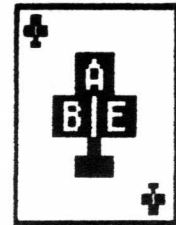


ABE'S LOG OCTOBER 1985



PROGRAMMING CONTEST WINNERS

FIRST PLACE - HARRY DAVIS - 130XE & VIRTUOSO MUSIC SYSTEM
SECOND PLACE - BEN MARTNICK - VIRTUOSO MUSIC SYSTEM
THIRD PLACE - BRUCE BLANAR - ATARI ARCADE CHAMP



The pictures above are the contest winners as seen through the eyes of Atari. The photos were digitized using "ComputerEyes" by Digital Vision, Inc.

We would like to thank Enhanced Technology Associates for donating two "Virtuoso Music Systems" and Black Moon Stereo for donating the Atari "Arcade Champ".

There were no losers; the seventeen programs submitted were all so good that the Executive Committee awarded everyone a prize. A two-pack of disks was received by the following members (listed alphabetically): Keith Bingaman, Eric Brodeur, Jim Craig, Ben Davis, Rob Dress, Gunther Kurrasch, Bob Loux, Robert MacGregor, Tom Reichard, Gabriel Siftar, John Spanitz, Ed Troyan, Robert Tune, and Robert Zawarski.

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Cover to Cover

November 30 / December 4
7:30 PM

"Lehigh Valley Computer
User Groups"

SPECIAL HOLIDAY MEETING

DECEMBER 14, 1985
GUEST SPEAKER - BILL HOLT/BRODERBUND
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WITH A \$1 DONATION TO DEFRAY COSTS



SOUND PROGRAMMING BY J. D. CRAIG

First, we should look at what are often considered two basic music concepts.

A **MUSICAL TONE** has four characteristics: Pitch, Duration, Dynamics, and Timbre. We will initially deal with only two of these: Pitch and duration. Dynamics and timbre will be preset at a particular volume level in "TONE 10". Although the **BASIC SOUND** command allows quick changes of timbre and volume as different quantities (**SOUND 0,PITCH,TONE,VOLUME**), we will be using a **POKE** to the **AUDC** register, which handles **TONE** and **VOLUME** as a single byte. With the **AUDC** preset to a particular stable value, we will then be able to control pitch and duration using the **AUDF** register alone.

A **MELODY** is a recognizable succession of similar musical tones, forming an illusion of shape, which is often represented by the "curve" of note heads across paper. (For the sake of simplicity, we will use the default setup offered by Atari **BASIC** and treat it so that we could produce up to 4 pitches at a time. However, we will start by looking at only a single melodic line, using just one firmware oscillator.) If we can produce the correct pitches in the correct order and rhythm, we can create a recognizable melody.

The larger problem is not so much in programming as it is in musical pattern recognition. The melody program is simply this: Load a pitch, count down a certain time, load the next pitch, count, etc. The question is: Which pitches, for how long? If we start with a musical score like a piano/vocal arrangement, we must learn to recognize the symbols and interpret them properly. Which of all those notes is the melody? (Often the uppermost ones, but score with only a melody line also exists, and can simplify the initial task.) In addition to notes, which represent a particular pitch held for a particular proportional length of time, there are rests, which indicate times of silence. We will create our silences by **POKE**ing the **AUDF** with a zero, which creates a frequency that the natural limitations of your tv or audio system should filter out. (If not, none of your mammals should be affected, but certain species of insects might take notice.) And how do we know which pitches for how long if we don't even have a score, just the tune in our heads? By quantizing.

The pitches in the melody can be quantized by comparing them with tones in the "scales" given in the manuals (or in the **LOG 3** issues ago). A program could easily be written to sound only these scale steps, or use a paddle controlling **SOUND 0**'s pitch to slide through all the possibilities in default mode. Listen to each tone as you sing it, comparing

it with different notes of the scale. When you have a match, or a near match, note the pitch names or numbers for later use. This list will answer the "which pitch" question. To quantize the rhythm, we must compare our mental melody to something that creates a repetitive sound pattern. A ticking clock might work. Make one tick of the clock equal to the shortest time duration in your melody. Then count how many ticks each pitch of the previously noted melody takes, and write that figure with its pitch. These proportions represent the rhythm.

There is, obviously, much more to even a single melody than this, but we will end for now with a short program to give your onboard speaker a repetitive "tick" using two cursor control keys, 'up' and 'down'. It's not exactly a metronome, but it will give you a graduated ticker to compare your note lengths with.

```
0 K=764:R=255:U=14:D=15:S=110:X=4:T=40
0:B=10:C=53279:Y=1:Z=0:REM jc CLICKER
10 GRAPHICS Z:? "++High numbers - FAST
ER Top=390":? "Low numbers - SLOWER Bo
ttom=0++"
11 ? "PRESS ( - ) for faster clicking"
:? "PRESS ( = ) for slower clicking++"
15 IF PEEK(K)=U THEN S=S-X:GOTO 20
16 IF PEEK(K)=D THEN S=S+X
20 POKE K,R:IF S>T THEN S=T:GOTO 25
21 IF S<B THEN S=B
25 ? "++";T-S;" ":POKE C,Z:FOR L=Y TO S
: NEXT L
30 GOTO 15
```

As usual, a copy of the program will be available from the library for you who refuse to type any more than necessary. Happy quantizing!



ST CORNER

GOING ON-LINE

What CAN you do with your new 520ST? You can go on CompuServe using the DEC VT-52 terminal emulator included as an ST desk accessory. You may not be able to download or upload with the VT-52 but you can still access SIG*Atari's message base.

What will you find there? How about information on CHAT!, a terminal program for the ST, which supports Christensen X-modem protocol. CHAT! also supports text buffer capture or transmit. CHAT! retails for \$19.95 (+ \$2.50 shipping) from SST Systems, 3456 Willis Drive, Titusville, FL 32796 (telephone: 305 269-0063).

Once you have CHAT!, you can download public domain programs from CompuServe's SIG*Atari. If the program you're looking for isn't on SIG*Atari, then try out ATARI BASE (408) 745-5308. Here, on Atari's own BBS, callers have access to the latest news and information on ST products. There are three separate lines available to allow access to over 150 callers/day. STAN (415) 552-8924, a BBS in San Francisco, offers news and public domain software for the ST. DR DOWNLOAD (614 587-3774) in Ohio is another source of information and support.

Locally, you will find information and programs for the ST on several boards. ABE's ACEs HELP KEY (215 837-9299) features articles from CompuServe in its download files. OSB (215 398-4983) has public domain programs for the ST available in its Atari AE section. Action Annex East (215 432-5686) has an entire message base dedicated to the 520ST.

* * * * *

DEALER SUPPORT

On a recent visit to Electronics Boutique, our Asst. Editor was given a copy of "Atari ST Dealer News", a publication of Atari Corp. which is being distributed to all ST dealers to keep them informed about available and upcoming products for the ST computers. The Editors also caught a glimpse of this publication at Hess's.

Under the section on 'ST Publicity', we found the following gem: "BYTE MAGAZINE will present a serious in-depth report on the ST by the end of the year. We don't have any quotes from that one yet, but judging from the fights their editors have had over who gets to play with it next, it should be a goodie." We whole-heartedly agree!

OF INTEREST

APPLE

Stephen Jobs, one of the co-founders of Apple Computer, has left. Apple is being restructured by a new management team. Rumor has it that the "new" Apple may resemble the team Tramiel has formed for Atari. Product changes may include a lower price and open architecture for the Mac. The new Mac may be an Apple II version of the Atari ST.

COMMODORE

Commodore has been hard hit with overstock of 64 and Plus 4 machines. They are now in technical default of bank loans.

ATARI

Atari and Digital have been at war over the new programs for the ST, GemWrite, GemPaint, etc. Atari has released a version of AtariWriter for the ST to help fill the software gap. The new AtariWriter does not use GEM, but a low cost word processor was needed.

J & S Computers

ATARI 5200ST	\$ 80.00
ATARI 5200ST COLOR	145.00
ATARI 530XE	145.00
ATARI 500XL	145.00
ATARI 1050 DISK DR.	145.00
EPSON LX-180	26.00
TRACTOR LX-50	30.00
EPSON FX-180	35.00
EPSON FX-185	35.00
EPSON FX-100	35.00
EPSON LQ1500	85.00
PARALLEL INTERFACE	85.00
C-ITOH 8510	36.00
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SILVER REED DAISY	259.00
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DUST COVERS	
800.....	8.50
800XL.....	8.50
1050.....	10.50
EPSON RX/FX80.....	10.50
BOOKS	
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ATARI BASIC BOOK.....	11.95
COMPUTE'S 2ND BOOK...	10.95
COMPUTE'S 2ND GRAPH...	10.95
ATARI ENCYCLOPEDIA...	17.95
SOFTWARE	
ATARIWRITER.....	39.95
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ATARI GAMES.....	10.00
PRINT SHOP.....	37.95
PRINT SHOP GRAPH LIB.	14.00

966-4464

BUYERS UPDATE

Each year we provide a listing of the area's local retailers and what products they carry for the Atari. We have also added a listing of 'bargains' for the Atari. Mail-Order is still the best way to save money; but, if you're shopping locally, this list should help you find what you're looking for.

WHERE TO SHOP

BOSCOV'S - Reading

Boscov's in Reading has a lot of Atari software that they got at a big discount due to a warehouse closeout sale.

CLOVER - Palmer Park & Whitehall Malls

Clover has some software, but they are best known for their sales on computers, disk drives, and printers.

THE ELECTRONICS BOUTIQUE - Lehigh Valley Mall

The Electronics Boutique has started supporting Atari with a large selection of software, hardware, and supplies. The 520 ST is on display and looks great. Hard-to-find items like Touch Tablets, Light Pens, and Modems are all in stock here.

GEMINI ENTERPRISES - 86 Ridgedale Ave., Cedar Knolls, NJ

Gemini has the largest selection of ATARI products. They also carry Epson printers and other third party peripherals and add-ons.

HESS'S - all Lehigh valley locations

After a year of skepticism of Atari, Hess's now carries all of Atari's products, including the 520ST and 130XE. Some software is available, not too much though. Since Hess's is a department store you can also find computer furniture, computer interfaceable typewriters, and other things which don't normally come to mind when buying computer equipment.

J&S COMPUTERS - Alburtis

J&S has long been the most popular supplier of hardware to Atari users. 130XE's, 520ST's, Epson printers, Hayes modems, disk drives, and all sorts of supplies can be found here. If there's something special you're looking for, it can be ordered and usually arrives in a few days. Jim Mueller is an avid Atari user and supporter, so you are dealing with people who know their product. J&S has announced they will no longer carry software, but they still have a good selection of titles in stock.

KAYBEE TOY & HOBBY - Lehigh Valley Mall

KayBee has a selection of older software titles, all for less than \$10. Beware--Much of the software is on tape, check before you buy!

SOFTWARE CITY - MacArthur Road, Whitehall

You can usually find almost any program you may be looking for here. The newest software programs tend to get here first.

WHERE NOT TO SHOP

JAMESWAY, K-MART, KIDDIE CITY, SEARS, SERVICE MERCHANDISE, and TOYS'R'US have next-to-nothing for Atari computers. What is in stock is outdated and/or overpriced.

BARGAIN HUNTING

DISKS

BEST PRODUCTS is the best (no pun intended) place to buy blank disks. Single Sided/Double density can be found anywhere from \$10 on up, and look for specials on Memorex and Maxell.

DISK DRIVES

Watch the newspapers for CLOVER'S ads, they usually have 1050's on sale for \$159 every few weeks.

GAME CARTRIDGES

If you feel like taking a drive down to Reading, BOSCOV'S has a large collection of Atari game cartridges from \$2 to \$5. Titles include Donkey Kong, Football, Joust, Pole Position, Robotron:2084, etc.

ST COMPUTERS

J&S COMPUTERS have the best prices around on ST computers. The 'monochrome package' goes for \$660 and the color for \$860. Well worth the drive to save \$140.

PRESIDENT'S VIEW

Well, it's October and we've made it through what we hope will be our club's last "un-air-conditioned summer." ABE's ACEs has been very fortunate to have access to Sts Simon & Jude's school auditorium for the past 3 1/2 years. The price has been right too...FREE! In August, the club made a \$100.00 donation to the church as a small token of our appreciation for the use of the hall.

Two factors have influenced the E-Board to look into other possible locations for our general meetings. The first is heat. The temperature hit 90° in the auditorium at our July meeting and despite the fact that we had a half-dozen fans at the August meeting, it proved to be another test of our endurance. We want AIR!

The second factor is space. Our winter meetings are normally better attended than our summer meetings by about two-to-one. If this holds true this year, we're going to be pressed for space very soon. Our membership has broken the 200 mark and summer attendance has been over 125 for the last three meetings.

As long as we are looking into a new meeting hall, we felt this would be the time to give everyone a chance to pick the day and time for our meetings. A quick poll at the August meeting indicated that a vast majority of our members want to keep the meetings at their present Saturday afternoon day and time. It was pointed out however, that those voting were all members who could make the Saturday afternoon meetings. (Nothing slips by us.)

In an effort to be fair, we are giving all club members a chance to vote on this matter. Here's how it will work.

We're asking that each membership call the club's 24-hour hotline (759-2683) sometime during the next week. This line is connected to an answering machine so don't worry about when you call. After the tone, leave your full name and your choice of the following times for our meetings:

- SATURDAY AFTERNOON
- SATURDAY MORNING
- WEEKDAY EVENING

Those are the only times under consideration. One vote per membership please and be sure to include your name. Anonymous votes will not be counted.

This is your big chance to change the day and time of our meetings, so take advantage of it.

-Dennis John-

MODEM S.I.G.

August 25 Meeting

Leon Bonam brought the free demo from Delphi. He captured the file and added a few minutes of on-line time to make it even better. The free demo explains how the system is set up and how functions are to be worked. Leon's added minutes showed us the menus you would see as a new subscriber and what to look for when moving through the system.

Keith Bingaman was kind enough to get on the Orefield CP/M system and capture the help files, which explain how the system works. I printed out some copies and passed them out to the members who were strangers to the CP/M system. We discussed how to log on and basically how to get started on the board.

Dennis John had some help files for anyone who calls Games Computers Play. Also, Dennis informed the SIG that GCP would be sending him information on how to subscribe to the service for \$15.00. The club would supply the program disks and some documentation. This sounds like another real good deal for ABE's ACE's members. I'm sure the club will only ask for the cost of the materials.



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MEETING HIGHLIGHTS

August 10, 1985

The meeting opened with the introduction of the Executive Committee by President Dennis John. The introductions were followed by the third reading of the proposed amendment to the constitution and the following announcements: 1) Electronic Arts was extending an offer to club members to purchase a case of their programs (case contains five games-six of each) for \$160 / \$26.67 per member; 2) JACS in Trenton, NJ is putting together a 'Best of Print Shop' disk - all original designs must be submitted by August 30 to JACS; 3) ANALOG Special Offer - if you subscribe or renew through the club, you will receive a discount on the magazine subscription and the club will receive a discount on the disk+magazine subscription.

Straw poll taken of members present regarding the possible change in meeting day and/or time resulted in a vote for no change. (Editor's note: Please read the President's View.) Members present were asked about purchase of 520ST, past and planned. It was suggested that a 520ST SIG be formed by owners of the machine.

The last manual 50/50 drawing was held; the first prize was 50% of the ticket sales and the second prize was a Virtuoso play disk donated by Enhanced Technology Associates. They also donated two Virtuoso Systems to be given away as part of First prize and as Second Prize.

During the I/O session, it was announced that the new issue of the Atari Explorer was out and Bruce Fedorcha announced that he would like to start a Machine Language SIG. Following the I/O, a videotape of the disk-of-the-month was shown. There was some difficulty with the sound, but a promise was made to have the sound problem cleared up for the next videotape. The main presentation featured a demonstration of Enhanced Technology Assoc. MIDI interface and Virtuoso, their new music program for the Atari.

September 14, 1985

Club president Dennis John opened the meeting by welcoming new members to the club which was followed by the introduction of the E-board. Membership Chairman John Chay announced that the membership is DEFINATELY over 200. Newsletter Editor Julia Piatt asked for a volunteer to help with the newsletter. Librarian John Slaby informed the membership about a 'bug' in one of the programs on Disk #102; if you bring it back, it will be replaced at no charge. Secretary Jim Finley announced that there will NOT be any MODEM SIG meetings in November or December. Treasurer Ralph Fenner stated that the treasury had about \$333 at the beginning of the meeting and that membership alone took in over \$200 today. Vice-president Thom Geller

announced the topics of the next meeting and asked for volunteers to demo programs.

The proposed constitutional amendment was read and voted on. It passed unanimously. The programming contest results were announced (see front page). The winning program was used to pick the winner of the 50/50 drawing. This was followed by a videotape of the Special-of-the-Month Disk.

The meeting was turned over to Thom Geller, who showed a videotape of 'The care and cleaning of the 1050 disk drive and the installation of US Doubler chips'. He followed the videotape with a live demo of SpartaDOS. Next Thom demoed CheapTalk and SAM (Software Automated Mouth). The next part of the presentation was a slide show and discussion of power line protection. Following a ten minute break, Dennis John demoed ComputerEyes Video Acquisition System.

The meeting ended with the I/O session. Ralph Fenner announced that owners of PaperClip v. 1.0 could purchase the debugged PaperClip v. 1.1 from the club library. This would save them \$6 over sending the disk back to Batteries Included for the same update. (PaperClip v. 1.1 will not work without the key supplied with v. 1.0.) Greg Lukow announced that he is willing to start a 520ST SIG. (An information sheet and questionnaire is included in this issue.)

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SPARTADOS AUTORUN.SYS

by Mark Bray

Lately, due to its speed, SpartaDOS is becoming popular with US Doubler owners. Because of its versatile command structure, it is a great game loader as well as a super programmer's DOS. It also supports all kinds of drives, but is only FAST when used with the 1050-US Doubler combination. But... SpartaDOS doesn't support the familiar AUTORUN.SYS files that DOS 2 and most DOS 2 compatibles support. Here's how to set up a SpartaDOS AUTORUN.SYS work-alike.

BINARY LOAD FILES

Let's suppose I have several binary load games that I want to put on a disk with one of the many public domain autorun menus which can be found in the club's library. First step is to choose one which does not require the files to be locked before they can be displayed, because SpartaDOS will not lock files. Suppose I pick one that will display a menu of all the files with an .EXE extender (Great, then I'm all set!).

Next, format a disk with SpartaDOS using these commands:

- 1) D1:INIT
- 2) A menu of 4 choices will come up, choose RD_HS. This is a read-only high speed DOS which is great for games and anything which doesn't try to write to the disk.
- 3) When you're asked 'change defaults', hit [N].
- 4) Then pick the following: the drive with the disk to be formatted; the type of drive (usually 1 for single sided 40 tracks (standard Atari drives, Indus, etc.); and the density. By all means, use 2 for double density because the SpartaDOS format is totally different from other DOS formats. Don't waste room by using only single density.
- 5) Input an 'unique' volume name, be certain that the volume name is unique, different than any other disk's volume name, otherwise you will have problems later.
- 6) Type [Y] to the 'Ultraspeed?' prompt if you are using a 1050 with a US Doubler, otherwise type [N].
- 7) Make sure you have the right disk in and FORMAT it!

You now have a disk all set up and ready to go. Next, put your master disk back in and type SPCOPY for the SpartaDOS copy utility, and copy all of your DOS 2 files onto the SpartaDOS disk, copy the AUTORUN.SYS file also. Then rename all the binary files on the disk like this:

```
D1:RENAME OLDFILEN.AME NEWFILE.EXE
```

NOTE: There are no commas in the rename command, be sure to leave a space between the word "RENAME" and the old filename and the new filename (no commas!).

Rename AUTORUN.SYS to AUTORUN.COM using the same command format. At this point, you should have a directory which has all the binary games named as 'filename.EXE' and has a file called AUTORUN.COM. Here's the tricky part - at the 'D1:' prompt, type in the following EXACTLY as it appears:

```
D1:COPY E:X D1:STARTUP.BAT
```

The 'X' is a dummy file name; due to a bug in SpartaDOS, if you don't supply a dummy file name when using a device which normally does not require a file name, you will mess up your disk real good; so USE IT! This problem and the volume name problem are fully documented in the SpartaDOS manual.

After the screen clears and the drive stops spinning, type this:

```
AUTORUN[RETURN]  
CONTROL-3[RETURN]
```

This creates a STARTUP.BAT file which 'runs the autorun'. That's all there is to it! It looks like a lot of work at first, but you get used to it after a little bit.

WHAT ABOUT BASIC PROGRAMS?

That's even easier! No AUTORUN.SYS file is required, simply follow the above format procedure (unless you have a program such as a database or word processor which writes to the disk, then use STD__HS) and again, use a menu which does not require the files to be locked. Then simply put all your BASIC files on the disk, and rename the menu to MENU.BAS.

Now follow this procedure

```
D1:COPY E:X D:STARTUP.BAT
```

When the screen clears, type:

```
CAR[RETURN]  
RUN "D:MENU.BAS"[RETURN]  
CONTROL-3
```

And you now have an auto-boot BASIC disk! Be sure you have BASIC in when you boot this disk, or it will lock up.

HAVE FUN!

ABE'S ACES

Allentown-Bethlehem-Easton's Atari Computer Enthusiasts is an independent users' group organized and run by owners of Atari Home Computers. Atari is a trademark of Atari, Inc.; all references to Atari should be so noted.

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IMPORTANT PHONE NUMBERS

HELP KEY BBS	(215) 837-9299
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ABE'S LOG

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