. This routine was made up of thirty-four numbers, which correspond to the thirty-four commands in this program. Here is the source code for that program (The "source code" is the set of mnemonics, understood by your assembler, and hopefully by you as well; the "object code" is the set of numbers generated by the source code, and saved as a binary load file.):

```
Byte 1= PLA    - get # of arguments
CMP #$1 - is it 1?
BNE #-2 - if not, kill program (infinite
loop)
PLA    - get MSB of argument (not
needed)
PLA    - get LSB of argument (character
code)
TAX    - store it in X
LDA $58 - store contents of $58 in A
and...
STA $CC - store A in location $CC
LDA $59 - store contents of $59 in A
and...
STA $CD - store A in location $CD
TXA    - retrieve the argument into A
LDY #0 - let Y=0  LOOP-> STA $CC,Y
- store A at location ($CC+Y)
INC $CC - increment location $CC
BNE #-6 - if $CC<>0 then go back to
loop
INC $CD - increment $CD
LDX $CD - store location $CD into X
CPX #$A0 - compare X with $A0 (160)
BNE #-14 - if X<>160 then go back to
loop Byte 34=RTS - return to BASIC
```

Depending on your background, this listing may or may not make any sense! What is shows, though, is that this program works exactly like its BASIC

counterpart—it places the internal code for an asterisk in the memory locations corresponding to the graphics zero screen display. It does this by first checking to see that only one number was recieved (this number [the argument] is the internal code for an asterisk, which you specified in the USR call from BASIC, eg. X=USR(1536,10).). It then transfers this value to the X register (a special memory location used to hold values needed in the program, just as variables do in BASIC), and then gets and stores the pointer to the beginning of screen memory (this is location $58 in hexadecimal). It then retrieves the character code, and begins to place it in the memory locations. The rest of the program simply counts how many locations have been filled, increments the screen pointer and stops when one screen-full is done! A slightly more detailed discussion can be found in "Atari BASIC Faster and Better", by Carl M. Evans (published by IJG Enterprises).

So, although you may not think so just yet, that's all there is to programming in machine language. While it certainly seems harder than other programming languages at first, with a little practice and familiarity, you'll find that it really is just another language in which programs may be written. Best of luck!

▼ Learning to Program in Atari BASIC
by Jackson Beebe

This is the first in a new series of articles to get you started to learn how to program in Atari BASIC. If you ever wanted learn, these articles will get you started. This month, Getting Started in Atari BASIC. This is the first half of lesson one. These lessons seem quite complete and very well done. Let me know if you want these continued. Next month, the second half of lesson one with programming examples. (Comments by Jim Schulz, Your VP Emeritus)

LESSON 1 Version 1.02

Getting Started in Atari BASIC
(C) Copyright 1986 by Jackson Beebe

This lesson is placed in the Public Domain. Individuals, user groups and BBS's may reprint, copy or distribute it, as long as this notice remains intact with the lesson.
CONTENTS: Line numbers
  REM statement
  PRINT statement
  Multiple statements on a line
  NEW command

This is Lesson 1 of Learning to Program in Atari BASIC, brought to you by your host - Jackson Beebe. Contact me at the address at the end of the lesson. Enjoy.

This series assumes no prior knowledge of BASIC, or programming. Each lesson ends with Sample programs. Writing the sample programs is STRONGLY recommended, as the main learning in BASIC takes place during the writing of programs. ATARI BASIC is the BASIC used in these lessons.
WHAT'S NEEDED:

You need an 8-bit Atari computer, with ATARI BASIC (cartridge with 400/800 or built-in with 800XL/130XE), and preferably a disk drive. A printer is a definite plus, as it gives you the ability to print out the lessons, and make printouts of your program. This is handy in development and de-bugging. Beg borrow or check out a copy of some BASIC textbook. Examples are USING BASIC by Julien Hennefeld (lots of used copies around in campus bookstores) or INSIDE ATARI BASIC by Bill Carris. The ATARI BASIC REFERENCE GUIDE, a 15 page booklet that comes with the computer is excellent, and nearly necessary for the Atari versions of BASIC commands.
One of the handiest of all things to keep beside your computer, is the ANALOG Computing POCKET REFERENCE CARD, an 8 1/2 by 28 inch folded 16 page

collection of BASIC commands, PEEKS, POKES, keyboard values, graphics, error codes, etc. They sell it for $7.95, which is a bit pricey, but worth it.

BOOTING UP IN BASIC:

If you have a 400/800, turn everything off. Install the BASIC cartridge. Turn on the disk drive. Install a disc with DOS. Set top of form, and turn on printer. Turn on the computer. For an 800XL/130XE, you don't need to install a cartridge, as BASIC is built in. When you see the READY prompt, you are in BASIC. You are now ready to write a BASIC program in the Random Access Memory (RAM) of your computer.

Turning on a computer with BASIC, and NO disk, takes you right to BASIC, as shown by the READY prompt, but you can't save your programs without a disk drive or cassette recorder.

You can boot up right to the DOS menu, by removing thE BASIC cartridge in a 400/800, or switching BASIC out of the system by holding down the OPTION key while turning on your 800XL/130XE. Hold down OPTION until you see printing on the screen.

There are three versions of BASIC in Atari 8 bits: A, B, and C. A and B each have problems, for example version B's adding an extra 16 bytes each time you save a file, over and over, or it's fatal lockup. Version C is very nice, and behaves perfectly. It is available as a cartridge from: Atari Customer Relations, 1196 Borregas Avenue, Sunnyvale, CA 94086 The price is $15 + 2.50 postage. Well worth it.

To find which BASIC you have, type: PRINT PEEK(43234) If you get 162 you have A, 96=B, 234=C

Fixes to B are available as type-in programs from the magazines.

INTRODUCTION:

All novices or beginners face three tasks in learning how to program:
1. Learning to operate the hardware.
2. Learning to program.
3. Learning the BASIC language.

Those of you familiar with your computers, or who already know another programming language, are already part way there!

BASIC stands for Beginners All Purpose Symbolic Instruction Code, and was formulated in 1963 by John Kemeny and Thomas Kurtz at Darthmouth College. BASIC is closely related to FORTRAN, having similar features. If you know FORTRAN, you nearly know BASIC.

BASIC is a HIGH level language, so called because it operates "high" up, away from the machine. You can issue complex commands such as PRINT, without having to worry about how many bytes you will need, or clearing space out in RAM for print, etc. These are concerns in LOW level languages, such as machine language, or assembler language. A lot of housekeeping has been done for us in BASIC, and we can concentrate on using the language, without having to understand how the machine actually works internally.

The price paid, is that BASIC runs much slower that most other languages, mainly because the software that makes addressing the machine so convenient, takes up time.

A prime reason for learning BASIC is that it's a very flexible, easy to learn language that you already own.

1. LINE NUMBERS:

BASIC programs use line numbers before each line of BASIC code. Normal program execution begins at the lowest number (may be any number) and executes each line in numerical sequence. Programs are rarely written from start to finish in one sitting, and sometimes are written from end to beginning, or from the middle toward the beginning and end. This means you will usually be adding extra lines between existing lines as you develop or modify a program. To allow room for these extra lines, it is recommended that you initially number your

---

⚛ 𝕄 ∘ 𝔸 ∘ 𝕊 ∘ 𝕋

November MAST Meeting Minutes
by Dan Stubbs

The November Mast meeting was opened by Bob Floyd and Jim Schulz. Jim discussed the disks of the month, including a news disk put out by MAST member Dave Meile with help from other MAST members. The news disk includes a review of 'Tackle Box ST', information about ST magazines, tutorials on ARCing, Pascal, and so on. This disk is a real bargain at $2.00! Get yourself a copy and help Dave out by contributing to the next issue!

The next item of business was elections for next year's officers. Jim Schulz was elected president of MAST, Phil Seifert was elected vice president, and Bob Siede was elected to the be the joint treasurer of MAST and SPACE. Once again, we thank our first officers and SPACE for getting MAST started. A special thanks is due Bruce Haug for helping to organize MAST and securing meeting places for MAST and the MAST PROGRAMMERS' GROUP. Even though Bruce does not own at ST, he has put forth an extra effort for the programmers' meeting and picked up a key to the building each afternoon before the meeting and opened up the building in the evening. Thank you, Bruce! The newsletter will now be done by Steve Pauley.

In general discussion the COMDEX show was reported on. MEGA ST's were featured with emphasis on desk top publishing. It was reported that MEGA ST's are in good supply on the west coast. A Unix-like environment ('IDRIS') will be available for the ST. The 'Transformer', which allows reading of Macintosh formatted disks directly for Magic Sac users was also shown. The CD ROM players will be available soon and there were demonstrations of Local Area Networks using

ST's.

Spectrum 512, MicroLeague Baseball, Shoot the Moon, and Word Perfect were demonstrated at the end of the regular meeting.

There will be a MIDIMAZE contest in December with prizes offered to the survivors, Phil Seifert is the orgranizer.

News from the Pres
By Jim Schulz

Well, elections are over and it's again time to move ahead. Some things have changed, but most things remain the same. It's now official. I am your new and first official MAST president with Phil Seifert standing by my side as my trusty Vice President. Also MAST is no longer as SIG, but a full fledged group. Well, that's it for changes for now. More exciting things, though, are planned for the future...

How about a state of the club report???? Financially, MAST looks pretty good. Membership-wise, MAST also doesn't look too bad. I think the places that current need work are educating new users to the fineries of the ST and expanding our membership base.

As I have said in the past, there seems to be a fine line between the beginner and the knowledgeable ST owner. It seems as though the MAST meeting continues to serve the knowledgeable user, but seems to miss the mark with the beginner. I brought up the idea of a beginners group or new users group two months ago. Response has been sparse. I currently have a firm yes and a maybe. Not much to start a group. I know these users are out there. After talking with one member over the last week, it seems like the interest is there, but a vehicle need to be found for communicating it. I don't want to lose these members and we need to serve all levels of ST users. If you fall in this category, give me a call, leave me a message, or stop by and talk at the meeting. The ST is a great machine, but

it can be used much more effectively if you know more on how to use it. I started you know more on how to use it. I started as a beginner, too and am still a beginner in some areas so I know where you are coming from.

Secondly, membership. We need to get the new members to the meeting as well as get MAST's name around. One place for exploiting the meeting is the MAST BBS which has not been used to its fullest extent. Again, if you have ideas on bringing in new members, let me know......

Future meeting plans... Let's see, first for December. In addition to the news, rumors, and disks of the month, and of course demos, we will have the first annual MAST MidiMaze tournament. So bring your ST, monitor, disk drive, a joystick and a power strip along and be ready for a good time. Last weekend, we played with eight computers and had a great time so the more the merrier. Also before I forget, there will also be prizes donated by Wizard's Works for the winners. Also watch out for Phil.

Also in December on the Monday following the MAST meeting, we will have another session of the programmers meeting with Chuck discussing more about Emacs editors and some more interesting discussions with Dale on his current projects as well. Also, if Steve is still willing, we will start the planning for the first MAST joint programming project. In addition, lots of questions and comments. All are welcome.

Coming in January, it's survey month. Surveys will be available at the meeting and on the MAST BBS for you to express your opinion on what you want from MAST, what we are doing right, and where we are slipping. Drop the surveys off at the meeting, and for your trouble, you will be entered into a drawing for a door prize at the end of the meeting. Finally, in February, MAST celebrates its second birthday with its now annual birthday party meeting. Volunteers are needed for food and refreshments. More

on this at the meeting. Lots of good stuff in the months ahead.

Disks... Blank single-sided disks sold quite well last month. Hopefully, the double-sided disks will be available by the meeting. I have already sold 60 of the 150. Remember, each disk sells for $1.10 each. Just one more benefit of your MAST membership.

Disks, Disks... Oh, yes, disks of the month... Elsewhere in this issue, you will find out more about this month's edition, but disks of the month sales have been down the last two months. Why???? Only you the member would know that. If you know, please let me know. Part of the problem always seems to be not knowing what there is before you buy. I try and give you a good idea each month through by blow by blow coverage of each disk. In addition, time permitting, we will return to selected disks of the month demos and I will start printing out the READ.ME files from each of the current month's disks for posting on the window. It seems like we go through one of these lull periods every few months so maybe this will bring us out again. Remember, disk of the month sales support the club and pay for the newsletter, room rental, software download costs, and special MAST events. Before we move on..., let me give a big thank you to Dave Meile for his very well done MAST Newsdisk last month. If you didn't buy a copy, pick one up at the next meeting. For $2.00 you get a disk of tutorials, articles, reviews, programs, and more, you can't go wrong. Also let Dave know what you think of the Newsdisk idea. Without your input, Dave will not know whether to continue the Newsdisk preparation. My personal vote is yes, go for it.

Newsletter... Starting this month, MAST's own Steve Pauley has taken over the newsletter. Steve, in addition to being the MAST sysop, is a graphic artist by trade and a former SPACE newsletter editor many moons ago. Expect lots of good stuff in the months ahead. Also, I am calling for more newsletter articles. We

need reviews, tutorials, columns, or just about whatever you want to write about the ST. Even questions are fine, and the next month we will supply the answers. You might ask, we don't have the room.... This will change in the coming months. Currently, we are starting negotiations with TAIG for a combined newsletter which will increase both the 8 bit and ST news space in the newsletter. So we need your articles. Bring them to the meeting, upload them to the MAST BBS, or contact Steve or me. It will get in the newsletter. We need your help.

BBSs... Speaking of the MAST BBS, currently things are looking quite good. Lots of uploads, lots of news, and lots of messages. Need we ask for more from a BBS. As always check out the bulletins for the latest news from the ZMAGS and ST Reports. Starting in January, the biweekly ST Reports are going weekly so more news will had by all starting next month. Also the MAST board for the latest meeting news, DOM news and more. A couple of our regular meeting attendees forgot about both MAST meetings last month because they misplaced the date. Well, starting this month, maybe quite a bit, or just a little, but the meeting time and date will be posted in the message base for all to see. As always, if you have any questions or comments, drop me a message. The phone number for the MAST BBS is 560-9254.

Well, that's about it for this month... Oh, the envelope. Yes... This month the envelope looked pretty empty for a while, but let's look again. First off, Star Trek is out!!! Yes, the Star Trek game with the digitized sounds among other goodies has finally been released. If you are a Star Trek fan or not, check this one out. Next up, a strange little program called Rings of Zilfin from SSI. This is another in their role playing/Ultima-type series of games that deserves a look. From what I have seen so far, it's well worth a look. I know that it will keep me busy over Christmas vacation. Finally, for our GFA program-

mers, the GFA book is out. The what??? The GFA book is a book of examples and tutorials for the intermediate to advanced GFA programmer and also includes a disk of example programs. This book picks up where the manual stops and is written by the author of GFA Basic, the man in the know. I have not yet seen my copy, but initial reactions sounds quite good. Another goody for GFA programmers is due next month so stay tuned.

Well, that is it for the month of December. I hope to see you all at the December MAST meetings. Until then, happy computing.

MAST Disks Of the Month
By Jim Schulz

Yes, the clock on the wall again says it's time for more MAST disks of the month. But first, let's look back at last month selection of disks.
ND #1 - MAST NewsDisk #1 (News, Articles, Tutorials, Reviews)
#37 - ST Writer 2.30 (Latest version of PD Wordprocessor)
#101 - Atari Emulator 1.11 (Atari 800 Emulator with Source)
#190 - Nov. DOM #1 (Utilities)
#191 - Nov. DOM #2 (Applications)
#192 - Nov. DOM #3 (Games)
#193 - Nov. DOM #4 (Demos)
#194 - Nov. DOM #5 (Music, C, OSS Pascal Programs & Files)
#195 - Nov. DOM #6 (Communication and GFA Programs & Files)
#196 - MicroEmacs 3.9 (Editor with command files and docs)
#197 - MicroEmacs Source #1 (Source code for MicroEmacs Editor)
#198 - MicroEmacs Source #2 (Source code for MicroEmacs Editor)
#199 - Music Disk #6 (Self-Playing Christmas Music)

So that's where we stand after last month... But before we move ahead to this month's selection, let's first look at some MAST DOM news.

First up, I would like to thank Allan Frink for selling the disks last month on very short notice. Thanks for your help. Last month, I had another round of disk drive problems. After copying roughly 150 disks a month, disk drives just don't hold up too long. I currently have four disk drives sitting on my table with only one single-sided drive that reads everything. Two of the other club drives are slightly off and my drive now seems to be way out of wack. My second drive bit the dust about a year ago after six months of disk copying. So you see disk of the month is not all fun and games. Last month, because of disk misalignments, eight of my masters proved bad on Friday afternoon when I was copying. Those disks are all now fixed and will all be available for the next meeting. Things are looking up and I am preparing my own series of reading and formatting tests to safeguard this in the future. The only loser so far in this mess has been a member of MAST now located in Texas. He took me up on the 150 disks for $300 deal, but has yet to get them after two months. That should be remedied in the next week, but I wasn't too hot about sending 150 strange formatted disks to Texas to then be returned. He has been patient and will be compensated for his wait accordingly. Like I say, it's not all fun and games. The problems should be fixed by next week, just in time for another round of copying.

Speaking of the 150 for $300 deal, give your computer a present for Christmas of 150 of the best public domain around at a ridiculously low price of $2.00 a disk. At this late date, I can't guarantee your computer his present by Christmas, but I can guarantee it by New Year's. So pick up MAST disks #1 through #150 for a low $300 and support MAST at the same time. This will probably be the last time that this is offered so if you are a new owner or a old owner looking for good public domain software, this is the deal for you.

Speaking of prices, this is the current pricing of the DOMS. All current months disks and the two previous month's disks (October and November) sell for $6.00 each. All disks older than three months (pre-October) are $4.00 each. The MAST Newsdisk and the doc disk are $2.00 each. Also updates of old disks are only $2.00 with the return of the original disk.

Speaking of doc disks, yes, I know, not yet. We will have a new doc disk in January. This is one of my projects for my Christmas vacation so check for it in January. I don't exactly what form it will take, but it will be updatable and complete.

So that's the news... now on to the good stuff, this month's selection of goodies...

ANALOG Disks - I started this over a year ago and it's time to restart it again. ANALOG disks are disks of ANALOG ST programs organized by issue and will now include ST-LOG programs as well. Each month, someone asks me about restarting these disks so this is the month. We will see how far I get, but expect at least one or maybe two disks this month. You don't need to own the magazines to run the programs, but it help for more detailed instructions. These disks will include a hodgepodge of utilities, games, applications and tutorials. Check it out.

DBASIC - DBASIC is now history, but the program lives on. This is the last version of DBASIC which I received about two or three months ago. A lot of new features including some kind of modem transferring. If there is interest, I will also produce a DBASIC program disk next month as well. This is the free BASIC with the superfast graphics and operating system which is not compatible with TOS. The company has now folded after selling only 40-50 copies. Check this out as another in our continuing series of languages. This is an update so it is $2.00 with your original disk or for a special price of $4.00.

Mark Johnson C - This is the latest update with a number of small bugs fixed.

Also the disk has been reorganized with the help of Dave Meile so that the latest libraries and tasks are now used. Check this out for a great version of public domain C. The update is $2.00 with the original disk.

MicroEmacs 3.9 - I knew this would happen. As soon as I released the disks, a new version of source, editor and docs appeared. So for the latest and greatest in editors, check out the granddaddy of them all. This month, I will update the program disk and both source disks. This update will be free with your original disks.

ST Writer 2.31 - Yes, one more update. This program just never stops improving. The latest fix is now ST Writer can be installed at the desktop. So you can now click on a .TXT file and ST Writer will load and read the selected document in. This update is free if you own 2.30 or $2.00 if you own an older version.

Dlibs and DJEmacs - Strange sounding but these are two very well done programs by MAST's Dale Schumacher and John Stanley. Dlibs is a public domain C libraries with source written by Dale for use with the developer C and can be modified for other Cs as well. With the source, you have a treasure-trove of good information. DJEmacs, my name, is an Emacs editor written by John and Dale from the source code for the Emacs editor with help. They have taken this editor and gone quite far while still keeping its size down. This editor also includes source. Also this is the emacs editor praised in a previous Analog. So check it out and see what everyone is talking about.

Christmas Music - What would Christmas be without music??? I have at least one more disk of Christmas music. This is the Audiolite 1986 Christmas music disk which was released in June of this year. Makes a lot sense, huh?? This again is a self-playing disk of music with pictures. In addition, I will also have last month's Christmas music disk and two previous Christmas music disks as well.

All sorts of good music for the season.

Turtle - Turtle is the best public domain hard disk backup program around allowing TOS readable backup disks. This is the latest update fixing a number of miscellaneous bugs. If you own a hard drive, this is the program for you. This is the only program which I use to backup my hard drive.

Gulam - Gulam is a public domain UNIX shell with a built-in editor and modem program as well. All of the UNIX utilities are built-in the shell so you don't need the shell as well as a number of utility files and additional directories. Starting this month, this will be on its own disk to facilitate more easy updates. Updates now seem to ranges about once every three months. Also included is a complete doc file. The perfect command shell for those non-GEM applications.

Tinystuff - Tinystuff is a picture squeezing program which has now become pretty much a standard for ST pictures. This is a demo version of the latest version which now supports Degas Compressed and PC Paintbox among a number of other features including monochrome picture conversion. In its current form, it is a great slideshow program for your Tiny, Degas, Degas Compressed, and more other types of pictures with you selecting the types and files to display as well as name display. A must for all Tiny picture owners. To get the full program, the author asks for a donation.

Templemon - This is a memory-resident reentrant 68000 monitor. You start this one up and you can break to it at any time to set your breakpoints. This program reminds me somewhat of Omnimon for the Atari 8 bit owners. I have not checked this program out, but from the reviews it sounds quite good.

Megamatic - This is your do-it-all chopmatic program. It slices! It dices! But seriously now... This program is a combination ramdisk, print spooler, memory checker, screen saver and more. It's your do-it-all program. Check this one

out if you dare.

FB - FB stands for First Base. First Base is a memory-resident data base program for all of your needs. Set up your fields with the program or with an outside editor. I have not tried this one yet, but it sounds like the perfect data base for those small and even large jobs. This could be the public domain data base we have been looking for.

So that's it for December. Lots of good stuff for everyone. As always, disks are likely to change as time permits and these are some of the hot new programs at the time of this writing. Many more will be included on this month's DOMs.

As always, if you can't make the meeting, disks are available by mail directly from me for $6.00 each plus $1.00 for postage for the first 6 disks. My address is:

    3264 Welcome Avenue North
    Crystal, MN 55422

Also starting this month, a bulletin will be posted on the MAST board after the meeting listing the new disks by number as well as ordering information by mail. Also if I run out of a disk, pay for it at the meeting and I will send it out in about a week by mail for free.

Well, that's it for December. This month we will pass the 200 disk milestone of all original MAST generated disks of the month. It's been a lot of work, but it's worth it for the members. I hope to see you all at the meeting and on the MAST BBS.

Children Will Play
by Phil Seifert, VP

And, boy, did the children play a couple of weeks ago at Todd Burkey's house! The occassion was a rolicking game of Midi Maze. Eight avid players brought their systems together and battle was enjoined. Great game and lots of fun. I am sure glad there is going to be a tournament at the December MAST meeting, aren't you? Oh, didn't you know there was a tournament? Well, check out page 15 of

the newsletter for the details. If you are a current member of MAST, you will be eligible to win some prizes if you can survive, but watch out, I hear Steve Pauley is a real killer!

On to other things, newer games released in the last couple weeks include Pinball Wizard from Accolade, Deja Vu from Mindscape, Test Drive which I think is from Broderbund, Star Trek the Rebellion from Simon & Schuster. Look for these at your favorite ST software store. Maybe when I get a chance to play them, I will review them. I have just been real busy with the Mega STs and music applications the last month, have not had much time to do anything else. Speaking of music, I did have the oppprtunity to take a look at a new midi program for the ST, MasterTracks Pro from Passport. This program looks real good and is simple to use. Price tag on this one is $350 retail. Good graphic editing involved including pitch bends. If you are into midi, take a look at this one sometime.

PC-Ditto is now available for use with the monochrome monitor and I understand it has also been sped up a bit. I am waiting to see if my copy of the update, since I am a registered user of the program, is in my mailbox. Have not seen it yet. That does bring to mind something that I feel is quite important. When you purchase good utility type software such as PC-Ditto, Magic Sacs and databases and so forth, DO SEND IN YOUR WARRANTY CARDS!!! It is nice to be able to get the support of the companies when you have problems. It has saved me a couple of times the last 2 months.

Cyberpaint, from Antic APX is now available. This is a nice painting system that works either as a 2-dimensional painting program or in conjunction with Cyberstudio for 3-dimensional artwork. Seems to be the definitive painting system to use to enhance CAD-3D animations. Check it out.

My first impressions of the MEGA ST from Atari is good. I like the way the

keyboard feels, but then I don't mind the current 1040 keyboards either. The only real gripe I have is most of the midi software does not work on the new roms and I don't like the coiled keyboard cable. I would have prefered a flat keyboard cable. Otherwise, that machine does run faster for some graphics applications. I had the opportunity to see the Multibird demo running on both the MEGA and the 1040. The MEGA put the other one to shame. The next product that I would like to see released is the internal 20 meg hard drive from Supra for the MEGA. It is currently not available now but should be a couple of months. Supra is shipping the 10 meg floppy system now, if you are interested in that.

Speaking of hard drives, if you own a hard drive, you should be backing it up periodically. I know I have and it has saved my bacon. Definitely worth the time to do it. You never know when something real nasty might strike.

I would like to wish everyone a happy holiday season. Hope to see you all at the December meeting and maybe even in the Midi Maze tournament.

MIDI MAZE Tournament

Ok, by popular request, MAST will hold a Midi Maze tournament at the December meeting. This will be open to all current paid members of MAST ONLY!!! The rules are simple, send a letter to Phil Seifert c/o Wizard's Work, 4124 N. Lancaster Lane, Plymouth, MN 55441 stating that you would like to particapate in the tournament, whether you can bring an ST with a power strip, joystick, and midi cable for playing, and whether you promise to wipe out Steve Pauley whenever you see him in the MAZE. The same information can be sent to Phil on the MAST bulletin board (560-9254). The deadline for entry is Wednesday night before the meeting. If you can't get a letter out to Phil before then, call Wizard's Work

and talk to him there. If you have a computer that you can bring but no midi cable, talk to Phil, he has extra cables. There will be prizes and a good time will be guaranteed to everyone. Good luck to everyone but Steve.

RIBBON RE-INKING
Jim Scheib - 721-4185

The club can re-ink most printer ribbons (black) for a small fee. There is no longer a reason to use a faded ribbon! Ribbons that can be re-inked are: $1.00/ribbon - Spool to spool (all types) - Epson MX-80 and compatibles - Epson LX-80 and compatibles - C. Itoh Prowriter and compatibles (NEC 8023A/C) - Citizen 120 D - Panasonic - small ones that turn counter-clockwise: $2.00/ribbon - Epson MX-100 and compatibles. Other ribbons can be attempted, too. But if you prefer, you can buy an adapter ($8.50 + $3.50 shipping and handling) for the club and receive half that amount in credit towards re-inkings. See Jim Scheib at the SPACE meeting, or Jim Schulz at the MAST meeting. Please pay in advance and be sure to have your ribbon(s) in a plastic bag.

Notes From the Editor

Well here it is, my first newsletter. Boy did this turn out to be about 10 times more work than I planned. But it's all my own fault. This is an all new look for the newsletter and I hope you like it. I change it to a 2 column format with a larget type style for the body and large bold heads for the titles of each article. This should make it easier to read. But the interesting part is that I can now get about 400 more characters on a page even though the type is larger (I do it with mirrors). If you have any suggestions or comments, let me hear from you.

MAST Sysop/Editor, Steve Pauley

lines by 10's, allowing room for later insertions. Renumbering programs are available either type-in or by D/L from bulletin board systems (BBS) to renumber existing BASIC programs. Most programs seem to begin with the number 10. Line numbers may range from 0 to 32767 in Atari BASIC. BASIC source code lines may have a maximum length of three screen lines, including the line numbers, etc.

2. REM STATEMENTS:

Any statement beginning with the letters REM, is not executed, but is a REMARK statement, used to label your program. As in all BASIC commands, it is always in upper case REM. REM statements still need line numbers. The example below is typical of lines found at the beginning of BASIC programs. As your programs grow in size and complexity, you can insert REM to label parts. Anything after the REM is just a remark or explanation. EXAMPLE:

10 REM *** PAYROLL PROGRAM ***
20 REM by Jackson Beebe 10/86
30 REM Version 1.01
40 etc, rest of program
or for parts of programs:
265 REM << COMPUTE OVERTIME >>

A few REMS can help a lot next year, when you try and figure out how last year's program works, to modify it.

3. PRINT STATEMENT:

This statement allows you to print ON THE SCREEN of your monitor or TV. For example: 10 PRINT "HELLO" will print HELLO on your screen. You can skip lines with blank print statements as: 10 PRINT "HELLO" 20 PRINT 30 PRINT 40 PRINT "THERE"

This prints HELLO, skips two lines and prints THERE. Note that anything in quotes in a PRINT statement, is printed EXACTLY on the screen, blanks included. You can print literals in quotes, or print the values of variables (next lesson.)

If you put a comma between items in

a PRINT statement, it will skip to the next print zone. There are 10 spaces in an Atari print zone. Example: 10 PRINT "HI","THERE" This will print HI, space over 8 spaces and print THERE. The spaces per "print zone" are controllable by POKEing 201 with 3 to 255 (more on that later). Watch this: 10 PRINT ,,"HI" This skips over to 20, then prints HI. Commas will come in handy for putting things in columns for printout, and printing tables.

Editors Note: the rest of this article will be printed in the next issue of the newsletter. Sorry about that but we just plain ran out of room. Let me know if you read this article, so I will know if I should continue to print the rest of the series as it becomes avaliable.
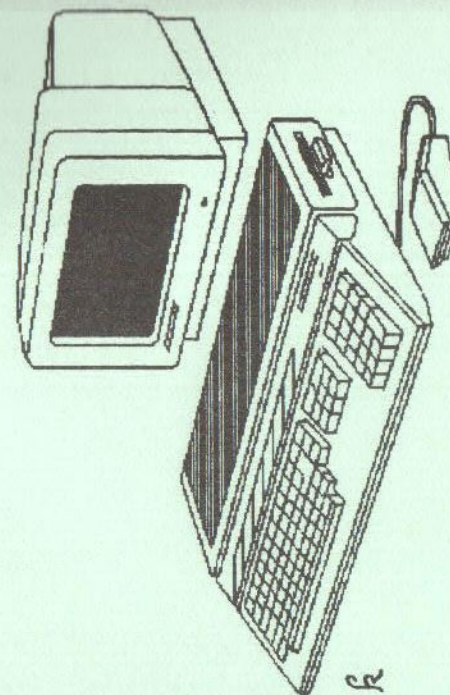

🔷 8-Bit BBS News

Well I am able to devote more time to the BBS now days, and I have not done to much !!! Reason ! We are getting a HARD DRIVE on the 8-BIT BBS. But first we have to format it and make some decisions as to how many partitions we want on it. I did not verify the last few programs, due to having to relocate them on the hard drive.

At last count we had over 3500 sign-ons, not to bad. Now we have to work on getting some of the BBS users to join SPACE. You could help by leaving E-MAIL to some of your friends, who are not SPACE members. There is a membership form on the BBS in the [L]ibrary. Speaking of the [L]ibrary how many of you have read all the info in the [L]ibrary? I don't get on other boards much, is the list of "OTHER BBS's" up to date??

Watch for more downloads on the BBS, hopefully the hard drive will be up and running by the time you read this. Your 8-Bit Sysop, Bruce Haug

---

SPACE/MAST NEWSLETTER