

*HAPPY*

North  
Pole

*HOLIDAYS!*



## Software Update

TOM TISBY & RON DEVINE

**WANTED:** Users interested in trading their public-domain disks with the San Leandro Computer Club. Experience not required. All that is required however, is that you have some good new public-domain software. Individuals, national user groups, and international user groups may donate. All others can donate also too. **REWARD:** Free Floppy-Of-The-Month of your choice for each public-domain disk filled. If you like to participate, write for more information and/or send your disk(s) to:

Tom Tisby & Ronald Devine C/O  
San Leandro Computer Club  
P.O. Box 1525  
San Leandro, CA 94579

Please mark "DO NOT FOLD" on your envelope.

## Beginner's SIG

RICHARD STIEHL

NOW THAT IT IS PLUGGED IN...

If you consider yourself a beginner ATARI Computer User, then this is the place for you! Once a month the Beginner's SIG meets at the San Lorenzo public library.

A variety of subjects are discussed from "Bootling" DOS, to connecting peripherals, to the ATARI computer itself, and how to utilize these effectively. We have even looked at and discussed certain software.

If you have any questions whether of a beginner's nature or otherwise, please come to the BEGINNER'S S.I.G. or you may feel free to call me at the following number during the day or evening: 835-9857. If I can't answer your question I will find someone who can.

Please see the CLUB CALENDAR for the date and time of the next meeting.

GOOD LUCK!

## SLCC Journal

The San Leandro Computer Club for Atari Microcomputers is an independent, non-profit organization and users' group with no connection to Atari Incorporated. Membership fees are \$20 per year. Membership includes access to the computer library, subscription to the Journal, and classes when held. Permission to reprint articles in any non-commercial publication is permitted without written authorization, provided proper credit is given to the San Leandro Computer Club and the author. Opinions expressed are those of the author and do not necessarily represent the views of the S.L.C.C.

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The SLCC Journal will accept any articles written by members on any topic found pertinent to the club. We will accept articles in any form, although we would prefer articles be submitted on Atariwriter files. The following Atariwriter parameters are used:  
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# From the Editor's Desk

RON SEYMOUR & TOM BENNETT

HAPPY HOLIDAYS!

Ready to celebrate! Make sure you show up for our special holiday meeting/party! There will be door prizes and our regular raffle, ice cream, cake and drinks. This should be a great way to end a great year with the SLCC!

And what a year it was! There was the announcement and release of the SLCC Special Edition, members had their hands on new XE and ST machines, and the SLCC truly received the publicity. The editors even had a chance to take a two month vacation!

Our cooperative booth with ABACUS at the West Coast Computer Faire in San Francisco drew the largest and most vocal crowds of the fair. It marked the first general public showing of the new ST line. We had publicity in the local newspapers as well as national publications like Byte and Infoworld.

Our second birthday party was attended by seven Atari executives in their first appearance before an Atari user's group.

We had the exclusive Chris Crawford Assembly language course taught here, and it is now being serialized across the nation through Antic On-line.

And the most recent development is the overnight success and stardom of "JIM-TV". Jim Hood appeared as the featured guest on the Affordable Computer Show this last month.

The club, in an open-minded approach, even invited Commodore-Amiga to demonstrate their machine.

What a year!

On a serious note, there are many people that a much less unfortunate than most, and this is traditionally a very difficult time for them. There is a way we can help them. Last year we ran a very successful food drive for the Davis Street Community Center. Our drive was one of many organization's that assisted the center in putting together over 400 food baskets. You can help us again this year. Bring your canned or dry food donations to our next main meeting, December 3. Let's show that we have the true spirit of the season in our hearts, and help this year's food drive be an even bigger success than last year's!

You hopefully have received your November Journal before you received this one. As was explained last meeting, there were many factors contributing to the delay of the Journal. We actually finished the

Journal 10 days faster than we ever had, but that's where the troubles began. We had to wait for our paper to arrive, our label disks crashed, and then we assumed that our \$.39 postage was enough! But noooooo.... We were only shy \$.17. We apologize for the inconvenience, and we'll be better prepared to handle this problem in the future.

Looking ahead to next year, we have been asked if we are ever going to have another Special Edition. By the looks of the SLCC response to our many requests for submissions for the Journal, this issue marks the all-time low in support. That is why you will see many reprints this issue. We have thought long and hard about this problem, and by the looks of the support, we may not be able to produce another Special Edition.

We have considered only printing the original SLCC submissions in January. At this month's rate of submissions, this should leave us with 6 or less pages. But if we did this, we would feel we are letting the club down, by not providing the quality you have come to expect. We would like to show the other clubs across the nation that we are still capable of producing original quality material.

Please don't be shy. We are very interested in reviews, which anyone can write. You may be receiving some new program or hardware this Christmas, so why not give your fellow members a review to help them in their purchase decision.

SIG chairmen could include information on what is being covered at their next meeting. This should rekindle interest in your groups.

Officers could give us helpful insights into the direction of the club and their information received on the Atari world.

Telecommunication fans can upload interesting things they come across to the Key System for reprint in the Journal. We have just introduced the "MASTHEAD" message base on the Key System, that you can give us direct input and comments, or letters to the editors that will be answered. Mike Sawley, the Key System SYSOP has provided this valuable service, and we thank him for his support.

We hope you can see our desperation in getting your input. Please help us provide you with a quality publication and make 1986 a standout year for the SLCC Journal.

MERRY CHRISTMAS AND HAPPY HANUKKAH  
HAPPY NEW YEAR



# Hardware Mod

CLAUS BUCHHOLZ

## A 130XE-COMPATIBLE 256K UPGRADE FOR THE ATARI 800XL

I designed the 256K upgrade described in my article, "The Quarter-Meg Atari" (BYTE, September, 1985), in December, 1984. Since this predated the 130XE, there was no precedent for extended memory on the XL's. I felt free to implement a system of eight 32K banks. The major reason was to keep the add-on circuit as simple as possible.

The 130XE, introduced in early 1985, set a different standard for bank-select memory. It uses 16K banks and makes them separately available to both the CPU and the video controller (ANTIC). The XE has 128K total memory. The 64K extended RAM is split into four 16K banks.

A 256K 800XL has 192K extended RAM, which requires 12 16K banks. I have designed a new upgrade for the 800XL that implements such a scheme. Its similarity to the 130XE's scheme allows use of software for the XE on a 256K 800XL.

To select one of four banks, the XE uses two bits, #2 and #3, in the memory control register (port B of the 6520 PIA, addressed at \$D301 or 54017 decimal). Zeroing bit #4 makes the selected bank appear at addresses \$4000-\$7FFF (16384 to 32767 decimal), as seen by the CPU. Zeroing bit #5 makes it appear there as seen by ANTIC.

In my upgrade, bits #2, #3, #5 and #6 select one of the twelve banks. Zeroing bit #4 makes the selected bank appear at \$4000-\$7FFF to both the CPU and ANTIC. So, any program for the XE that uses the extended RAM for CPU storage will work on an 800XL with this mod. Those programs won't use the additional 128K, though. Programs that use the video banking feature of the XE might run on the modified XL, but the screen display will be wrong.

The procedure for this upgrade is basically the same as in the article, except for the following points. If your ANTIC (U7) part number is C021697, use the circuit of the figure, excluding the area inside the dotted lines. If it is the C012296, include the circuit inside the dotted lines. The circuit requires five connections to the PIA (U23). So pins 12 through 16 must be bent up and connected to the circuit. The rest of the procedure is the same. Notice that this circuit has one more chip than the article's circuit. This is the price of compatibility.

With the 256K dynamic RAMs in your XL, be sure to wait at least ten seconds after turning the computer off before you turn it

back on. Otherwise it may not coldstart properly.

My original RAMdisk software doesn't work with this new mod. Enclosed is a listing of the new version. It is used in the same way, except that it offers a choice of either two single-density RAM disks or one double-density. If you wish a disk copy of the source and object code, send me a blank disk and return mailer with full postage, and I will promptly send it back with the software (Claus Buchholz, 201C East Edgewood, Lansing, MI 48910). Alternately, you may download the software from the Capitol Hill Atari Owners' Society BBS at 517-371-1106 or from the Castle Communications board at 517-371-4234. The source file is called QMEGXLD.SRC for Quarter-MEG XL Double.

Also available is a RAMdisk program that sets up one single-density RAMdisk and leaves the XE-equivalent banks free for XE software. This is quite useful with BASIC XE, DOS 2.5, or the new Synapse software. Its name is QMEGXLS.SRC.

I ask one thing in return for this information: please pass it around to all your interested friends. Put it in your club's library or on your favorite BBS. Encouraging software support of 256K will result in many interesting uses for it. Thank you and enjoy!

P.S. In response to an often asked question, I state that I have no documentation for my 192K upgrade for the 800. It involves modifying an Axlon 32K board to imitate a 128K Axlon RAMDISK and upgrading an Atari 16K board to 64K. It is a difficult mod, and I recommend the XL mod instead.

(SLCC JOURNAL EDITOR'S NOTES: We recommend reading the BYTE article mentioned above for a better description of the basic modification, then apply this article's information to your mod.)

### PARTS LIST

- 8 41256 256K-bit dynamic RAM (200ns or less)
- 1 74LS153 Dual 4-to-1 multiplexer
- 1 74LS139 Dual 2-to-1 decoder
- 1 33 ohm, 1/4 watt resistor
- 1 Radio Shack # 276-150 circuit board
- 1 16-pin DIP header and short ribbon cable
- 3 16-pin low profile sockets

### ADDITIONAL PARTS FOR ANTIC #C012296

- 1 74LS158 Quad Inverting 2-to-1 multiplexer
- 1 74LS393 Dual 4-bit counter
- 1 16-pin low profile socket
- 1 14-pin low profile socket



## DEFINITION OF MEMORY CONTROL REGISTER AT \$D301 (54017 decimal)

XL MOD

130XE

 bit: 7 6 5 4 3 2 1 0  
 D a b E c d B R

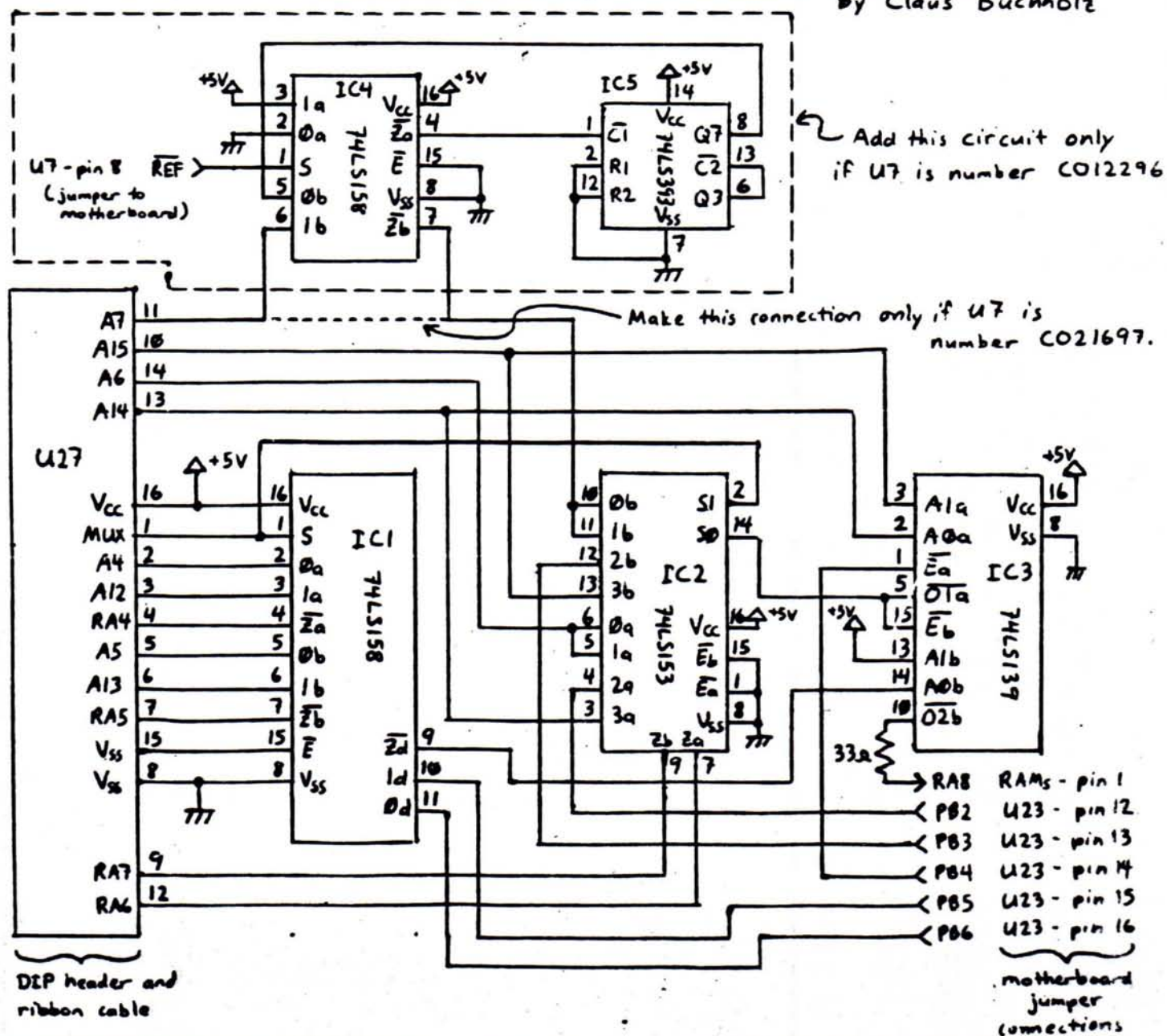
 bit: 7 6 5 4 3 2 1 0  
 D V C x y B R

D=0 enables diagnostic ROM  
 B=0 enables BASIC ROM  
 R=1 enables OS ROM  
 E=0 enables extended RAM  
 abcd is 4-bit extended RAM bank #  
 - ranges from 4 to 15  
 - banks 12 to 15 are equivalent  
 to XE's banks 0 to 3

D=0 enables diagnostic ROM  
 B=0 enables BASIC ROM  
 R=1 enables OS ROM  
 V=0 enables extended RAM for video  
 C=0 enables extended RAM for CPU  
 xy is 2-bit extended RAM bank #  
 - ranges from 0 to 3

## A 130XE-compatible 256K Upgrade for the Atari 800XL

by Claus Buchholz





# Software

RANDY MCSORLEY - PACUS

## R-DRAW 1.3 FOR THE ATARI 130XE

(EDITOR'S NOTES: You will find this program on the December Floppy of the Month.)

R-DRAW 1.3 is a high-res (GRAPHICS 8) drawing program for the Atari 130XE computer. Using R-DRAW, you will be able to create, modify, and display picture files. R-DRAW saves your pictures in the standard 62 sector "MicroPainter" format. Although R-DRAW does not print your pictures, screen dumps can be achieved by using such programs as MegaFont, Humpty-Dump, and Page Designer. R-DRAW was written in BASIC and compiled into 6502 machine language using the MMG BASIC COMPILER. No BASIC cartridge is needed.

After the program has loaded, a title screen fades in and out, and the MENU SCREEN appears. The top portion contains a brief description of all the functions of R-DRAW, and the bottom lists your options in the MENU SCREEN. Your options are:

### 1 - PUT FILE ON SCREEN

When you press #1, the program asked for the NAME OF FILE TO GET. You can specify any standard 62 sector file you have on your disk. If you are unsure of the contents of your disk, enter "DIR" (or simply press RETURN) and the disk directory will appear. You will then be prompted again for the NAME OF FILE TO GET.

### 2 - SAVE SCREEN TO FILE

This option saves your work onto your disk. The filename can be any Atari-standard filename. You need not type "D:" before the filename.

### 3 - GO TO DRAW MODE

Option #3 puts you in the DRAW MODE.

### 4 - TOOLBOX

A "toolbox" is provided that enables you to change certain parameters in the program. The TOOLBOX will be discussed later.

## THE DRAW MODE

When you press number 3, GO TO DRAW MODE, your screen will go blank and you are ready to draw. A tiny flashing cursor appears in the upper left corner of the screen. To move the cursor, use a joystick inserted in port #1. To draw while moving the cursor, simply press the trigger button

while you move the stick. Here is a list of all the functions of R-DRAW, along with explanations. The commands are in the same order as they appear on the MENU SCREEN.

START - returns you to the menu screen. From there you can SAVE your picture, LOAD another picture, go to the TOOL BOX, or GO TO DRAW MODE. Your picture is saved in the ramdisk, and will not be lost unless you LOAD another file to the screen.

1 or 2 - By pressing the numbers "1" or "2" while in the DRAW MODE, you control the horizontal spacing. "1" gives you a continuous line, "2" makes the cursor skip every other space. Using "2", you can create artifactual colors on your TV, or shade in areas on your monitor. When you press "1" or "2", the COLOR you are using is set to COLOR 1.

0 - Erase mode. When you press "0", the color that is issued when you draw is COLOR 0. This allows you to erase bits of your picture. By first pressing "1" or "2", then "0", you can erase every dot, or every other dot.

UP, DOWN, LEFT, RIGHT - The arrow keys. Pressing any of the arrow keys moves the cursor one space in the direction of the arrow. You need not press the CONTROL key as you press the arrow key.

L, R, B - When you press "R", a line will be drawn from the point the cursor is to the right until it touches a line or dot. "L" draws left, "B" draws both ways. These commands can be used, in succession, as a simple "FILL". By pressing CONTROL-L, CONTROL-R, or CONTROL-B, the lines drawn will ignore any other line it may encounter, and will draw all the way to the edge of the screen.

SPACE - Erase entire screen. When you press the SPACE BAR, the border will turn red. This is to warn you that if you press the SPACE BAR again, your picture will be lost. After you press the SPACE BAR once and the screen turns red, any other key you press will return you to normal, and your picture will not be erased.

P - SPRAY PAINT. By pressing "P", you enter SPRAY PAINT MODE. By moving your joystick and pressing the trigger, a random pattern will appear near the cursor, simulating "spray painting". ESCAPE or any other key will return you to the DRAW MODE.

D - DRAW LINE. When you press "D", you will hear a short "beep", telling you that you are in the DRAW LINE MODE. Move your cursor anywhere on the screen, then press the trigger. A line will be drawn from the



point you were when you pressed "D" to the point your cursor now rests.

" (quotation mark) - By pressing SHIFT-2, the quotation mark, you enter the TEXT MODE. After pressing this key, simply press any key and you are entering text in graphics mode eight. The letters will begin a little to the right of where the cursor is when you press the quotation mark. You will have to experiment a little to get used to the TEXT MODE. The DELETE key "backs you up" one space, although there is no cursor to show you where your next character will appear. The ESCAPE key returns you to the DRAW MODE.

CONTROL-E, CONTROL-X, and CONTROL-W work the same way as the quotation mark, but are double, triple, and quadruple height characters. Using these extra TEXT MODES, you are given the opportunity to enhance your screen greatly.

O - CIRCLE MODE. When you press "O" (the letter O, not zero) you hear a short beep. Then move the cursor to the right and press the trigger. The place the cursor was in when you pressed "O" will be the center of the circle, the place the cursor is when you press the trigger will be the radius.

S - SQUARE MODE. Pressing "S" allows you to make rectangles. first position the cursor where you want the upper left corner of the rectangle to be. Press "S". Move the cursor down and to the right to where you want the lower right corner of the rectangle to be, and press the trigger.

M - MIRROR MODE. After you press "M", anything you draw on the screen is mirrored four times. To exit MIRROR MODE, press ESCAPE.

C - COPY MODE. Pressing "C" allows you to copy a small (20X20 pixel) area of the screen. Position the cursor on the upper left corner of an area you wish to copy. When you press "C" you will hear a short beep, a pause, then a higher beep. Now move the cursor somewhere with the joystick and press the trigger. The copied area is duplicated. You can repeat this as often as you wish. To exit the COPY MODE, press ESCAPE. Your cursor will then appear where it was when you originally pressed "C".

TAB - Pressing the TAB key rotates you through all the colors available in GRAPHICS 8. Pressing CONTROL-TAB brings the colors back to the default (white on black). Pressing SHIFT-TAB reverses the colors, to black on white.

? - STAR PATTERN. When you press "?", a "star pattern" of random dots will appear on

the screen. To stop the dots, press ESCAPE.

CONTROL-Q - REVERSE SCREEN. When you press CONTROL-Q the screen border will turn gray and the picture will slowly reverse itself. The entire screen takes about ten minutes to reverse, so be patient. To stop the process in mid-action, press any key.

SELECT - SAVE PICTURE TO RAMDISK. When you press SELECT, the border flashes green and your picture is saved to the ramdisk as a temporary holding area for your work.

OPTION - GET PICTURE FROM RAMDISK. When you press OPTION, the border flashes yellow, and the picture you previously saved to ramdisk using the SELECT key returns to the screen. The SELECT/OPTION functions can be useful when creating a screen. Before trying something that may destroy the work you have already done, press SELECT and save it to the ramdisk. If you do destroy the picture, simply press OPTION to get it back.

## THE TOOLBOX

When in the MENU SCREEN, press number 4, TOOLBOX to go to the TOOLBOX screen. There you can control some of the features of R-DRAW as well as format a disk. The options of the TOOL BOX are selected by pressing the highlighted letter of the function you want to perform. Here is a description of the options.

I/O NOISE - Press "I" to turn the I/O noise on and off. I/O noise is the "chatter" that the computer makes when saving and loading the screen.

KEY CLICK - Press "K" to turn the key click sound on and off. Some people find the speaker-generated click distracting.

CIRCLE FINENESS - Pressing "C" rotates you through a series of numbers representing the number of lines drawn to make a circle in the DRAW MODE (by pressing "O"). The most exacting circle is drawn by selecting 360, or one line for every degree. The smallest number that can be chosen is 3. If you select 3 as the CIRCLE FINENESS, you will find that instead of creating a "circle", you've drawn a triangle. Similarly, if you choose 4 as the CIRCLE FINENESS, a diamond (square) will be drawn when you try to draw a circle in the DRAW MODE.

JOYSTICK SPEED - Select a number between 1 and 19 as the JOYSTICK SPEED, which controls the speed at which the cursor flashes, and thus, the speed the cursor can be moved. The higher the number, the faster the JOYSTICK SPEED. Although the actual speed



of the joystick changes only a small amount, the rate at which the cursor flashes changes quite a bit, allowing you to see the cursor better at the slower speeds.

**DIRECTORY** - By pressing "D" you will obtain a disk directory. Press any key to return to the TOOLBOX screen.

**ERASE FILE** - Press "E" to erase a file from the disk.

**FORMAT DISK** - Pressing "F" runs you through a series of prompts to format a data disk. Use care with the FORMAT command so that you do not destroy any important information.

**RETURN TO MENU SCREEN** - Self-explanatory.

#### ERROR HANDLING

The only errors you are likely to ever get in R-DRAW are disk errors. If you specify a nonexistent file to be loaded, or if your drive is turned off, or if you try to write to a full disk, the message "DISK ERROR - CHECK DRIVE OR FILES" will appear on the screen. R-DRAW will then restart. The pictures you have contained in memory will not be affected.

#### USES

Using R-DRAW, you can display any 62 sector picture file. If you would like to use your R-DRAW files with the KoalaPad paint program, name the R-DRAW file "PICTURE". Then, after you've booted the KoalaPad program, press "CLEAR" and the file "PICTURE" will be loaded to the screen in the hi-res color mode. Similarly, if you would like to manipulate a Koala picture with R-DRAW, press "INSERT" while you have your Koala program running. The picture on the screen will be saved as "D:PICTURE" in 62 sector format and can then be used by R-DRAW.

Page Designer by XLent Software works very well with R-DRAW. Using Page Designer, you can use the 80 column mode or use various fonts that R-DRAW does not support. R-DRAW pictures can also be loaded and printed with Page Designer. MegaFont and MegaFont II+, also by XLent, are also excellent programs for printing your R-DRAW screens.

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REMEMBER THE SLOC  
FOOD DRIVE  
BRING YOUR CANNED AND DRY FOOD  
DONATIONS TO THE  
DECEMBER MAIN MEETING

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## Disk of the Month

TOM TISBY & RON DEVINE

### THE DECEMBER FLOPPY OF THE MONTH

Ho! Ho! Ha! It's Christmas time again. Time to pin that mistletoe under the doorway and let that special person in your life know you're still alive!

Since Santa is a little busy and can't help out with the floppy this month (like most of the time!), we (alias Tom Tisby & Ronald Devine) decided to give a little more to choose from this month. So heeerrree we goooo.

#### LAZER

- From ANALOG magazine, this program should increase (or decrease) your typing speed, depending on who you are. All at machine language speed!!

#### RDRAW

- This one is for all you 130 XE people only! Written in BASIC (the compiled version didn't work at press time), this program will allow you to draw in a Hi Res graphic mode. This program is definitely great! We picked this up from Randy McSorley of PACUS.

#### EXPRESS 1030

- This HAS GOT TO BE THE BEST MODEM PROGRAM FOR THE 1030! It needs no handler, just rename AUTORUN.SYS and put on a separate disk with DOS. And don't forget to also get the PHONE.LST file which loads in those great boards! You got to see this program to believe it!

That's just half a floppy! Believe it or not there's MORE! But time and space are getting limited in this article so we want to quickly say that there is ONE MORE SPECIAL disk for this month. ANNOUNCING the S.L.C.C. First Edition Digitized Photo disk! On side one: Digitized photos by yours truly (Tom & Ron). No our pictures aren't on this month disk (sorry!). But there are a lot of pictures from movies and other things (can't reveal now). On the other side are some pics from CANADA! This disk will show your other friends (with other computers) that the ATARI HOME COMPUTER IS THE BEST AROUND!

That's it! Merry Christmas and a Happy New Year! And don't be too much of a scrooge!



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# ATR-8000

AUSTIN ACE NEWSLETTER

## SOME FACTS ABOUT THE ATR

What is it? The ATR 8000 and its newest brother the ATR 8500 are Z80 based micro-computers which interface with ATARI computers and replace the standard ATARI disk drive controller, and the RS-232 interface needed for attaching a modem to communicate by telephone. In addition, the ATR provides a parallel printer interface and buffer which can free your ATARI for other work while your printer is finishing its task. The ATR is the most flexible solution to expanding your ATARI computer. It may be more power than you need, but it may be the power you need to grow into. In addition to being a disk drive, printer and RS-232 interface for the ATARI, the ATR can be used as a computer by running a program which converts the ATARI to a terminal and allows the ATR to take control using the CPM operating system. The same peripherals (disk drives, printers and modems) which you use with the ATARI can serve your CPM computer. Finally, you may add an additional processor and utilize the MSDOS operating system.

For me, the ATR is primarily an ATARI peripheral interface. I've dabbled in CPM see below, but, just after I bought the ATR, ATARIWRITER and Syncalc and to a much lesser extent Synfile+ solved my 'serious' computer problems.

Economically, the ATR made a lot of sense almost two years ago. Disk drives were \$350 to \$400 and mostly single-sided single density at that, there were no direct connect printers or modems. Now prices are down, there are a variety of direct connect peripherals or very inexpensive interfaces and double-sided drives are not supported by much of the commercial ATARI software.

Economically, the ATR still makes a lot of sense; but it is not the only option and may not be the least expensive for your purposes or needs. Read on...

Some facts about CPM. The most prevalent of the 8-bit operating systems, some of the best micro-computer software runs on a host of different machines using this operating system. Apple computers for example are often expanded with a 'CPM card' expressly for the purpose of running Wordstar a powerful but difficult to learn wordprocessor. Many of the commercial programs are expensive, and powerful and are unique solutions to business and other problems. A variety of computer languages have been implemented under CPM. There are thousands of programs ready to run and inexpensive or free. Why not go for it then?

would not care, if I could use the CO-Power Ramdisk in the ATARI mode. I'd buy one in a minute. Right now, unless I find a CPM application I need, or unless an application I need becomes available on the the CO-Power, I am in a wait and see mode.

If you have a business application, you can use a terminal with the ATR and have a solid CPM computer; but, if you're like me and just bought the ATARI to learn, recreate and get my feet wet with computers, I carefully pinch each penny I spend before letting it go. CPM is not very user friendly and requires much more learning than ATARI DOS 2.0. Patten and Calandro's Getting Started with CPM. Rochelle Park, N.J.: Hayden Book Co. 1983 is just under 100 pages of good introduction with a detachable reference card. If enough of you are interested, we could talk about the basics of CPM.

I mention the complexities of CPM because, I have found them to be surmountable, but, I have also found many solutions without resorting to CPM.

The SigM and CPMUG Libraries to which the members of the AACE have access are the vast library of Software to which I referred above. If you are interested in CPM, this may be the way to get started. I've found some things available which run with little or no problem. ZCPR has been patched to run on the ATR by Marc Newman. As many of you have read, ZCPR is a replacement for the standard CCP (Console Command Processor) I have not tried to use it (we accept article contributions if you've implemented ZCPR write one) but, some of the best things in the public domain library are utility programs. D.COM, DISK76.COM, FIND.COM, and NSWEEP.COM are powerful programs which will save you much time.

All that Software? Get the index disk, use FIND and explore. Are you interested in Pascal. An early release of JRT Pascal is there, (I can't make it work it may need to be patched for installation). Much of the software available is dependent on owning Microsoft Basic, or some other language. M-Basic is \$250, copying commercial programs is illegal and wrong, ATARI Basic is \$15.00. OSS Basic XL is getting down to a reasonable \$60.00, the public domain BASIC's in CPM are causing me a problem. (Finding Documentation for the public Domain Programs is often a problem).

All the above is not meant to be negative; but cautionary. Don't go out and buy an IBM PC and expect to buy programs for what you have to spend for an ATARI product. I'm trying to work my way thru the club library. When I find something that works, I will share it with you; but, I have very little assembly language, and therefore cannot fix even the minor glitches there may be in some of these programs.



Extending your reach, the CO-POWER is a add-on board for the ATR which now supports 1 megabyte of memory. It runs CPM 86 and MSDOS 2.1 the latest operating system. Unfortunately, much of the programing being done today is machine specific and many of the most desirable new programs won't run on a machine that is not 100% IBM compatible. I'll work on getting a list of programs which are known to run on the CO-POWER. I

## Hardware Review

JEFF REID, ACAOC  
ORNJ/UCB March, 1985, ACAOC  
WHAT'S INSIDE THE ATARI 1050  
(AND THE US DOUBLER)"

This article explains a bit of the the inner workings of the Atari 1050 and Atari's orphaned "enhanced" density.

The 1050 is an Atari 5 1/4 inch floppy disk drive. It performs all of the necessary functions to support Atari DOS (disk operating system) functions: reading, writing, formatting, and so on. It is an intelligent controller as are all Atari peripherals; the Atari computer sends simple commands to the 1050, which in turn performs the necessary steps. This requires a little "computer" inside the 1050.

The 1050 "computer" is made up of five chips: 6507 - a microprocessor; 6810 - 128 bytes of random access memory (RAM); 6532 - 128 bytes of RAM, input/output (I/O) ports; 4132 - 4K bytes read only memory (ROM), the 1050 software; 2793 - floppy disk controller. There is also the actual floppy drive mechanism itself and some smaller component chips used to allow the five big chips to communicate with each other, the floppy drive, and the Atari.

The 6507 is similar to the 6502 microprocessor used in the Atari, but with fewer address lines. The 2793 is similar to the controller chip used in the ATR8000 and is Western Digital's top of the line floppy disk controller chip. It is capable of driving 5 1/4 or 8 inch floppy drives, single or double density, and single or double sided.

So why doesn't the 1050 support true double density? Well, the problem is memory, or actually, lack of it. There are only 256 bytes of memory, some of which is needed for program control. This limits the 1050 to 128 byte sectors and is OK for single density. However, double density sectors are normally 256 (or more) bytes long. Atari's answer to this problem is enhanced

density. Enhanced density actually uses the double density recording technique but only 128 byte sectors are implemented. This ends up producing 26 sectors per track, or over 133,000 bytes of storage.

It makes you wonder why Atari used an expensive floppy controller chip and then didn't give it enough memory to support double density. Well, somebody else did. You can enhance your 1050 with an upgrade like the US Doubler and get "true" double density.

### The US Doubler

The US Doubler, available for around \$60.00, adds another 128 bytes of RAM memory and a new software ROM chip. These modifications support true double density with 256 byte sectors. In addition, the drive can communicate with the Atari computer about three times faster than normal.

Included with the US Doubler 1050 enhancement is Sparta DOS, a totally new operating system for the Atari. This new operating system is similar to MS-DOS as used on the IBM PC. The main features are date and time support, including file date/time stamping, and tree structured directories. Since the directory structure is not like the Atari DOS standard, a special copy utility is provided that will transfer files to/from Sparta DOS from/to Atari DOS type diskettes.

Sparta DOS also takes advantage of the US Doubler speed enhancement by utilizing a more efficient "Interleave.". Interleave describes the physical ordering of the sectors on each track of a diskette; an Interleave of 17 means that the sectors are arranged so that sector two is located 17 sectors past sector one, sector three is 17 past sector two, and so on, so that each higher numbered sector is the 17th sector from the current one. Another way to look at this is to realize that if all the sectors on a track are read in order, the number of revolutions required to read the track is the same as the Interleave. For example, since the 1050 spins at 288 rpm, it takes 3.54 seconds to read a track with a Interleave of 17, and 1.46 seconds with an Interleave of seven. The normal 1050 uses an Interleave of 17, although it is capable of using an Interleave of 16. The high speed US Doubler mode uses an Interleave of seven, about 2.4 times faster than a normal Atari 1050.



## ST Topics

(c) 1985 MICHAEL REICHMANN

### COMMODORE AMIGA VS ATARI ST

(EDITOR'S NOTES: Permission to reprint was granted 11/16/85 by Michael Reichmann provided nothing is changed. He claimed that this review may be a bit dated, and he would perhaps rewrite certain statements today. But we feel this is one of few unbiased comparisons we have seen and wanted to present it to you.)

#### First Impressions

This review placed in public distribution 1 September, 1985 for the interest of its readers. It may not be reproduced or quoted in any manner without the express written permission of its author.

CIS 76703,2007 (416) 881-9941

The following is NOT a review of the Amiga A-1000. It is a first impression of this machine, after having spent a day or so with it. It is also a comparison with the Atari 520ST, its most logical competitor. So that no-one feels left out I'll also throw in some gratuitous comments on the Mac by way of comparison, (how to make LOTS of enemies).

The full specifications for both machines have been published now and initial reviews have appeared in the magazines. It is not my intention to do a side by side technical comparison. Anyone who wishes to do this can do so on their own, based on the published specs.

I am writing this then from the point of view of a consumer who might be lucky enough to bring home one of each to examine and play with for a day. I've had an ST around for a couple of months and become familiar with it, but to this date, just as everyone else, haven't a single piece of application software (other than our developmental prototypes). The Amiga that I received does not come with any applications software (though the production versions will) and thus I'm pretty much in the same boat with both machines; able to play with the desktops and examine the development environment but not do anything productive or useful. I'm going to be getting samples of all the early software next week, but comparing them without application software seems an appropriate and fair thing to do at this early stage in the lives of both machines and in some ways helps prevent the clouding of features by a particularly strong piece of software on one or the other.

I also want to stress that my perspective on these computers is that of someone who would primarily use them in a personal productivity environment. These are not in my opinion "home" computers (whatever they are) and they are obviously not destined for the desks of corporate users in the Fortune 1000 companies. These are machines for the likes of you and I to use to do real world tasks; writing, filing, calculating, communicating and recreation and that will be the perspective of this piece. If you are approaching these machines from any other perspective then be warned that we differ.

First some caveats and disclosures. Though I am V.P. of Product Development for Batteries Included (BI) the following observations and opinions are my own and not those of BI. BI has a vested interest in the success of both computer systems as we currently have products under development for both of them.

I've been a long time Atari enthusiast but on the other hand I have followed the Amiga for over two years, since it was first shown behind closed doors to a few industry insiders as a collection of circuit boards being run by a mini under the table. I've lusted after one since, and followed the product's development very closely.

So with that out of the way, here goes. Remember! This isn't a technical analysis, it's a user at home playing with the machines and trying to draw some comparisons and conclusions.

**KEYBOARD** first. I like the Amiga's keyboard a great deal. In fact I would rate it as the second nicest keyboard I've ever used. Since I'm not a touch typist the exact position of keys doesn't concern me. I use so many different ones that the odd displacement is less disconcerting than poor tactile feedback, which on the Amiga is very good. The ST by comparison is acceptable but not quite as crisp. As a fairly fast two finger typist I find both quite acceptable.

The RETURN key is large and well placed and the FUNCTION keys well separated (which is one thing I'll quibble about on the ST). The ST keyboard, while not having quite as good a feel, is a direct copy of the DEC VT200 keyboard in terms of layout and thus will appeal to many. Of course the ST is a one piece unit; the keyboard and computer are one while the Amiga has a detachable keyboard that connects through a telephone cable with modular jacks. If you're the type of user that likes to type with the keyboard on your lap then the Amiga will be preferred. Both the ST and the Amiga blow the Mac away when it comes to keyboards, by the way. The Mac simply doesn't have enough keys and I find it's angle uncomfortable.

**DRIVES** second. Both machines use the new 3.5" microfloppies and I love them. I never see another 5 1/4" diskette it won



be too soon. I can't wait for the PC2 which will have them as well so that the rest of the industry is forced to make the switch.

The Amiga's drives are very high density, double sided, 880K formatted. The ST's that are shipping now are single sided 360K formatted. Supposedly Atari is to ship their double sided drives shortly. They'll be 720K formatted. A little smaller in capacity than the Amiga's, but in the same ball park. This is REAL storage capacity folks, on either machine.

One curious thing is that the Amiga's drives seem to be running all the time. They are "almost silent" but an occasional 'clunk' can be heard that indicates that they are spinning. This doesn't bother me one way or the other since many system's drives are always 'on'. I don't think any conclusions regarding longevity or reliability can be drawn at this point. The Mac uses 360K formatted disks as well, so it is comparable to the ST. Most PC and Mac owners are starting to bemoan their small disk capacity so I think ST owners with single sided drives will end up feeling the same way. Apple supposedly has double sided drives on the way this fall and it's also likely than when IBM embraces 3.5" disks they'll be 720K or better as well..

The Amiga can accept a second outboard drive as can the ST. The Amiga's though doesn't need a separate power supply as it gets its juice from the system unit. Any additional drives must have a separate power supply though. Amiga OS can address up to four external drives while the ST can address two as well as a hard disk.

**COSMETICS:** The Amiga isn't pretty but neither is the ST. The Mindset was pretty, but look where it got them. All in all I wouldn't choose either machine based on their cosmetics, both are very acceptable for either home or office. The Amiga's footprint is a bit larger but the keyboard slides under the system unit for storage and the monitor can sit on top of it (to a maximum of 40 lbs worth). The Mac is positively ugly (in my opinion) by comparison.

**MICE:** Both machines come with rodents of the two button variety. There isn't much to choose between them. I have found the ST mouse's buttons to not be quite as crisp as I would like but that may just be the couple that I've used. While the ST has a two button mouse, GEM doesn't require the use of two buttons. Intuition does. The left button selects while the right button displays menu bars. I'm not crazy about this; in fact I dislike it! You thus have to keep the right button depressed while clicking on the menu item from the drop down with the left button. It's not easy (although I suppose I'll get used to it) and I much prefer the ST-GEM method! Non-GEM would have hated it.)

I would have as well except that it's without a doubt the quietest fan I've ever heard (not heard?) on a computer. I have a PC clone on my desk at work which has a fan so loud as to sometimes interfere with conversations. Most PCs are similarly loud. The Amiga's fan is totally inaudible even in a quiet home so no one should be bothered by it. The ST on the other hand does not have a fan and thus is obviously quieter still. The ST's drives don't spin all the time either so all in all for someone who is neurotic about noise the ST is preferable. Whether the fan will contribute to the Amiga's longevity remains to be seen. The Mac doesn't have a fan either, but I am told that the next generation modular Mac will.

**SOUND:** The Amiga's sound capabilities are superb. It also has voice synthesis built in which is very intelligible. The ST's sound capabilities are all right but not in the same league. For games and music software applications the Amiga will shine. When it comes to personal productivity applications music is almost irrelevant. The Amiga has stereo audio output and users can anticipate some exciting software that utilizes this capability. The ST though has a direct MIDI connection built in. I personally wouldn't buy one or the other simply on the basis of sound so I'm probably not the best person to comment on this.

**GRAPHICS:** The Amiga defines the state of the art in affordable graphics capabilities. I won't get into the details since they've been detailed in print elsewhere (Issue #1 of Amigaworld; Creative Computing and Byte September issues for the Amiga and recent Antic's and ANALOG's for the ST). Cost aside for the moment, if graphics are your "thing" then the Amiga is superior to every other computer currently on the market or yet announced.

Now that there are Amiga's on dealers shelves there is discussion regarding the ST's versus the Amiga's text display on their respective RGB monitors. At the desktop (Workbench) level, both machines are in 640X200 4 color mode. There appears to be some significant difference between the displays with the Atari color display looking crisper and easier to read text.

It is too soon to declare definitively what causes this but it may be in part that the Amiga's screen is quite a bit larger than that of the Atari monitor and thus one is able to more clearly see the the black inter-scanline stripes which reduces apparent resolution. Also, the Atari's font seems somewhat more pleasing to the eye.

One clear advantage that the Atari ST has is in its high-res monochrome mode, 640X360. This mode is incredibly crisp and readable, ideal for serious wordprocessing and other long session uses. A separate special Atari monochrome monitor is required to use this mode but it is every bit as good



If not better than the IBM PC's monochrome text mode or that of the Macintosh. The Amiga doesn't have any similar mode and this is a definite drawback for serious text applications. Many people with IBM type color displays (the same resolution as the medium res Atari and the Amiga) find it difficult to work all day at that resolution and end up getting monochrome cards for text work.

Now for the counterpoint. I don't know about you but I'm not able to spend from \$1,000 to \$2,000 or more (depending on system and options) on a game machine. Sure I like to play games, but I don't think that's the *raison d'être* for either machine. It would be facile and unfair though to simply latch onto the Amiga's superior animation-graphics and sound and dismiss the ST. The financial part of the equation is significant and will be discussed in detail at the end of this piece, but it is a major consideration.

The graphics on the ST are not shabby by any means (I know first hand because we have a graphics program for the ST under development that really makes it shine). The bottom line? The Amiga is the winner in terms of graphics and sound without regard to price. How important this is, is up to each user to decide. The 520ST is the clear winner for displaying text but the user must buy a second monitor or forsake color. The Mac doesn't have color capability (yet) so isn't in the same league. Monochrome (hi-res) graphics on the ST are as good if not better resolution than the Mac as well.

User Interface: This is a tough one. I like GEM very much. It is very close to the Mac in style and manner of use. In fact in some areas GEM has features preferable to those on the Mac; variable size scroll boxes for example and the upper right sizing button.

Intuition on the Amiga is quite similar in style to GEM and the Mac. It has windows with scroll bars, a close button and several other "gadgets" are available. In many ways though it is quite different. For example on the Mac and ST-GEM, if you have a number of windows on screen you simply click on any visible part of a window to both bring it to the front and make it the active window. On the Amiga clicking anywhere in a window takes it the active window but does not top it (bring it to the top of a multi-window display). To do that you need to click on one of the upper boxes in the upper right hand corner of each window that places a window in foreground or background. I can't say that I like this method.

Otherwise Intuition is very Mac-GEM like. Close and size boxes are where you'd expect them; windows are dragged in a similar manner, there's even a Trash can and Preferences (control panel) window for mouse, screen and keyboard settings. Once

you know how to use any one of these systems (Mac-GEM-Intuition) you'll be able to use any of the others without a hitch. Finally (!) there is now virtually a standard user interface for microcomputers.

One thing that I've noticed is that the Amiga does disk IO every time that you change something on the Workbench (Desktop). Thus it is more akin to the Mac than GEM in it needs to talk to the drive frequently. Disk IO speed though seems to be extremely fast, about the same as the ST though I've not run any speed comparisons. Subjectively they seem to be about the same and both appear to be much faster than the Mac.

One area where the Amiga is different is that besides having windows it has Screens. Unlike a Window, a Screen must be the full width of the display. Screens allow the Amiga to display different tasks in different resolutions. You can thus have one part of the screen in low-res multi-color mode playing a game while the bottom half is in hi-res running a word processor. A very nice capability indeed which brings us to multi-tasking.

The Amiga is a true multi-tasking computer. That means that it can run several separate tasks or programs simultaneously. For example, you're on-line on CompuServe on a conference. This can be quite boring, waiting for the other folks to type their thoughts. So, open a second Window and call up a game thus allowing you to play Cosmic Froggy Space Zapper during the dull moments. Just got a bright idea for that reporconference running simultaneously.

This isn't the same thing as a desk accessory or a program like Sidekick. ALL of the programs are actually running at the same time, not just standing by on-screen. For me, this multi-tasking capability is the most exciting aspect of the Amiga and the one that means the most to me. I can barely walk and chew gum at the same time but there are many instances where I want to be able to run a couple of programs simultaneously (reply to Email while doing a compile, that sort).

What about multi-tasking on the ST? Right now the ST can't do it but there is no reason why it shouldn't be able to. Multi-tasking is a result of the operating system used in the Amiga, not the hardware. Though I have no information to this effect, I wouldn't be surprised if Digital Research is considering or even working on a Concurrent GEM. They are working on Concurrent DOS 286 and since GEM is a key product for them marrying the two can't be far from their minds, particularly considering the threat of Topview and Windows.

Also Metacomco, the folks in Englewood responsible for the multi-tasking Amiga OS are known for the ease with which they are able to port their products to other



machines. While the ST then doesn't have multi-tasking today, there's no real reason why it shouldn't at some time in the future.

Is multi-tasking worth the money for you? Only you can decide. The need for it is very much determined by the type of work you do and your work habits. I happen to find it a very exciting and useful capability. The Mac by the way is not multi-tasking and I've heard no rumors about Apple having such a capability on the near term.

An operating system is more than icons and windows. On the Atari ST (at least the machines that are currently being shipped to users) there is no way for the user to directly address TOS. All DOS commands must go through the GEM visual interface. Developers have received a Command processor and thus can access TOS directly. On the Amiga you open what is called a CLI, or Command Line Interpreter which then allows you to directly talk to Amiga DOS. A brief look at the DOS commands show it to be extremely powerful but one apparent drawback is that all utilities appear to be disk based rather than RAM based. Thus you must have a DOS disk present all all times.

TOS is also a very competent operating systems based on CP/M 68K. Both of these are large, dense and difficult to learn and use, so in many ways the visual interfaces of GEM and Intuition are a godsend. I hope that Atari sees fit to include their command interpreter with the ST in future as many serious users will miss having it.

Cost: The final frontier. This is what separate dreams from ownership. The equation is complex because of the number of variables and what comes with what machine. A 520ST has 512K of RAM but loses half of it to TOS/GEM needing to be booted off disk. When Atari finally ships the OS ROMS this will change but today a 520ST is really only a 256K machine.

The Amiga is at base level a 256K machine but one can buy a 256K board that plugs into a slot in the front giving you a 512K machine. Like Atari with the ST, the Amiga isn't ready yet to have its operating system ROMed. Commodore's approach though is to include what they call a Writeable Control Store; a hidden internal 256K board containing RAM into which the DOS and Intuition load. The user thus doesn't lose any RAM. On the other hand, Commodore has said that they have no intention of providing ROMS when they finally come out and early Amiga owners apparently will have to boot the "Kickstart" disk forevermore. The pre-release Amiga with 512K, by the way, shows 374,944 bytes free. Where 125K bytes have gone isn't immediately clear.

However you slice it, list price to list price with comparable displays, drives and monitors a 512K Amiga A-1000 with one drive and color monitor is almost twice the price of a comparably equipped Atari 520ST.

Reportedly the Amiga will come with more bundled software, but then Atari has promised other software will be bundled as well. History has shown that bundled software is seldom the best though and users usually end up purchasing the better software from independent developers. Conclusion? The Amiga is more expensive than the ST. I'll leave it to others to determine by exactly how much more. This also doesn't figure in discounts which will vary widely.

What that brings us to is the ultimate question (after the meaning of life, of course), which is, should I buy an Amiga or an ST? I know you're going to say "cop-out", but there is no one simple answer. Like your father used to say, "It depends".

The question of software availability aside for the moment; if money is no object, you'd probably buy the Amiga. But, only if serious and extended text display wasn't something important to you. Even without money as a consideration, the text display on the ST with the hi-res monochrome display is so good that it's a hands down winner in my book.

For color-animation, graphics and sound the Amiga clearly wins its turn. Even the most ardent Atari enthusiast will have to agree that the Amiga's three co-processors make it the pre-eminent graphics machine. The tradeoffs for this are price and the lack of a hi-res text mode.

The two remaining questions are corporate survival and software availability. Without software in both quantity and quality, no computer is worth having. Right now I may be regarded as lucky to have access to these two exciting new computers but I can't write this report on either as I don't have a wordprocessor; I can't calculate their potential sales as I don't have a spreadsheet and in fact can't do a single useful thing with either.

Not fair you say? The Amiga will ship later in September with some basic productivity software and the first releases for the ST are also due this month. OK, but until there is sufficient software neither the ST nor the Amiga are anything more than pretty chunks of plastic and silicon. It took the Mac almost a year before there was sufficient quality software to make it a viable productivity tool. If no one ever wrote another piece of Mac software again the Macintosh would continue to be a useful computer. It may take at least a year until the same can be said for the ST and the Amiga.

What about the ability to survive of both Atari and Commodore. CBM's IIs are well known. The C64 market is flat and they need the C128 and Amiga to be strong successes. Sales of eight bit Atari's aren't anything to write home about either but Atari pulled in its spending horns a long



time ago and is lean enough (so we're told) to survive this period.

Whether the Amiga A-1000 and Atari 520ST sell enough to lift both the marketplace and Commodore and Atari out of the doldrums still remains to be seen. Initial ST shipments appear to be selling well but clearly these sales must be to "early adopters" and closet software developers since why would anyone buy such a machine with no software to run on it.

As this is being written in early September the Amiga has not yet shipped. Certainly when it does (supposedly later this month) many people will rush to buy it just as they did to snap up the first ST's. The real question becomes, after the initial "feeding frenzy" will there be sales to a broader base of more discriminating users? That remains to be seen, but the industry as a whole remains cautious. I for one am very confident that these two exciting micros will help to revitalize a flagging industry. Color me bullish.

The "bottom line"? I really like the Amiga and the ST both. Each has its strengths and weaknesses. If anyone tells you otherwise, he's lying. Clearly the A-1000 is not the ultimate Amiga nor is the 520ST the final ST. Both companies will be looking to push outwards in terms of both price and features; in both directions. Who's the beneficiary? You and I and all computer users.

If some one asks the question then, "which is better, the ST or the Amiga?", simply answer, "what's your budget and what do you want to do with it?" As for me, I'm waiting till they have models with 2 MEG of RAM in a lap-top design with color LCD display, 20 MEG 3.5" hard disk and all weighing less than 10lbs. But on the other hand.....

## ST SIG

MICHAEL CURRY

### ST SIG NEWS

Allow me to introduce myself. My name is Mike Curry and I am the program librarian for the ST SIG. It is my responsibility to maintain the ST SIG software library and any questions or comments about the ST software library. Please do not hesitate to contact me. Now that I've introduced myself, let's get on to the interesting stuff.

### THE DECEMBER DISK OF THE MONTH

This month we will be offering a very complete, very professional implementation of the Forth language. It has full support for the ST's graphics capabilities and allows use of standard disk files. Full source code as well as documentation and demonstration programs are provided on the

disk, so that Forth fans will be able to compile their own custom version of the language. I am not an experienced Forth programmer, but I have heard from others that this Forth is superior in many ways to the Forths that are commercially available, and from what I have seen it appears to be true. Definitely worth the \$5.00 asking price!

### NEOchrome

For those of you that haven't yet received a copy of NEOchrome, we have the final version (0.5) of NEOchrome. It is on the November 1985 DOM. It includes documentation for NEOchrome, sample pictures, and a program from Digital Research called DOODLE. DOODLE is an interesting demonstration of the windowing capabilities of GEM, and a pretty decent drawing program as well.

For those that did buy a copy of NEOchrome from the user's group, but did not receive the documentation on the disk, we are offering a swap: bring in your original NEO disk that you bought from us, and I will exchange it for the new version free of charge. Be sure to bring your ORIGINAL with the printed label.

### ST Writer

We also have available the final release version of ST Writer. It is on the December 1985 Special. ST Writer seems to be compatible with AtariWriter on the 400/800/XL/XE series, except that you get about 160,000 bytes of free memory to play with! If you have a monochrome system, STwriter allows you to display 38 lines of 80 columns during editing. If you have purchased a pre-release version from us, we offer the same upgrade as on the NEOchrome disks.

### Atari BASIC

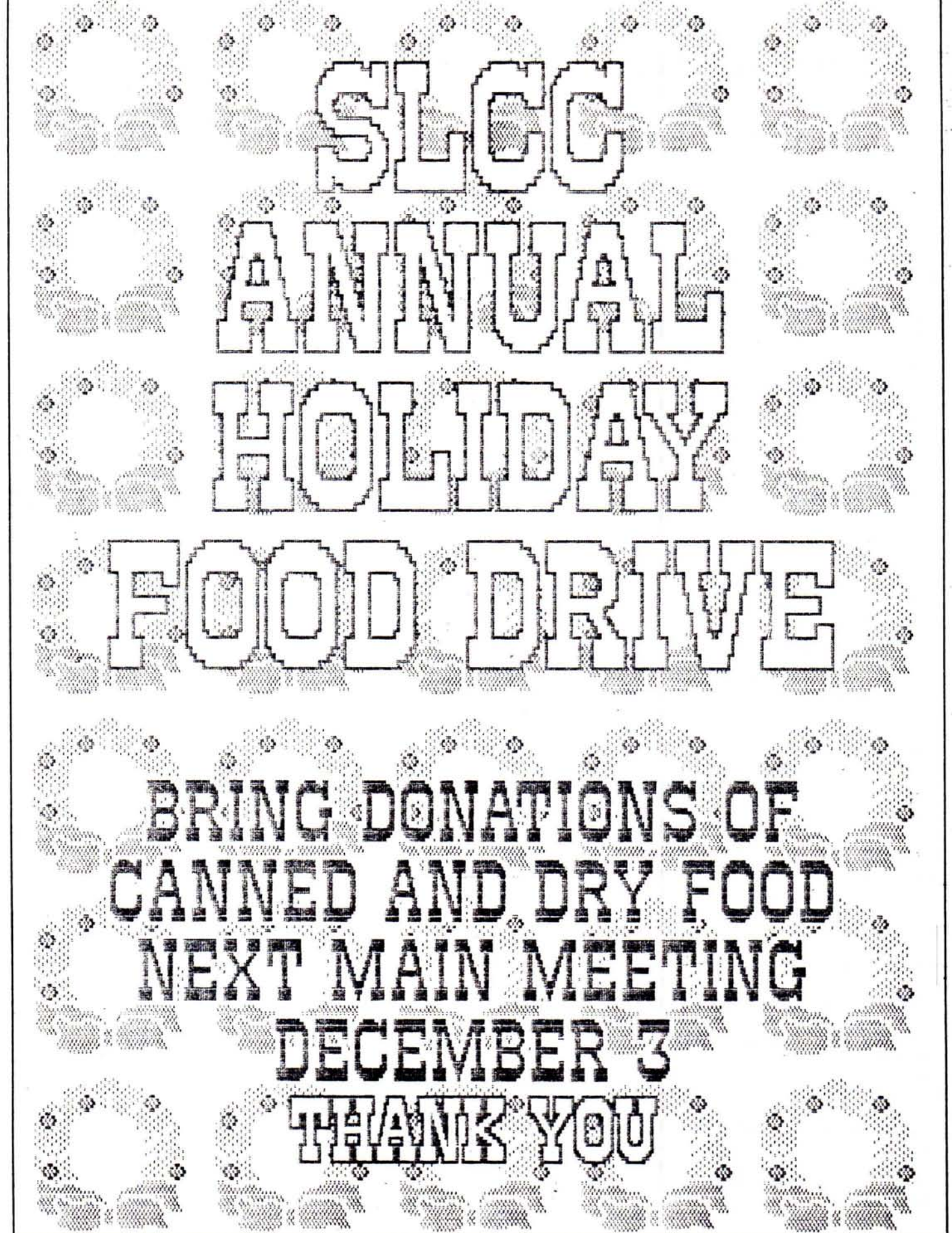
We now have an upgrade available to purchasers of the original August 1985 special disk containing BASIC and the BREAKOUT desk accessory. The disk has been updated with the final version of Atari BASIC and some new demo programs. If you do not wish to wait for Atari to ship the final version to you, you may trade in your old disk (or buy one if you haven't yet done so) and get the latest BASIC (it is a BIG improvement over the old version).

### COMING SOON

I am working on several utility programs which will be made available on an upcoming DOM. "C" source code will be provided so folks can make changes as they see fit. I am also putting together a listing of our ST software library so that people can see what they are missing. When I have completed it I will post it on the Key System for downloading.

See you at the December main meeting!





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## Our Next Meeting

DICK SCOTT

I would certainly like to thank EPYX and Mr. Jim Siefert for letting us have those eight (8) games to raffle. I also appreciate Mr. Nat Friedman of ANTIC MAGAZINE for coming over to speak to the club members after the break. I must apologize for all the noise at the meeting, which was created by some of the members. This was very distracting to those that wanted to hear Mr. Friedman. In the future, please keep the socializing and questions until the break and after the meeting. If it is not kept within these time frames, we may have problems getting speakers in the future, or members may decide to just stay at home, because they can't hear what the speaker is saying.

Well, I have been having fun playing the games from EPYX. (That is one of the things that makes this job interesting, being able to take home some of the software and check it out for the month). That is, providing it hasn't been raffled off. EPYX gave us eight (8) games to raffle off last month, four (4) were raffled off and there are four more to go for this month. If you recall, there was some problem in loading BALLBLAZER using the club's ATARI 810 look-a-like, modified disk drive, at the "main meeting"? Well I experienced the same problem in loading BALLBLAZER and RESCUE FROM FRACTALUS using my PERCOM disk drive, but no trouble with the standard ATARI 810 drive. You might consider that when one of these games doesn't load in on another type of drive.

Now, I'll bet that you thought that I didn't have a speaker for December, didn't you? Surprise!! I do have a speaker, Mr. Bill Wilkinson, of OPTIMIZED SYSTEMS SOFTWARE (O.S.S.), and columnist for COMPUTE magazine. He will explain a few things about the new "BASIC LANGUAGE" for the ATARI 520ST and other things that are happening at O.S.S.

My thanks to Mr. Jim Warren for this tip on how to repair the 130XE computer, if you are experiencing problems with the "START, SELECT, OPTION, and SYSTEM RESET" keys responding when pressed (as I was) it could be due to the slippage and corrosion of the cable that connects the "keyboard" to the "mother board". You will need to take out the four screws on the bottom of the computer and separate the two halves, slip the strap out, clean off the contacts using an eraser, that's right, an eraser, very lightly to remove any corrosion, and then insert it VERY CAREFULLY between the contacts.

I wish one and all "A MERRY CHRISTMAS AND A HAPPY NEW YEAR"

## From the Exchange

TOM BENNETT

### THE NEWSLETTER EXCHANGE

You may be one of those people who look forward to checking their mailbox to see if the latest issue of Antic, Analog, Compute, or Byte has arrived. And when it does arrive, you can't wait to sit down and browse through, passing by the many ads that account for about 50% of the printed paper. You can't wait to get to the "meat" about Atari.

You don't have to wait any longer for SOLID, good information about your Atari. We have binder after binder full of Atari club newsletters from over 100 clubs internationally that you can now check-out for a minimal, refundable deposit. Jim Rodrigues, our print librarian, will have all of our exchange newsletters available at each main meeting for any club member.

You can find good information for just about any topic you want. From beginner's topics to advanced programming, hardware/software news, reviews and modifications... you will be amazed at the quality of the articles that will offer hours of good reading in each monthly exchange binder.

Since it is the end of the year, and this is when we begin to see "top ten" lists on just about everything, let me recognize what I have seen to be the ten best Atari user publications that you will find in our files.

### THE ATARI CLUB NEWSLETTERS BEST OF 1985

I have listed in alphabetical order what I believe to be the ten best Atari newsletters:

ACE OF EUGENE  
ATARI BOOSTERS LEAGUE EAST  
CURRENT NOTES, WASHINGTON D.C.  
FEEDBACK, ADELAIDE ATARI COMPUTER CLUB  
JERSEY ATARI COMPUTER GROUP  
JERSEY ATARI COMPUTER SOCIETY  
LOS ANGELES ACE  
MACE, MICHIGAN ACE  
ORNJUCE, ORANGE COUNTY  
PORTLAND ATARI CLUB

There are a few more newsletters that I could have also listed here but these are the real standouts. So look for them in the newsletter exchange.

You can find Jim Rodrigues and the newsletter exchange at each main meeting.



# Antic On-Line

## ANTIC ONLINE

COMDEX REPORTS 1985

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November 20 by Jack Powell

Las Vegas, NV — Covering a huge, three island display area in the center of the West Hall of COMDEX, the largest computer trade show in the US, Atari and its third-party developers are the busiest attraction of the show.

Atari was clearly aiming at a show of force in the 68000 world by gathering its supporters under a collection of plum-colored banners identifying each ST stalwart. Over Forty software companies were provided display areas and ST machines by the Tramiel operation.

In the center of the Atari action, the ST, the Amiga, and the Macintosh were lined up side by side. The familiar Amiga bouncing ball was running identically on both the Amiga and the ST, (actually, a bit faster on the ST), while the Macintosh displayed only a black and white disk icon bearing a question mark.

Not to be outdone, the 8-bit Atari 130XE was also displaying a bouncing ball demo. It was, however, the only Atari 8-bit machine on display at the Atari space. Except for the Amiga at the Atari exhibit, Commodore was not represented at the show.

Perhaps the most impressive graphics demo was an animated parrot, also from Atari, which flies across the screen while a graphics slide show continues in the background.

ANTIC displayed its new ST catalog software, including The Cartographer, Murray and Me, and the Metacomco Macro Assembler. Of particular interest was a demonstration of a new program by Tom Hudson which displays three dimensional objects in both wire-frame and solid — with adjustable light source!

Activision is showing both Hacker and Borrowed Time. If you've seen Hacker on the 8-bit machine, you're in for a pleasant surprise. The travel through the underground tunnel is graphically real; complete with railroad lanterns hanging from the rock walls.

Llamasoft was showing a brilliantly colorful psychedelic light show called Colourspace. Sierra-On-Line has its Ultima II on the store shelves. We saw King's Quest II, the animated graphics adventure. On the ST the hero can move at three different speeds and the program can take advantage of two disk drives.

Sierra-On-Line will also soon release Winnie the Pooh and ST-One-Write which, they say, is the number one small business accounting system for the Macintosh.

Hippopotamus Software has its Backgammon on a full-color screen with excellent graphics right down to the reflections on the pieces. Academy Software has an ST version of Typing Tutor, and Xlent Software is showing The Typesetter — a Print Shop-style program.

Batteries Included was showing off colorful graphics of DEGAS, and a company called Computer Curriculum is adapting their dedicated education software, originally designed for a mini-computer, over to the ST.

GST Holdings LTD, from England, is showing a C Compiler, a Macro Assembler and a MacWrite-like word processor. Spinnaker Software is introducing its line of graphics adventures and educational software. On their screen was Perry Mason and The Case of the Mandarin Murder.

Migraph is demonstrating Easy Draw, an object-oriented graphics program. Among its many options is an "almost-infinite zoom."

TDI Software, is currently offering Modula-2, a favorite language of computer scientists. They will also be demonstrating Andra, a professional typesetting program which was written on their own Modula-2.

BMB Compuscience is demonstrating a database management package with LAN (Local Area Network) which will allow users to transfer data to and from the IBM and ST. They expect this to be available in March or April.

Mirage Concepts is also showing a Database in addition to their disk utility program by Holmes and Ducksworth. And Portable Software is showing a property management system which operates under BOS (Business Operating System). This is going to be a high-end system for the vertical market.

Right next to Portable Software is Softronics which was displaying the first element of a complete integrated package. Their terminal program was truly impressive. Practically any terminal can be emulated, and if that's not enough, you can define your own and compile it to disk. Among their other modules, Softronics plans a intelligent CAD/CAM system which can analyze a plan and determine the success or failure of the structure!

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Las Vegas, NV — Jack Tramiel, president of Atari, told ANTIC today that Atari will not release a CD ROM player for the ST until manufacturer's prices drop. He saw no release of the massive storage peripheral for the ST in the immediate future. "I will never release it for higher than \$600," he said. He went on to say that consumers are used to paying \$199 for CD



audio digital disk players. Why should they pay \$1000 for the same mechanism just because it's a CD ROM? "I'm definitely not willing to lose money."

Tramiel felt no compulsion to be the first company to release it. When asked again when he thought he might have one ready, he replied, "You'll have to guess and I'll have to know."

Tramiel also avoided setting a specific date for when the GEM operating system for the Atari ST would be placed in ROM. But he said it was a "matter of days, not months." Also, despite the current disagreement between Apple Computer and Digital Research regarding the appearance of the GEM desktop, Tramiel stated the ST desktop would not alter in appearance.

Several hard disks were being used at the Atari exhibits—including at the ANTIC display. ANTIC Marketing Director, Gary Yost, described his experience adding the hard disk to his demonstration system. "It was incredible. I brought the whole thing up and partitioned it in fifteen minutes. It usually takes an hour to do this on an IBM. I moved ten disks of our demonstration disk with no problem."

According to Tramiel, hard disks are currently being shipped to developers and he expects them to be available to the end user by the first quarter of 1986. No firm price has been set, but he hoped to keep it under \$600.

Tramiel was very pleased by the reception his ST was receiving, both at COMDEX as well as globally. "We have over 1,000 developers worldwide" and he expects total sales of the ST, by year-end to reach 100,000, worldwide.

Sig Hartman, President of Software at Atari, confirmed that Borland International, developers of the phenomenally successful Turbo Pascal, had just purchased three 520 ST's. "Borland is committed to write software on the ST," said Hartman.

Starting December 1, each ST sold will include a free giveaway package of 5 pieces of software, to include Basic, Logo, a game called Megaroids, a word processor and a database.

Okidata is currently working with Atari to configure the software for its new Okimate-20 color printer for the ST which is scheduled for a late January release. At COMDEX, the Okimate-20 was printing rich, full-color screen dumps of ST Neochrome and DEGAS pictures.

Not all the ST exhibitors were in the Atari area. Sublogic had its own large booth displaying Flight Simulator for the ST and other computers. The new simulator, with a planned release in the first quarter of 1986, and a tentative price of \$49.95, has many new features.

Michtron had several of their games and software utilities displayed. But the most

impressive of their products was a new game called Time Bandit. This was a final beta with a planned release date in mid-December at \$49.95.

GST, Computer Systems Limited had the best MacWrite clone of the show. 1st Word is a full-feature word processor written specifically for the GEM interface.

**THIRD PARTY MONITORS..** When the Thomson company (which makes monitors) was setting up their booth, they had Apples and IBMs to display the clarity of their products. They thought they had a pretty good display -- until they wandered over and saw the ST demos at the Atari exhibit. So they borrowed an ST and one of their IBMs was slipped under a table, out of the way.

Then the Thomson people spotted the robot and rocket demo running on the 130XE. Another ST, they asked? Oh no, replied Atari, that's our 6502 computer. So now the Thomson display contains an ST and two 130 XE's. And two Apples and an IBM PC are gathering dust under a table.

**EIGHT-BIT ATARI.** Being shown for the 8-bit line was Atari's XM301 300-baud modem featuring direct hook-up, auto-answer and phone number storage, and Russ Wetmore's XE-Term software. Retail price is \$49.95.

And PLATO is finally shipping! After more than a year of anticipation, the educational on-line service is available in the Atari Learning Phone package. According to Skrutch, the Learning Phone includes the LP cartridge PLATO terminal emulator, a one year free subscription to PLATO (normally \$25) and one free hour of on-line time (normally \$7.75). Atari is releasing the full package for \$24.95.

Atari 8-bit owners may also look forward to a home finance program called The Silent Butler -- available at the end of the month for under \$30 -- and a spectacular educational program called the Atari Planetarium which Skrutch expects out by Christmas at a price under \$50.


The Atari Planetarium displays the sky patterns in any time zone from 10,000 years in the past to 10,000 years in the future. You can choose your observation point from a map of the world, show the sky with or without constellation lines, and search for and track objects. This should be popular software in the school market.

Given the above collection of 8-bit software, it's evident Atari is aiming at the educational market with their low-end machines.

ANTIC also spotted a few of the new Atari XMM801, dot-matrix printers in use, one at the VIP Technologies booth. These printers are said to be Epson graphics compatible with a print speed of 80 CPS. They should be shipping next month with an approximate price tag of \$299.



# DECEMBER 1985

* Sunday *	* Monday *	* Tuesday *	* Wednesday *	* Thursday *	* Friday *	* Saturday *
1	2	3 8 pm	4	5	6	7 8 pm
				EXEC. BOARD		
		MAIN MEETING				ATRB000 SIG
		S.L. Library				for info call
		300 Estudillo		closed meeting		Mike 482-5061
8	9 8 pm	10 7 pm	11	12	13 8 pm	14 7 pm
		BEGINNER SIG				GOLDEN GATE
		for info call				COMPUTER EXPO
		Rick 835-9857			Newsletter	
		8 pm			Deadline	MSIG/GAMEROOM
	ST SIG	ASSEMBLY SIG			for info call	for info call
	S.L. Library	for info call			Ron 537-3183	Phil 351-2208
Chanukah	300 Estudillo	Frank 632-7181				
15	16	17	18	19	20	21
GOLDEN GATE						
COMPUTER EXPO						
Oakland						
Coliseum 10-5						Winter Begins
22	23	24	25	26	27	28
						
			Christmas			
29	30	31				

**SEASON'S GREETING'S**



**ANNOUNCING...  
THE RETURN OF...  
THE H-SIG???**

**DECEMBER 14th**

**CALL PHIL  
FOR DETAILS!**



PICTURE FROM THIS MONTH'S SPECIAL FLOPPY



## SLCC Interface

The SLCC Interface is available to all active club members for the purpose of announcing any club function, an item for sale, swap meets, or to be used as a question/answer forum. You may give any officer your contribution to the Interface, or you can leave it on "The Masthead" message base of the Key System BBS, (415) 352-5528, operated by Sysop Mike Sawley.

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There is a new San Leandro Atari BBS, 300-1200 baud, 24 hours. Call:

THE FORBIDDEN PLANET  
(415) 481-8760

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### SLCC CHRISTMAS PARTY

Come to the next meeting for our special SLCC Christmas Party. Cake, ice cream, beverages, door prizes and raffle. Special guest speaker, Bill Wilkinson, of OSS Software and Atari Columnist for Compute magazine. You will not want to miss this meeting. Bring your family, and make this a real social event.

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FOR SALE: Prowriter Printer and supporting software. Only \$250.00 or best offer. Call Bob at (415) 352-8118.

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### REMEMBER THE SLCC FOOD DRIVE.

Bring your donation of dry or -canned food to the next meeting. Help the SLCC help families during this special time of season. Show us your support and generosity.

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HAPPY HOLIDAYS  
FROM THE STAFF OF THE  
SLCC JOURNAL!

We wish you the happiest and safest of seasons! Thank you for this most rewarding year with the SLCC. We look forward to an even greater 1986!

Ron Seymour  
Tom Bennett  
& the Journal Staff

## SLCC Journal

P.O. Box 1525, San Leandro, CA 94577

### Next Meeting:

DECEMBER 3 8:00 PM  
San Leandro Community Library  
300 Estudillo Ave.  
San Leandro, CA

7:30-8:00: Soft/Hardware Swap  
8:00 Christmas Party  
Speaker:

BILL WILKINSON  
OSS SOFTWARE

TO:

186

86/05/08

