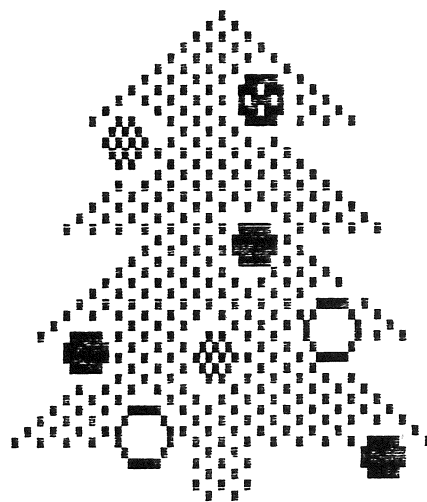


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1652 Hess Blvd.  
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614-587-2716

DISK LIBRARIAN

Charles Lusco  
Channing Terr. #C  
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614-863-4016

NEWSLETTER EDITOR

Mark Shuter  
1854 Solera Drive  
Columbus, Ohio 43229  
614-899-9473

ADDRESS ALL MAIL TO  
ACE of Columbus  
P.O. Box 849  
Worthington, Ohio 43085

## Conference Systems Bulletin Board.

(Technical Information)

Conference Systems was designed specifically for the Atari 8 bit computers. This text will help you understand the inner workings of this system...

The bulletin board consists of two parts. The actual basic bulletin board programs...

```

Waitcall - logs a user on and off the board.
Board    - the actual bulletin board
           (reads - scans msgs) etc...
Ae-line  - File transfer program used to upload and
           download programs.
Editor   - Used when posting, sending or editing a message.
Sysop cmds - user/board modification.
Sub-cmds - story boards and other
           bulletin board numbers.
Game     - text game/games
  
```

... and the machine language portion the Modem Operating Environment (MOE). M.O.E. has two basic functions:

[1] To treat the remote computer's keyboard just like the keyboard on the local computer (the one operating with M.O.E.).

[2] To supply machine language subroutines to several of the BBS functions for speed.

M.O.E. takes care of all the little things you don't care to worry about. For instance, Other bulletin boards not using M.O.E. have to close the modem IOCB before accessing the disk drive and re-open it after it is done. This needs to be done because the serial port cannot access more than one device at one time. Before M.O.E., you would have to do the following to display, say, a directory of drive one.

```

10 MODEM=2:DRIVE=1
20 DIM A$(20):TRAP 120
30 CLOSE #MODEM
40 OPEN #DRIVE,6,0,"D1:*.*)"
50 INPUT #DRIVE,A$
60 OPEN #MODEM,13,0,"R:"
70 XIO 40,#MODEM,0,0,"R:"
80 ?#MODEM;A$
90 ? A$
100 CLOSE #MODEM
110 GOTO 50
120 END
  
```

With MOE activated you would not need any of those modem

commands at all...

```
10 DRIVE=1
20 DIM A$(20):TRAP 70
30 OPEN #DRIVE16,0,"D1:*.*)"
40 INPUT #DRIVE,A$
50 ? A$
60 GOTO 40
70 END
```

Not only is this easier to understand, More memory efficient, and less time consuming, but this will also work without a modem! You can run this program even if you never intended it to run on a modem system. It also works the other way around, If you have any Basic programs made with no intent of working over a modem, they will work with M.O.E. This excludes sound and graphics of course. All printing is automatically sent to your screen and over the modem. All keyboard input is automatically received from either the local or remote terminal, who ever hits a key first.

Again, you don't have to put in special commands, data is automatically received from either the local or remote terminal, who ever hits a key first. Also, you don't have to continually scan to see if the person on-line has hit a key or not. Just do an...

```
INPUT A$
```

Or

```
OPEN #1,4,0,"K"
GET #1,A
```

and M.O.E. will again take care of it. Together, These simple functions can let you perform another incredible feat, Use BASIC over the modem. If you intend to become a sysop of the Conference systems bulletin board, you can at anytime enter into BASIC and modify your bulletin board from across the country if need be! This will allow you to do anything you can do at home except switch the disks in the drive. If you have a ram-resident DOS, you can even go to DOS to do whatever you have to except switch the disks in the drive.

M.O.E. also contains a built-in terminal/chat mode allowing you to enter into a terminal at anytime, even when a program is running or when you are in BASIC. Just press start, and there you are. In this terminal mode you have a selection of word-wrap or even macros.

Other frills included are a day-calculating clock, a 5 line changable status display, Special function keystrokes (turn multi-user on and off, and chat bell on and off for the bulletin board). Also, ctrl-S pauses printing at any time,

even in BASIC, and ctrl-C aborts any listing (returns an definable error defaulted at error - 151) changing this default to 128 will simulate the break key.

Also, no error checking to test to see if the modems have disconnected is necessary, M.O.E. automatically returns a definable error (defaulted at error - 255) when someone hangs up. All you need to do is have a TRAP command at the beginning of the Program.

M.O.E. has over 15 Built-in BASIC accessible subroutines. For example, Upload and Download routines, Fileprint routine, Memory move routines, Open/Close routines, etc. Also, a 16 sector buffer is built in (used for uploading, downloading, file printing, message storage space for message editor, etc...).

The bulletin board contains many desirable features not found in any other bulletin board plus most of the standard features.

This system features...

- \*-True E-mail
- \*-Read - Scan features
- \*-Delete message
- \*-Read New message feature  
(searches for messages posted after last call)
- \*-Edit message command  
(lets you edit a message posted by you, as opposed to re-typing an entire message)
- \*-Post message command
- \*-Send command for E-mail
- \*-SELF-COMPACTING MESSAGE BASES  
(up to 50 lines per message, full message editing ability, word wrap...)
- \*-Virtually unlimited message bases
- \*-Virtually unlimited databases
- \*-Access levels for each message base, database, and download file
- \*-Timelimit option calculated by access level
- \*-9 access levels
- \*-Extreme command stacking ability
- \*-Supports ascii and atascii
- \*-Density smart
- \*-Supports up to 8 drives and a ramdisk for the XE compatibles

Here are the number of commands supported by each module.

	Unique cmds	Standard cmds	
Board	- 18	04	
Aeline	- 04	04	
SysCom	- 18	04	
Game	- xx	01	
Waitcall	- xx	xx	
Sub cmds	- 02	01	
<u>Sub total</u>	<u>42</u>	<u>14</u>	= 56 total.

This system is a combination of menu driven and/or non-menu driven. If all of the parameters needed to execute a function are specified, then no prompts will be displayed. This will eliminate time-consuming searching and printing. On the other hand, if specified, then no prompts will be displayed. This will eliminate time-consuming searching and printing. On the other hand, if someone is new to the system, it is prepared to help that person out with prompts.

All commands are words and not letters. It is much simpler to remember the commands that way, and once you get used to the system, it saves alot of time. Commands do not have to be spelled out completely though. Only the first three letters of any command, message base, database, or other commands need to be specified.

Command stacking has been taken to the greatest possible extent. You have the ability to stack as many commands as you can fit in one input.

Example...

Read new in general. Post general to all. Ae-line. Directory of Basic Games. Bbs. Users. Logoff.

Yes, it will execute all of those commands in order, with no prompts. It is almost programmable. In the Ae-line, x-modem upload and download is supported. Capture protocol is supported for text files. When doing a directory, you can (if you want) specify what you are looking for. Example...

Dir basic game

or

Dir of utilities

or

Dir of Action programs

or just

Dir (for all files)

This is perfect for hard disk drives or systems with numerous download files.

Adding your own modules is a breeze. Remember any Basic (print-input) program that can fit in memory with an RS232 handler and MOE will work. Also on the disks comes a quality terminal program. With these disks comes a bound users manual. If you are interested in this product, the projected price is \$69.95. Other (so called) quality systems go for over \$100.00. This is a little bit much, especially for what you are getting.

Conference Systems is, as you can see, about 5 times more advanced and is significantly lower in price.

If you have any questions about this product, leave mail in the SYSOP message base, or call....

Carina Software Systems  
305-793-2792  
Hrs- 2:30 - 5:30

OR

Rick Hunter c/o Computer Chip  
813-355-8448 from 11am to 6pm

Spectrum BBS - 813-355-0745 24hrs

We can also be reached on Compuserve, User # 70271,243 or On The Games Computers Play Network, (leave message to:RickHunter)

## THE ATARI ASSEMBLER EDITOR CARTRIDGE PART 4 (DEBUGGING)

In this article I am going to try and explain what debugging is. When you debug a program you usually try and find the mistakes and correct them. This is true no matter what language you use.

To enter the debug mode you would type bug and hit return. You would get the prompt debug. In the debugger you have many useful commands. I will try and explain what they are.

The first command is DR. This command is display registers. The 5 registers and their contents will be displayed. The 5 registers are the accumulator, the x register, the y register (all 3 are index registers), processor status register, and the stack pointer. A lot of times it is important to know what the contents of those registers are. This command will show you.

The next command is CR. This command is change the registers. This is an important debugging tool. By changing the different registers you can change the outcome of your program. You can experiment and see what values will work. This command is very useful to programmers.

The next command is D. This command is display the contents of memory. The command would be used like this D 2C4,2C8(hexadecimal). This command tells the computer to display the contents of memory from location 708,712(decimal). These locations are your playfield colors. If no 2nd number is typed in then the computer will show you the next 7 locations following your selected one. This command can be used to test your program out at several places in order to tell if it is working all right.

The next command is C. This command will change the contents of memory. It is used like this C2C6<40. This command tells the computer to change the contents of location 710 to the number 64. In graphic mode 0 this would change the screen color to dark red. With this command you really can experiment with your program and see what it is doing. Make sure you change the right location. It is the same thing as doing a poke in basic. If you get the wrong value or location to put it in to, you could really mess things up. Remember if you display memory you are just looking at it. On the other hand if you change it you can cause some real mess ups, if you type in the wrong number. So be careful with this command.

The next command is M. This is used to move memory or copy it. It is used like this m1230<5000,500F. This command would take the contents of memory locations 5000,500F. It would copy over to locations 1230,123F(hexadecimal). Again you better know what location you are sending data to. If you put data in the wrong location you have got big problems.



The next command is V. This is verify memory. The command would look like this V7000<7100,7123(hex). The above command would compare the contents of 7100,7123 with locations 7000,7023. It would show any mismatches. If you would have 2 locations that are supposed to have the same data in them. This command would help you assure that they do.

The next command is L. This command is list memory with disassembly. This is one of the most important commands in the debugger. It will take the contents of the desired memory locations and disassemble them. That is it changes the object code back into the source code that created it. For example lets say that you type in L5000,1. You want the computer to disassemble the contents of locations 5000,5001. If the contents were A9 03. Then the computer would display LDA #\$03. That is because the number A9 is the hexadecimal equivalent for the object code for the command load the accumulator. The number 3 would be the value that was loaded into the accumulator. This command is very useful in keeping a close eye on your program.

The next command is A. This command is assemble one instruction into memory. This is a mini assembler that can assemble only one command at a time. It is useful in seeing if a certain command or commands will work.

The next command is G. This is the Goto command. By typing in the G and the location the computer will execute the instructions starting at the desired location. This is used to either run the whole program, or to test certain parts of it.

The next command is T. This is the Trace command. It is the same as the goto command but it will list each memory location. It will show the location, the machine code instruction, the source code instruction, and the values of the 5 registers. This command will really show you what your program is doing. You can really test to see if your program is working or not.

The last command is S. This is the step command. While the trace command takes off at a mile a minute. You have to stop it by using the control 1 key combination in order to read it. The step command does the same as the trace except that the step command will only do one memory location and stop. You would continue by typing s and return. This way you can really slow it down and see what the program is doing

I hope that I have given you a little understanding into the debugger. It is a very useful tool in testing a machine language program. It is priceless in testing a program and correcting any mistakes. It comes in very handy

BY CHARLES W. BROWNE

Software Review  
PaperClip  
by Batteries Included, Inc.

Reviewed by Dr. Warren G. Lieuallen

At the time I bought my Atari 800 XL, I also bought an AtariWriter cartridge, because it was being sold at such a good price (about \$25), and I had heard that it really was a fairly good word processor. Once I got home, I was delighted with my new "prize". AtariWriter was everything it claimed to be, and I really couldn't think of any significant improvements to be made to a word processor for home and light business use.

However, I recently got my hands on PaperClip, and I doubt I'll ever use AtariWriter again! Combined with my SG-10 printer, I really do think that I'm now set for life! What caused such a radical change in my word processor affections? What made me completely abandon my old friend? Read on, and see.

PaperClip is based on the editor used in ACTION!, one of the hot new languages for the Atari. This means that almost everything is a bit quicker than you'd expect. The cursor moves across the page at a quick clip, and editing a document is noticeably faster than any other system I've seen. Part of this is due to the two independent, adjustable text windows allowed. Separate files can be read and written from these windows (as well as disk directories), and blocks of

text can be freely copied, moved or deleted from either window. "Cutting and pasting" take on a new meaning, as you can always see exactly what you're doing. In addition, you have the freedom to move or delete by character, word, line or screen.

Many of the system parameters can be adjusted to your particular liking, and set to default values. For example, you can choose to use the cursor movement keys without also using the "CONTROL" key, you can remove the key-click and warning chime, you can adjust the screen colors, and you can adjust the screen margins up to 132 columns, easily allowing an 80 column screen (although only 40 columns are visible at one time). This is very handy when setting up charts or tables, because you can see exactly what the page will look like: this is essentially a print preview, with full editing capabilities! A standard print preview is also available, and with surprising speed.

There is an Auto-Save feature, which will automatically save your text after a pre-defined number of keystrokes. This could certainly be a life saver for those of us who rarely remember to back-up our work!

The familiar "search and

replace" feature is included, with both individual and global versions. In fact, the correction of items will even encompass other files on disk that have been "included" in the current file, a technique that allows you to construct documents larger than the computer's memory. On my 800 XL, PaperClip allows for 31,600 bytes (approximately 16 double-spaced pages), which is almost 11,000 bytes more than AtariWriter, and sufficient for all but exceptionally long letters!

There are quite a number of other features included in this program, but the true test of any word processor is the final printed copy. PaperClip shines here, too. More than 20 customized printer drivers are included on the main program disk, as well as a separate utility program to construct one for your particular printer, if needed, which also allows you to take advantage of the four available user-defined commands.

The printer configuration files contain all the formatting values, such as page margins, line spacing, etc. You are also able to change any of these values from within the document, as well as adding others like right justification, footers, underlining, and more. Possibly most exciting, you can also request double-column printing (like this), and actually get it with nearly any printer! This is accomplished by internally formatting the text into the two columns, and then printing the corresponding lines of

each column simultaneously. No reverse line feeds are required, and no stopping to roll the paper back, either!

A variety of fonts are available, if your printer supports them. Pica, elite, condensed, italics and expanded print can all be used with just the touch of two keys, and two user-definable commands are also available.

There are two different ways to print your document. One does so automatically, using the defaults and formats specified in the text. The other allows you to indicate the output device (which includes the disk, for preparation of text files for modem transmission, or use with some of the "fancy font" printing utilities), starting and ending pages, number of copies, and whether or not to pause between pages to allow single sheets to be used.

Another set of special commands can be used to perform simple mathematical calculations within the text, allowing some tables to be constructed automatically. A table of contents can also be generated automatically.

Included on the main disk are a series of help files, which may be viewed at any time while using the program. This is useful when you've forgotten one of the less commonly used commands, and can't easily find the owner's manual.

The other major feature is the ability to include graphics within your text. A

separate program on the disk allows you to access files created with MicroIllustrator (AtariArtist), B/GRAPH, and many more, and create "Verbatim" files for inclusion directly within a text file. This program also serves as an independent screen dump, with seven different printer drivers for this purpose.

On the negative side, there are a few bugs left in the program, particularly in Version 1.0. When deleting a word at the end of a line, the cursor has a tendency to jump several lines up the page. Also, at only a moderate rate of typing, it's not too difficult to lose a character when the word "wraps around" the screen, particularly in the 80 column screen mode. When using the Macro feature (which allows you to assign commonly repeated phrases to a single key), the defined items seem to always have the last character repeated one or more times at the end of the phrase. All of these inconveniences have reportedly been fixed in Version 1.1 (which itself contains a new bug or two.).

Nonetheless, I think PaperClip is one of the better values around for the Atari computer user. After using a number of word processors on a variety of tasks from casual letters home to five-figure research grant proposals, I feel as if my search is finally over. PaperClip isn't the easiest word processor, and it's not perfect, but I think it's a good combination of power and usefulness that are hard to beat.

For any and all interested parties, I am planning to have a Word Processor Comparison Demonstration at a future ACEC meeting (February or March?). If anyone has any particular program they'd like to see included, just let me know. I'm currently planning on: AtariWriter; PaperClip; HomePak's Hometext; The Writer's Tool; Letter Perfect (if I can get ahold of it); and SpeedScript, a public domain program on DOM #32, side 2.

## 1030 EXPRESS!

THE ULTIMATE PROGRAM FOR THE 1030 MODEM!!

Programmed in "ACTION!" by Keith Ledbetter, Richmond, Va., who has given this program to the Public Domain.

Reviewed by Bill Morgens, Columbus, Oh.

So you thought sliced bread was good! And maybe even thought it was pretty special when man landed on the moon! Forget all that. This is the topper - the ultimate! I was so impressed by the program when I first saw it being used that I immediately bought the 1030 modem just so I could use the 1030 EXPRESS!

Keith Ledbetter has improved on perfection with version 2.0 of his 1030 EXPRESS! modem program for the Atari 1030 modem. As of this writing the program was not available for any modems other than the Atari 1030, but his MPP version is in development.

The program is very easy to use and has more available options than any other modem program I'm aware of for the Atari. There are 41 operational commands on the first screen, plus 17 more on the BBS list screen! There are several outstanding features, that I'll discuss in detail, such as having available as many as three macro's for EACH bbs number in your directory, and being able to work on files with DOS functions while online.

After you download the program from your favorite bbs or get a copy from a friend, or perhaps you have it from the November 1985 A.C.E.C. Disk of the Month, you'll need to rename it AUTORUN.SYS. Be sure to copy the doc's at the same time and read them over CAREFULLY. It is suggested you make a backup immediately! Remember to turn on your 1030 before you boot up.

As the screen comes up the first thing you may want to do is change the screen and/or characters color, going through the gamut of colors by pressing the arrow keys. This color change may be saved as a default by pressing <SHIFT \$> and will be the same color every time until you want to change it.

Next you will probably want to see what is available on the menu. You may scroll down the menu page for

additional commands by pushing <SELECT> until you get to the bottom, giving you a whole second screen full of commands, and then you can scroll back up by pressing <OPTION>. Look them over and make a mental note of what's available, because you'll want to use many of these never-before features. For instance, you may print a screen of text by pressing <SHIFT CONTROL P>. If you want to print more than a screen at a time COPY BUFFER then PRINT BUFFER.

Now, let's build the BBS directory by choosing option "D". This will change the screen to the sub-menu where you'll find commands for working on the list. The new screen will need to have some BBS numbers and other information input. Use option "A" Add and an easy-to-use sub-menu pops up asking for information such as board name and phone number and then as many as three macro's for each of the BBS's you're going to use. At this point a bit of an explanation about macro's may be in order. You may use, for instance, as macro #1 your name, and as macro #2 your city and state, and as macro #3 your password. After you have connected with a BBS and the BBS asks for your name, press <SHIFT CONTROL 1> and EXPRESS! will transmit your name, or whatever you choose to send in your macro. <SHIFT CONTROL 2> will send your city and state, etc. And, since some BBS's want different log-on information from you, you can customize these macro's for each different BBS you call. You will then be prompted to tell how many seconds (up to 99) you'd like to wait for the connection to that particular BBS. (Some do require longer than the default of 15 seconds). You will then be asked whether you want to log on in ATASCII or in ASCII so that when the connection is made the switch-over is made automatically. Any of these parameters may be changed by using the (E)dit option. After you have completed your listing (up to 18 numbers which can include long distance coding too) be sure to (S)ave your file as D:PHONE.LST since that is the file the booter will be looking for.

A status line across the top of the screen tells you the duplex setting, the translation, and the lapsed time beginning at the precise moment of connection, as well as the buffer status when sending or receiving.

You may set a default for the drive number you want to use regularly. Some of us use D2: on a regular basis to lessen chances of writing unwanted information on the program disc. This default, too, can be saved with the <SHIFT \$> command.

A - Translation toggle- ATASCII<->ASCII

B - Choose Parity - none (default), odd, even  
D - Dial from BBS list - brings your BBS list to the screen with 14 additional commands on the sub-menu. After your list is entered and saved, the BBS name that is highlighted with inverse video is the one that will receive your attention. Pressing "arrow" keys will move the "cursor" to another BBS. Pressing <RETURN> will dial the number of the highlighted BBS. Pressing <SPACE BAR> will mark a BBS with an arrow indicating this and all others so marked will be continuously dialed automatically in sequence until a connection is made. The sequence is initiated by pressing sub-menu function D. (More later on this sub-menu.)  
E - Dial manually - just type in the number and press <RETURN>.  
F - Originate call - to be used when going one-on-one with another computer.  
G - Answer call  
H - Hang up - terminates connection.  
I - Format disk. Formatting is done with DOS 2.5 enhanced density to give you 1010 sectors on the disk on the 1050 drives. For those of you who have the 810 drives, the drive will format OK but you'll only get 707 sectors.  
J - Delete a file.  
K - Unlock a file.  
L - Lock a file.  
M - Rename a file.  
? - View a file.  
> - Copy a file.  
# - Default drive # (1-8)  
\$ - Save defaults  
@ - Reload defaults  
N - Dial mode toggle - Tone<->Pulse  
O - Duplex toggle - Full<->Half  
P - Set time allowed for connection - 15 sec is usually OK, but may be set between 5 and 99 seconds. This should probably be set between 20-25 seconds for long distance BBS's but for locals about 12 seconds should cover most circumstances.  
Q - Left margin set.  
R - Receive XModem - use when ready to receive a file.  
S - Send XModem - use when ready to send a file.  
T - Capture to disk - allows you to capture text to a disk file.  
U - Send from disk - allows you to send the contents of your copy buffer to the BBS - you'll be asked for a delay rate, 1 to 255; a rate of 25 to 30 works best with no data loss. When the buffer is sent EXPRESS! goes back to the disk and automatically reloads the buffer, allowing you to transfer text files which may be as large as a whole disk!  
V - View copy buffer contents.  
W - Save copy buffer to a disk file. This will clear the

buffer if the save was successful.

X - Load copy buffer with data from a disk file.

Y - Send copy buffer.

Z - Send data from the copy buffer to the printer.

< - Clear the buffer.

#### Terminal Mode Commands:

<START> or <SELECT> will return you to the Main Menu so you can begin your D/L or perform disk functions etc.

<OPTION> will toggle the copy on<->off (your border color will change).

<SHIFT CONTROL P> will print the visible screen.

<SHIFT CONTROL O> will send the screen to buffer.

<SHIFT CONTROL 1, 2, or 3> will cause macro 1, 2, or 3 to be transmitted to the BBS.

Now to go back to Function "D" Dial from List - this is where we get into the really fun part of the program (I can just see the grin on Keith's face while he was programming this part!) As you press "D" we get the sub-menu and BBS list. To post names & numbers etc., on the list use option "A" Add an Entry. You will be asked to type the name of the BBS then <RETURN> and you'll be asked for the telephone number of the BBS (you can include area codes etc., but not the MCI/SPRINT codes - they'll be dealt with separately). Next you may enter any of three macro's (up to 15 characters each) which could be your name or city or password or whatever the BBS is asking you for. You are asked for the number of seconds to allow the BBS to answer (the modem doesn't know whether the line is busy or disconnected or just ringing). If you call a Commodore (ugh) BBS a lot you can set the toggle to respond in ASCII so you don't have to remember that you're in the wrong translation. All this is to be done for each of the BBS's you want on your list.

E - Edit an entry - allows you to make changes or corrections in your listings. Just move the "cursor" to the BBS you want to edit and press "E". You will see all the data for that BBS in the area of the BBS list. <RETURN> will by-pass any changes, leaving data intact.

Z - Delete an entry.

I - View BBS information.

U - Will update your MCI/SPRINT or other long distance codes for your specific phone location.

D - Dial marked #'s - the space bar will "mark" a BBS with an arrow - when you use the "D" function each number marked will be dialed in sequence, automatically and repeatedly until a connection is made. If a number is not marked it won't be dialed.

C - Clear this list from the screen.

L - Load a phone list.

S - Save this phone list to disk. Use PHONE.LST as the filename since this is what the booter will look for.



P - Print this BBS list.

1030 EXPRESS! will work beautifully with Atari 810 drives as well as Atari 1050 drives and Indus drives. My personal experience doesn't include some of the other drives in use at this time. Since DOS must reside with the program, you can select ATARI DOS 2.0 or 2.5; SmartDOS, OSS DOSXL 2.3, SpartaDOS from ICD, plus some of the others.

This modem program is undoubtedly the finest ever for the Atari and would outstrip many other configurations as well. Mr. Ledbetter is to be congratulated for his fine professional effort. I know he would appreciate hearing from you. He would like to hear from you via CompuServe CIS #72457,3442, or via modem (804) 747-0041, or by mail at 2919 Ennismore Ct., Richmond, VA 23224.

ACE OF COLUMBUS NEWSLETTER  
P.O. BOX 849  
WORTHINGTON, OHIO 43085

LIEVALLEN, DR. WARREN G.  
12/9/85