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Directions to the library: From the Long Island Expressway: Take exit 58 North (Old Nichols Road). continue north for approximately two miles and make a left (west) turn onto Smithtown Blvd. Continue west for 1 1/2 miles to the Nesconset Plaza on the right hand side of the road. The library is located in the west end of the plaza.

From The Northern State Parkway: Take the Northern to the end where it continues east as Veterans Memorial/Nesconset Highway (routes 347/454). Go east approximately two miles and take the left fork (347). Continue for another three miles to Terry Road. Make a right turn onto Terry Road and take the left fork (approximately 3/4 mile) onto Smithtown Blvd. The library will be in the Nesconset Plaza on the left hand side approximately one mile from the fork.

Meetings are open to all those interested at no charge. The meetings begin at 12:00 p.m. in the library 's community room and end at 4:00 p.m.

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Club Meetings

The Long Island Atari User Group Meets once a month at the Nesconset branch of the Smithtown Library. Membership dues are $20 per year and enttitles you to receive the newsletter.

The newsletter is currently being produced on a Mega2 with 4mbytes memory and a 20mbyte hard drive. Software is Timeworks Desktop Publisher and printer is HP Deskjet Plus.

If you have any questions or comments about The Lighthouse or LIAUG, please write to our mailing address or post on our BBS.

Our address is:

LIAUG
P.O. Box 92   Islip NY 11751

Our BBS number is: (516) 234-4943

If no answer call: (516) 221-2964 and leave a message.

Review: ICD's ADspeed ST

by John Damiano, Transierra Technology

What is it? Its a 68000 Accelerator for the Atari ST line of computers. And it cooks. I decided to buy this hardware accelerator for my Mega 4 computer while talking to ICD at the Glendale Atari Show. I purchased it on the spot but it took a while to receive it. It finally arrived last week and I finally found the time to install it today.

Installation was somewhat traumatic but not difficult. My advice would be to take ICD up on their offer and send your computer and $40.00 to them. However, if you want to do it yourself here are some recommendations. Tools you should have on hand are a phillips screwdriver, small small sharp sidecutting dikes, some needle nose pliers, a 25 watt soldering iron or battery powered soldering iron and small diameter solder, a solder sucker, and some patience. A static suppression wrist strap is also a good idea but not mandatory.

First you take apart your computer, a somewhat time consuming task consisting of removing the plastic covers and shielding, power supply and disk drive. You kind of feel your way along if you have never done it before. It's a logical operation. Disassembly of a 1040, 520 or Mega is a similar procedure. If you are going to upgrade to TOS 1.4 now is the time. I did this and also added a Moniterm driver board. Really pushing my luck, I suppose.

Before touching anything on the board itself, touch your hand to the ground plane around the edge. This SHOULD put your body at the same potential as the ground or common. If you move, get up, etc. do it again.

Also, be aware that some of the cheaper soldering irons use an ungrounded tip and can generate static discharges. Having ICD do it is starting to look better..no?
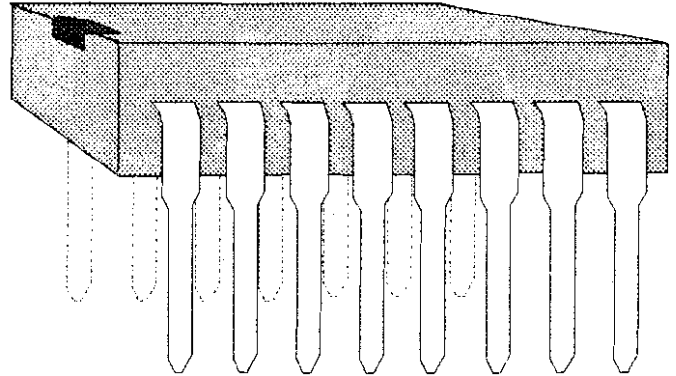
With the PC board loose you simply cut off the 68000 by cutting each pin next to the chip body. (note which way the notched end of the 68000 points) I had to also eliminate the small daughter board on top. This required adding a single jumper. Their instructions make it quite clear.

You now have 40 legs sticking up where the 68000 used to be. Take the small iron and grab each leg with the small dikes while heating the connection. Wiggle the leg gently and pull it out when the solder holding it softens. If you get a tough one, go on and come back to it. I got all but 6 out easily. Some of those 6 were bent over on the bottom and some were attached to a large metal ground plane. I had to remove the solder from the bottom before I could get these last ones out.

Now you have to get the solder out of the holes. Take some very small diameter solder and add it to each hole. Although this may seem redundant, it will allow you to use the solder sucker more easily as the solder pool will transfer heat to the connection quickly. I sort of cheated on solder removal. I own an avionics business and so had an expensive PACE solder removal tool available. It made solder removal quick and easy but, I am sure with some patience, I could have cleaned the holes with a cheap solder sucker such as sold by Radio Shack. I did not test this theory however.

After all the holes are clean you install the supplied socket paying attention to getting the notch on the same end as the 68000 you removed. Now just hold it in place while you tack a couple of corners from the back side. Now solder the rest of the connections. Use plenty of solder as it needs to wick through the holes and solder the other side as well.

Inspect all connections for shorts between pins. I cleaned the board of flux with some flux remover so I could see the connections a little better. Isopropyl alcohol and an old tooth brush (or even your wife's toothbrush) works fine. Next you reassemble the computer up to where you put the top cover on.

☞

Now take the ADspeed itself and line it carefully up with the socket. If the pins don't line up exactly you should make sure they do so none get bent while pushing the unit into the socket. It did not push in easily. I had to exert a lot of pressure. This is normal with a new socket. Start one end then go to the other end. You kind of work it down into place. That's it.

You can add a hardware switch if you like at this point. This involves soldering two wires in place of a jumper and running them to a SPST switch. You have to drill a hole somewhere to add this and I choose not to do so at this time. The switch allows you to change from 8 MHZ to 16 MHZ speed easily. You can do the same thing using the ACC they supply or a 16/8 speed set program. Using Deskmanager or Superboot you can configure the system at boot up for whatever you are going to do. I may add the switch later if events warrant it.

Once the computer is reassembled you have to test it. I always dread this part. What if I have taken a perfectly good computer and turned it into a perfectly dead one. No problem this time. It booted up totally ignorant of the fact I had just given it a heart transplant. After it booted up I copied the ICD supplied software to the auto folder and root of the boot disk. I rebooted and it came right back up. Gosh, twice in a row! I set it up to run in 16 Mhz mode and it flies..it really does. It's like having a new computer.

Except it's still the friendly ST I have grown to know and love. I have not found anything that is incompatible with it so far. I will keep checking but I am not going out of the way to find something. If it shows up in routine use I'll let ICD know about it. The one I received was supposed to be a gamma release (whatever that means) but it seems flawless so far. I would expect nothing less from ICD. They have shown that their standards are very high by the quality of their other products.

ADspeed works as advertised. Buy it and support ICD. They have another winner.

Price: $299.00 suggested list, I believe. I paid somewhat less since I was so bold as to accept the dreaded gamma edition.

Time to install: 2 hrs. I could do it in 1 hr but hate to rush something like this.

Where to buy it: At this point only directly from ICD

ICD Inc

1220 Rock Street

Rockford Il 61101-1437

Phone: 815-968-2228 voice or 815-968-2229 BBS

8-Bit Odds-N-Ends

By Jim Harris (LIAUG)

Computing by Telephone

What a month! It all started out so simply, with a quick visit to the LIAUG meeting. Toward the end of the meeting, John Aalto, (our esteemed President), and Pat Mulvey, (Sysop of the Nest BBS), came to me with an incredible offer. It appears that Pat wanted to pass the BBS on to younger, more capable hands. Even more incredibly, they were offering that position to ME! (OK, I am **younger** than Pat, by maybe three years! But "more capable?" Hmmm.... Maybe looks count for something after all!)

The long-and-short of it is that by the next Saturday, I had a new telephone line installed, and Pat was leaving a box bung-full of computer equipment at my house.

Running a BBS seems so very easy from the outside. You hook up the equipment, connect the telephone line, load up the software, and away you go! Right?

W R O N G !

Good Ol' Mr. Murphy's gotta have his say, and when he said "nothing is ever as easy as it looks", he meant it! Essentially this was a working BBS, only the phone number was changing, so it should be very simple... Except we had to re-format a couple of hard-drives and I wanted to make a couple of teeny-weeny changes to a few menus and add one or two small features......

About a week (and innumerable 2:30am sessions!) later, the BBS was **finally** back up and running.   ☞
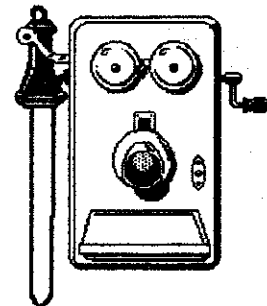
Running a major Atari BBS is not easy. There are a number of decisions that have to be made before you can even think about applying power. There are even more decisions to make and things to do before you can imagine someone calling in.

One of the thorniest questions that every Sysop faces, is the question of access: who gets to do what. Everybody wants unlimited access to every feature in the system.

Unfortunately, if you gave everybody Sysop level access, the first woodpecker that came along would surely destroy your carefully planned system. This question is made even more complex when you have several classes of people using the system. Should non-member users have the same access as the dues-paying members? What about members of sister groups like the Old Hackers? How much access do I give Visitors or New users? Should there be a distinction between simple guests and honored guests?

The design of the system is equally important and nerve-wracking. There's the question of exactly what features do I want to support on the BBS? What do I want the menus to look like? What should be on the main menu and what should be on a sub-menu? If the system is designed right, the screens are uncluttered and the commands are intuitive. A properly designed BBS will attract users like a picnic attracts ants! If the system is NOT designed right, the menus are cluttered, and the commands difficult, users will stay away in droves.

Should we support F-mail? Do we want on-line games? Should I add **more** message bases? Should the bases we have be **longer**? What about colors? Graphics? What about the 40 column users? 80 column? VT-52? IBM ANSI? All of these users expect that we are going to provide specific support for **their** system and all of these users need an entire network of menus, prompts, and displays designed.

Running a club's BBS is not easy: nothing worthwhile ever is. It is a challenge. It can be very interesting and rewarding or it can be very frustrating and defeating. It's all a matter of attitude. Are defeats and set-backs an attack on your person or are they opportunities to learn and grow.
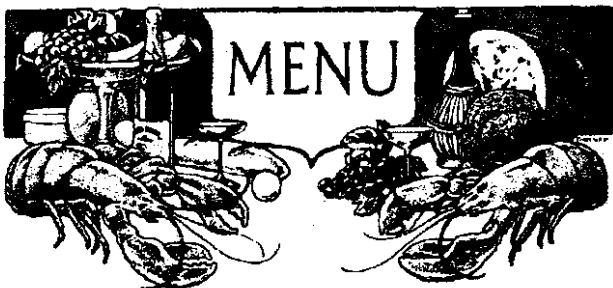
Like I said, it's a matter of attitude.

One of the most dangerous traps that a BBS's sysop can fall into is the EGO trap. The sysop of a BBS is quite literally 'god' in miniature. He has total authority, total power. He can give you Olympian power or bury you in the mud. 'Power corrupts, and absolute power corrupts absolutely!' It's a very easy trap for any sysop to fall into.

How do I prevent myself from falling into that trap? It's simple but not necessarily easy. The key word here is **SERVICE**. I have to remember that this is not MY system, it's the CLUB'S system. I'm not the owner, I'm the steward. It's a lot like being a librarian. Yes, the librarian has authority. Actually it's more like RESPONSIBILITY. The librarian is RESPONSIBLE for making sure that the library is clean, uncluttered, and provides an environment for everybody to enjoy. Sure, if some air-head comes in and starts to disrupt or destroy the library, the librarian has the authority (read that responsibility), to kick 'em out on his ear! However, if the members or trustees come to the librarian with a request to change things around, the librarian has a RESPONSIBILITY to abide by their wishes.

It's exactly the same way with a BBS. Think of it as an orchard, and me (the sysop) as the gardener. It's my job to make sure that the orchard is healthy, but it's YOUR job to tell me what to plant!

The New Nest BBS! is **YOUR** BBS. I'll do what I can to make it interesting, but I need your help. I need your thoughts, comments, questions and ideas. If you have an idea, tell me. If I can do it, I will and if I can't I'll tell you exactly why not. John Dunn once said "No man is an island, entire unto itself..." I need your help. I need you to tell others about the BBS and tell them what you like about it.

I need to know what you DON'T like about it, as well as what you DO like. We all meet as a club because together we can do great things. If we all pull together with the BBS, we'll be able to do even GREATER things!

See you next month!

POKEY Stereo Upgrade for Atari 8bits

Codename: GUMBY

Chuck Steinman (MGAUG)

This is an information file for adding stereo sound capabilities to an Atari 8bit computer using two POKEY chips. While it is a simple installation compared to most, it still requires some experience with soldering and electrical assembly.

Note: Installation of this modification will void any warranty you may have on your computer. Chuck Steinman, DataQue Software and AIM cannot be held responsible for the installation of this upgrade or any incidental or consequential damage to any equipment or persons using this upgrade or any variation of it. In other words...you are on your own.

This upgrade will only provide stereo output for software written specifically for this upgrade. It will not produce stereo output for existing software. Also, the keyclick will NOT be fed into the stereo outputs, as it does not originate from POKEY. A modified version of the Pokey Player, which produces stereo sound using existing Pokey Player files is available on GEnie, CIS and my BBS. It is called GUMBY.ARC

Parts Needed

A second Atari POKEY Audio Chip, available from BEST (#CO12294, $5.00) or B&C ComputerVisions (#C2294, $3.50) 74LS14/74HCT14 Inverter, available from BEST (74LS14) (#CO16541, $0.30) or Jameco (74HCT14, $0.29) 1000 Ohm, 1/4 Watt Metal Film 2-5% Tolerance, available from Jameco in lots of 10 (#R1.0K, $0.50 for 10) or Radio Shack in lots of 2 (Don't know P# or $) Two RCA style phono jacks, available from Radio Shack, Jameco or other electronics outlet Two 0.01 (or close) 16V (or more) bypass capacitors, available from Jameco (#DC.01, $0.10 each) Two short (6-12" each) sections of shielded audio cable A standard dual RCA to RCA patch cable
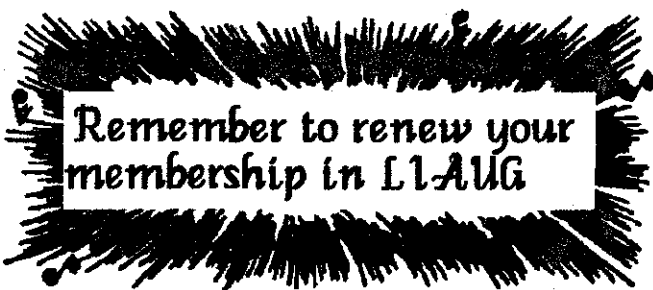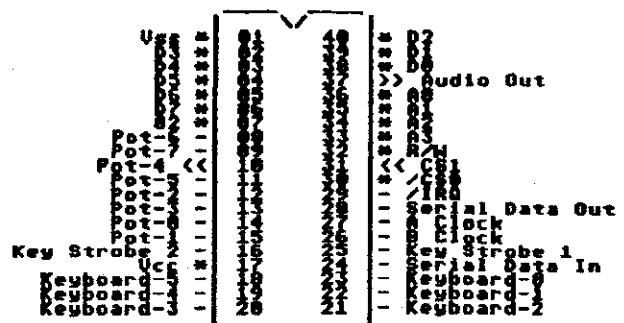
Remember to renew your membership in LIAUG

Figure 1

Optionally, two 50K single turn trimmer pots, available from Jameco (63P50K, $0.89 each)

Inverter Information

a) Bend up all pins of the inverter except for pins 7 and 14.

b) Cut off the narrow part of the pins which were bent up.

c) Install the inverter over top of the existing 74LS14 (or another 74LS part if more convenient) on the motherboard. Make sure that the new chip has its locator notch/dot on the same end as the chip below it.

d) Solder pins 7 and 14 of the inverter to the same pins of the lower IC.

e) Run a small wire (wire wrap type works best) from pin-1 of the inverter to pin-13 of the CPU. The CPU is part number CO14806 on the XL/XE series.

f) On the old POKEY there is a 3k pullup resistor connected between pin-31 and Vcc. You will need to unsolder this resistor and remove it.

g) Run a small wire from pin-2 of the inverter to pin-3 of the inverter, and then on to POKEY pin-31. Note, you can use the pad where the resistor was just removed. Be sure to get the correct one.

POKEY Information

a) Bend up all pins on the new POKEY which are marked with a minus on the diagram. This includes POKEY pins 8, 9, 11-16 and 18-29. (See Figure 1.)

b) Cut off the narrow part of each pin bent up.

c) Tin each lead which was NOT bent up. This includes pins 1-7, 10, 17, and 30-40. These pins are marked in the diagram as *, > or <.

d) Now, bend up the pins indicated by the > and < symbols. Do NOT cut these pins short.

e) Place the new POKEY on top of the old POKEY in a piggy-back style.   ☞

f) Solder the unbent pins of the new POKEY to the old POKEY. If your original POKEY was in a socket, then it is easier to connect the two if it is removed. Make sure no excess solder flows down the pins to the narrow part of the OLD POKEY. Reinsert both POKEYs into the original socket.

g) Solder the 1K resistor from pin 37 to Vcc. The most convenient location to pick up Vcc is where the 3K resistor was removed earlier.

h) Solder a wire from pin-31 of the new POKEY to pin-4 of the inverter.

i) Mount the two RCA jacks on the rear of the case, preferably in an area close to the POKEYs.

j) Solder a bypass capacitor to each of the center conductors of the RCA jacks.

* k) With the trim-pot knob facing you, pin 1 should be to the left side. Solder a wire from this pin on each trimmer, to a ground trace on the motherboard.

* l) Connect the free end of the bypass capacitor to the center pin of the trimmer (one capacitor to each trimmer).

* m) Connect the shields of the audio cables to the provided solder lugs on each RCA connector, and the center conductor of the free terminal of each trimmer.

n) Connect the center conductor of the free end of the audio cable which is connected to the left RCA jack/trimmer/cap to pin-37 of the OLD POKEY.

o) Connect the center conductor of the free end of the audio cable which is connected to the right RCA jack/trimmer/cap to pin-37 of the NEW POKEY.

p) The shield of the audio cable on the POKEY end, should be cut and taped (or heat shrinked) so that it does not touch anything.
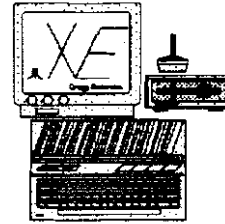
q) Run a 18-20 AWG wire from the ground lug of the RCA jacks to the wide ground area on the motherboard. This normally makes contact with the shield box that covers the motherboard.

r) You will now be able to connect the two RCA cables to an AUX (or Tape) level input of a stereo or boom box.

* s) I would suggest centering the trimmers in their travel, and adjusting them as needed to get the best clarity. You may want to glue the trimmers to the back of the cabinet to keep them from moving around.

* NOTE: Optional steps. On my system the POKEY outputs worked fine without the trimmers. So I just connected the bypass capacitor on each RCA jack to the appropriate audio cable center conductor. This was driving an AUX 350mV input of a Pioneer SPEC-1 preamplifier.

POKEY Registers

I will only elaborate on registers used to produce sound in the stereo upgrade. All registers which were in the original POKEY will appear in the second POKEY 16 bytes higher in memory. The extra UART, key scanner and pot scanner could be used for all kinds of neat projects.

Location	Name	R/W	Function	
$D200	AUDF1	W	Audio Channel #1 Frequency	(Divide F/n)
$D201	AUDC1	W	Audio Channel #1 Control	(Vol/Distort)
$D202	AUDF2	W	Audio Channel #2 Frequency	(Divide F/n)
$D203	AUDC2	W	Audio Channel #2 Control	(Vol/Distort)
$D204	AUDF3	W	Audio Channel #3 Frequency	(Divide F/n)
$D205	AUDC3	W	Audio Channel #3 Control	(Vol/Distort)
$D206	AUDF4	W	Audio Channel #4 Frequency	(Divide F/n)
$D207	AUDC4	W	Audio Channel #4 Control	(Vol/Distort)
$D208	AUDCTL	W	Audio control for channels 1-4	
$D20F	SKCTL1	W	Serial Port Control	
$D210	AUDF5	W	Audio Channel #5 Frequency	(Divide F/n)
$D211	AUDC5	W	Audio Channel #5 Control	(Vol/Distort)
$D212	AUDF6	W	Audio Channel #6 Frequency	(Divide F/n)
$D213	AUDC6	W	Audio Channel #6 Control	(Vol/Distort)
$D214	AUDF7	W	Audio Channel #7 Frequency	(Divide F/n)
$D215	AUDC7	W	Audio Channel #7 Control	(Vol/Distort)
$D216	AUDF8	W	Audio Channel #8 Frequency	(Divide F/n)
$D217	AUDC8	W	Audio Channel #8 Control	(Vol/Distort)
$D218	AUDCT2	W	Audio control for channels 5-8	
$D21F	SKCTL2	W	Serial Port Control	

Each Audio Channel Frequency Register is an 8-bit value which is a divisor of the primary frequency.

Each Audio Channel Control Register Controls the Volume and Distortion of each channel. The bits are assigned as follows:

```
76543210
----vvvv   Volume control bits.  Range controls volume as follows:
           0000  lowest volume level
           \/
           1111  highest volume level
---s----   Volume only bit.  Directly controls audio output:
           0 Speaker output is off
           1 Speaker output is on
ddd-----   Distortion code.  Code is assigned as follows:
```

000 5-bit/17-bit poly noise
001 5-bit poly noise
010 5-bit/4-bit poly noise
011 5-bit poly noise
100 17-bit poly noise
101 pure tone
110 4-bit poly noise
111 pure tone

The AUDCTn register controls all channels. There are several functions assigned to this register as follows:

Bit-7 Makes 17-bit poly into 9-bit poly counter
Bit-6 Clock Channel-1 with 1.79 MHz (CPU rate)
Bit-5 Clock Channel-3 with 1.79 MHz (CPU rate)
Bit-4 Join channel 1 and 2 to form 16-bit range
Bit-3 Join channel 3 and 4 to form 16-bit range
Bit-2 Insert filter in channel-1, clocked by channel-2
Bit-1 Insert filter in channel-2, clocked by channel-4
Bit-0 Switch clock base from 64kHz to 15kHz

The SKCTLn register controls various functions of the POKEY device, and only has to be initialized to a value of three to assure all four channels of POKEY are active.

NOTE: To detect if the upgrade is installed, look at the 8 extra pots, they will be all zero. Also the key code register will be also zero. If you compare the keycode at $D209 with that of $D219, and $D219 is zero, the upgrade is installed. You may want to mask IRQ's during the test for safety.

Chuck Steinman is president of the Mid-Ohio Atari User Group and is the developer of DataQue's Turbo-816 hardware upgrade for Atari 8-bit computers. Here's how you can reach Chuck via modem if you have any questions about GUMBY or the Turbo-816: GEnie: DataQue.1 CIS: 71777,3223 BBS: (419) 529-5197, 300/1200bps, 24 hours

CHOOSING A LANGUAGE

CPU/STR InfoFile? An interesting list...

Selecting a Programming Language Made Easy

Daniel Solomon & David Rosenblueth

Department of Computer Science, University of Waterloo

Waterloo, Ontario, Canada N2L 3G1

With such a large selection of programming languages, it can be difficult to choose one for a particular project. Reading the manuals to evaluate the languages is a time-consuming process.

On the other hand, most people already have a fairly good idea of how various automobiles compare. So in order to assist those trying to choose a language, we have prepared a chart that matches programming languages with comparable automobiles:

Assembler – A Formula I race car. Very fast, but difficult to drive and expensive to maintain.

FORTRAN II – A Model T Ford. Once it was king of the road.

FORTRAN IV – A Model A Ford.

FORTRAN 77 – A six-cylinder Ford Fairlane with standard transmission and no seat belts.

COBOL – A delivery van. It's bulky and ugly, but it does the work.

BASIC – A second-hand Rambler with a rebuilt engine and patched upholstery. Your dad bought it for you to learn to drive. You'll ditch the car as soon as you can afford a new one.   ☞

PL/I - A Cadillac convertible with automatic transmission, a two-tone paint job, white-wall tires, chrome exhaust pipes, and fuzzy dice hanging in the windshield

C - A black Firebird, the all-macho car. Comes with optional seat belts (lint) and optional fuzz buster (escape to assembler).

ALGOL 60 - An Austin Mini. Boy, that's a small car.

Pascal - A Volkswagon Beetle. It's small but sturdy. Was once popular with intellectuals.

Modula II - A Volkswagon Rabbit with a trailer hitch.

ALGOL 68 - An Astin Martin. An impressive car, but not just anyone can drive it.

LISP - An electric car. It's simple but slow. Seat belts are not available.

PROLOG/LUCID - Prototype concept-cars.

Maple/MACSYMA - All-terrain vehicles.

FORTH - A go-cart.

LOGO - A kiddie's replica of a Rolls Royce. Comes with a real engine and a working horn.

APL - A double-decker bus. Its takes rows and columns of passengers to the same place all at the same time. But, it drives only in reverse gear, and is instrumented in Greek.

Ada - An army-green Mercedes-Benz staff car. Power steering, power brakes and automatic transmission are all standard. No other colors or options are available. If it's good enough for the generals, it's good enough for you.

Manufacturing delays due to difficulties reading the design specifications are starting to clear up.

There's a lot of truth to this list. I thought everyone might enjoy it since we seem to be spending so much time comparing programming languages.

Doc Holiday...

THE CASIO BOSS VS. THE PORTFOLIO

by Jerry Morton

During coverage of the Winter CES show, CNN briefly spotlighted the new Atari Portfolio and the new Casio BOSS. They referred to both of them as "pocket mini-computers."

The Casio BOSS is being advertised as if it WERE an actual "pocket mini-computer," but this isn't really the case. The ads read: "64KB memory (more than the original IBM PC!)...", which is true, but somewhat misleading, because the BOSS isn't really a "true" computer.

Here is a comparison of the two items, both of which I recently had the pleasure of trying out.

Size: The Portfolio is approximately the size of a VHS video tape. The BOSS is slightly smaller and thinner.

Weight: I don't have the weight of the units on hand, but both are very light (we're not dealing with Mac portables, here).

Built-in software: The BOSS comes with a telephone & business card directory, a memo storage program, a calendar, and a time converter (find out what time it is in Tokyo, for example). The Portfolio comes with the Lotus Spreadsheet, an appointment calendar with alarm, a text editor, and a database. Both units can also be used as a calculator. (An EXPENSIVE calculator!)

Display: The Portfolio and the BOSS have similar backlit LCD display screens. Again, I don't have the exact numbers, but I would estimate that the screens are approximately 3.5" long by 1.75" wide. Surprisingly, they are both quite easy to read, albeit with a very limited text display. The BOSS has a 32x6 display field, but I'm not sure of the exact field on the Portfolio. It appeared to be about the same, however, give or take a character or a line. (YES, I was supplied with excellent documentation for the BOSS, and very little for the Portfolio. Still, I should've taken more notes!)

Keyboard: The BOSS has a "flat" keyboard similar to the Atari 400, while the Portfolio has a small, typewriter style keyboard. It is more chiclet in nature than typewriter style, but the overall feel was surprisingly not that much different from typing on ANY keyboard with a tight layout. I was impressed.

☞

Data Transfer: The BOSS can exchange data with any PC or compatible using the optional PC-link package. A Mac link is planned. The Portfolio can transfer exchange data with any PC or compatible using an optional package. It can also do the same with the ST with a similar package.

Data Storage: The BOSS uses built-in memory for data storage. The Portfolio uses SRAM cards. You an also buy SRAM card drives for PC's or compatibles for more efficient data exchange and storage. These cards can be used to import commercial software, or used as a no-frills disk drive. The best way to understand SRAM cards is to picture dynamic RAM chips that don't"forget" when you power down. The absence of a 3.5" drive saves space, and is really the only true shortcoming of the Portfolio.

Software Compatibility: The BOSS can only run the software which is included with it. The Portfolio can run any adapted MS-DOS software made available on (or transferred to) SRAM card. The Portfolio will run most small PC applications without modifications, but Atari insists on the use of the word "adapted". Apparently, they've found a few quirks... Regardless, the Portfolio would probably deliver excellent performance on PCjr-specific titles (which can often be found in discount bins). Besides, you can always take the computer with you to the store (in your coat pocket, even) to make sure it works!

Price: The BOSS sells for approx. $225, while the Portfolio sells for approx. $399.

So, as you can see, the BOSS isn't a "true" computer. While it can exchange data with PC's, it cannot run MS-DOS software; in fact it can't run any software except what is built in. The Portfolio, on the other hand, has an 80C88 cpu and can run adapted PC software.

Both units can be used as pocket-diaries, but the Portfolio is the only "pocket mini-computer" of the two.

You can order the Casio BOSS (Casio model number SF-7500) by dialing (201)-361-5400. The Portfolio is available through Atari's Portfolio hotline, 1-800-443-8020.

BetaZine 2/12/90, Issue #5

"BATTLE OF BRITAIN" BY LUCASFILMS

Game Review By Paul Varn

Those familiar with the Lucasfilm game Battlehawks, will have a good idea what this WW II re-creation is like. Based on the battle for conquest of the sky over southern England early in the war, German and British forces are represented by the most famous and numerous craft used in that battle. Again, historical and mechanical detail are given minute attention with several added in addition to those in Battlehawks.

First, there are more types of craft with custom gauges and controls for each type of craft. In addition to the flight characteristics and armament for each, you have to learn the instrumentation that is unique to the aircraft. For the RAF, there is the Spitfire and Hurricane fighters which did 95% of the fighting for the British during that battle. The German forces are represented by six craft and their variations. One of the treats here is that three of them are medium bombers that have multiple gun turrets. You can toggle between these guns while your plane is in auto-pilot and take pot shots at the attacking fighters. Or, place any or all of the turrets in auto-fire so you can concentrate on piloting or bombing (with appropriate level bombsight included of course). Affects such as flack, explosions, and air frame hits are even more detailed than before, enhancing the realism.
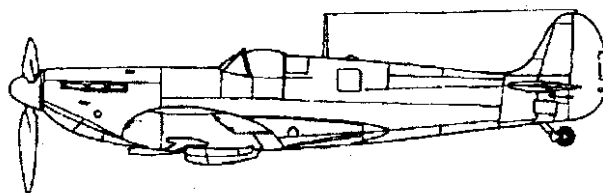
The 3-D camera re-play feature is retained and enhanced with full control given over to the mouse and well placed, implemented icon controls. I have to give the programmer extra credit as this kind of interface has been the failing of many would-be good games, but works very well here. Dramatic "films" can be saved to disk and played at will, even on other machines.

☞

LIAUG 1991 Meeting Dates

Jan 5	July 6
Feb 2	Aug 3
Mar 2	Sept 7
Apr 6	Oct 5
May 4	Nov 2
June 1	Dec 7

NEW
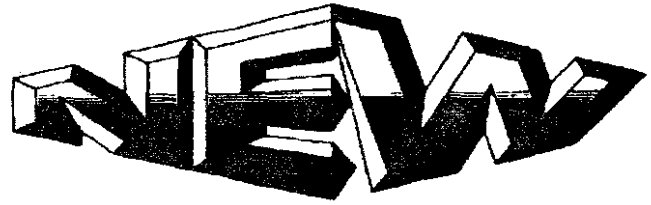
☆ **16 bit Public Domain and** ☆
Shareware software

Check with the ST Librarian for new PD and Shareware programs in the club library.

ANNOUNCING

☆ **8 bit Public Domain Disks** ☆

Please see our 8-bit librarian, George Leek, for the latest listing of PD disks. We are constantly adding new items to the library.

Check with our 8-bit librarian for new PD disks in the club library.

Check it out: 8 bit disks $2.00

16 bit disks $3.00
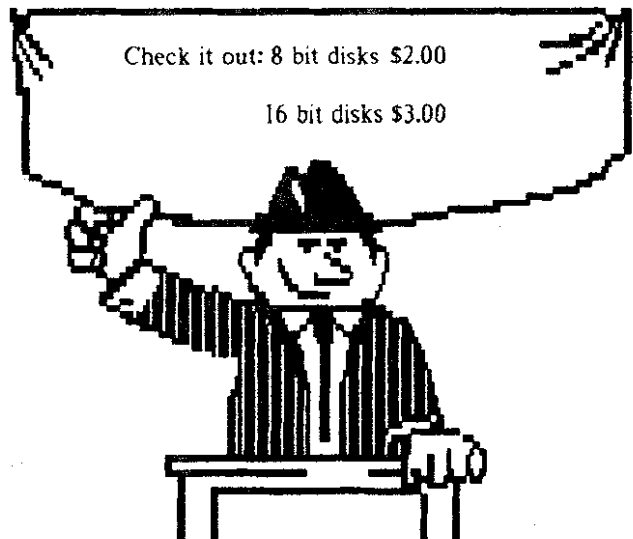
GAME PLAY

There are four basic modes of play. Pre-programmed historical situations re-enact a particular battle. There are many to choose from. There are also non-destructive training scenarios. The meat of the game is in the campaign area. Here, using a map of the region you re-create the whole three to four month conflict and try to duplicate the successes and correct the historical errors. As a guide, the nearly 200 page manual is half devoted to an entertaining overview packed with photos, quotes, and eye witness accounts. In addition, you can create your own battles with a builder program that puts every detail at your control. This may be a creative way for friends to challenge one another and provide increased variety (of which there is no lack).

An aspect of role playing exists as well. You create pilots and crews which you select for the various planes in the group you are flying with. Not only the pilot/crew in your plane, but theothers you've chosen for the planes flying with you benefit (and possibly advance) from current mission successes. As these crews gain experience and promotion, they can be relied on to fulfill combat objectives (and are missed more when lost to enemy action).

Air and ground targets abound which include radar, factories, airfields, ships, and more. Some missions may involve ground strikes and escort for bombers. You can direct the flight paths of the craft from take-off, mission objective, to landing by setting up way points that include altitude. Up to four mission objectives can be pursued simultaneously. In the campaign game, other similar targets are attacked by friendly aircraft who's success is dependant upon yours. A successful mission will not only promote the surviving pilot crews but inflict damage far beyond what your one strike would.

INTERFACE AND DISKS

As in Battlehawks, complex action can greatly reduce the scrolling smoothness and response. Possibly even more so here. A useful addition is the ability to select the amount of

ground detail (which really isn't much to begin with) and speed things up when the going gets real rough. Mouse and joystick are implemented. I liked the mouse better although like most games of this kind, it's a little too sensitive. The joystick is way too sluggish. The manual mentions a joystick adjustment feature which doesn't seem to exist in the European ST version I own. The controls are easy to learn and most are identical to Battlehawks. Unlike Battlehawks, take off and landing is implemented adding realism although not always necessary to accomplish for successful game play.

The game comes on two double-sided disks labeled 1,2 and 3,4 respectively. They are not copy protected and will install on hard drives. When played from floppies, (as I have to do) swapping disks is frequent and tedious (not to mention SLOW WWW). In addition, the file search and sorting routines associated with pilot/crew management cause up to 30 second additional delays when there are more than 15 or so created. A possible solution for floppy users might be to keep smaller numbers of pilots on separate disks.

GRAPHICS AND FINAL COMMENTS

Again, as in Battlehawks, the aircraft images (I assume digitized from photos of models) are superb. Computer adversaries are intelligent and crafty, the battles fast and furious. Time can be accelerated to absorb lapsing moments. Alternate views containing your own aircraft details are held in ram but may take up to 4 seconds to display which has caused some impatience for me.

Price at the time of this writing hovers around the $50 markwhich now seems typical for the current run of the highest quality simulation games. Although I tend to view this as getting close to the limit of what I'm willing to pay for games, this one has done well to justify its cost with authentic detail, intelligent adversaries, variety, and excellent manual. There is a protection code wheel that is better done than others I've seen and is cleverly integrated into the game design. Better yet, unlike Battlehawks, you are most likely to have to enter the code only once during play.

If historical air combat simulation appeals to you, this game packs a lot of entertainment power.

Re-print without permission is granted 11/29/90
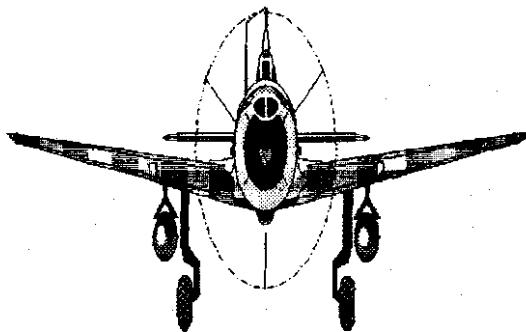
DRAW — A Screen Drawing Program in GFA BASIC, Part I

Ed Smith (SPACE)

For those just learning GFA BASIC, DRAW is a simple program that makes use of the mouse movement and mouse buttons. As the mouse is moved and the left mouse button is pressed, a thin line is drawn on the screen using the color value selected by clicking on the desired color box displayed at the top of the screen. In low resolution, up to 16 colors may be selected. To exit the program,press the right button.

Some techniques of programming included are:

A one dimensional array X%(16) is used to store X% (% means integer in GFA BASIC) locations on the TV screen of the 16 color boxes.

Constants W%, H% and D% define the width and height of the boxes and the distance between boxes.

A FOR NEXT loop is used to plot the boxes. Within this loop, the X%() array is filled so that, for each color, the box xy location is known.

The DO LOOP is the main part of the program. This loop is constantly incrementing I% from 0 to 15 and back to 0, etc. For each value of I%, the color box coordinate Xa% is pulled from the X%() array.

Mouse data X%, Y% and K% (mouse pointer location and button press info) are obtained from GFA BASIC's MouseX, MouseY and MouseK instructions.

The first IF statement determines if the mouse pointer falls within any of the sixteen color boxes and if a left mouse button was pressed. If so, a new color value C% is obtained from the GFA Point(x%,y%) instruction.

The second IF instruction states that if a left mouse button is pressed and the mouse pointer is located below the color boxes,then plot a color pixel using the GFA BASIC Plot X%,Y% in color C%.

Finally, the GFA EXIT instruction permits exiting to the desktop if K%=2, meaning the right mouse button, was pressed.

The listing of the program appear below. The program will run in any resolution, but is best used in low resolution. This short program does not permit saving screens to disk or varying brush size. In upcoming issues of AIM, we'll add these features to DRAW.

After running this program or compiling and doubleclicking DRAW.PRG (or whatever you decide to call it), you will notice only 15 color boxes appear on screen. Don't be fooled. The sixteenth box is to the left of the leftmost block — in the same color as the background. This color may be used to erase other colors, if you wish.

That's all folks.

```
' Drawing program using mouse and mouse buttons

' by E.C. Smith June 23, 1989 for S.P.A.C.E ST SIG

'

Dim X%(16) ! Array to hold x coordinates of the color boxesdisplayed

Print "DRAW.PRG - Left btn to draw, Rt btn to exit"

W%=10 ! width of color box

H%=10 ! height of color box

D%=8 ! distance between boxes

X1%=19 ! leftmost box position

Y1%=11 ! distance from top of screen

For I%=0 To 15 ! This FOR NEXT loop

X%=X1%+(W%+D%)*I% ! plots 16 color

X%(I%)=X% ! boxes across

Color I% ! the upper portion

Deffill I% ! of the screen.

Pbox X%,Y1%,X%+W%,Y1%+H%

Next I%
```

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WACO	TBA
BASIC	718-833-0828

Do ! DO loop to look for left or right mouse buttonpress

Inc I% ! increment to next color box

If I%>15 ! Only 16 boxes possible (0 to 15)

I%=0

Endif

Xa%=X%(I%) ! Get X% location of color box

Ya%=Y1%

K%=Mousek ! Look for press of mouse button

X%=Mousex ! Get location of

Y%=Mousey ! mouse on screen

If X%>Xa% And X%<Xa%+W% And Y%<Ya%+H% And Y%>Ya% And K%=1

C%=Point(X%,Y%) ! Color box was clicked on, get color value

Endif

If K%=1 And Y%>Y1%+H% ! Left button pressed and pointer not inboxes

Color C% ! Set color held in C% and

Plot X%,Y% ! plot at location X%,Y%

Endif

Exit If K%=2 ! Exit by pressing right button

Loop

End

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The Long Island ATARI Users Group

Long Island Atari User Group

To apply for LIAUG membership fill out the following application and bring it to the next meeting, or mail it (including check or money order) to:

The Long Island ATARI User Group
P.O. Box 92
Islip, New York 11751

The current dues, which includes a subscription to our newsletter, is $20 per year. Kindly make your check payable to The Long Island Atari User Group.

First name: _____ Last name: _____

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Your system (please be specific):

Computer: 400   600   800   800XL   65   130   520   1040   MEGA

Memory: _____ K   Cassette: _____   Disk drives _____
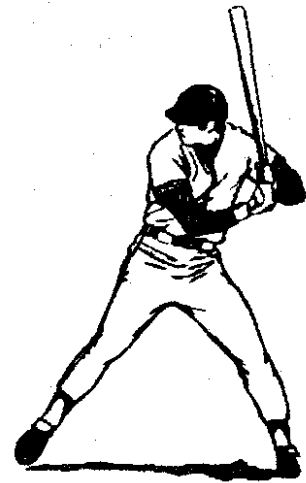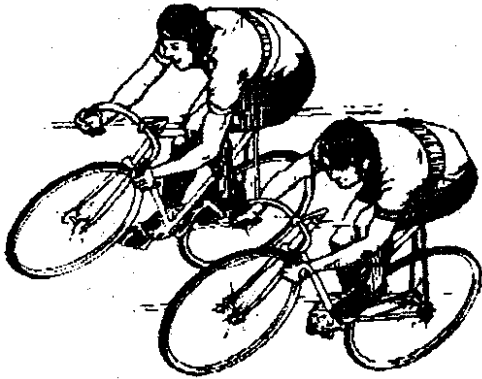
Modem: _____   Interface: _____   Printer: _____

Other _____

What languages are you familiar with? _____

_____

In what areas would you like to learn more about your computer system? _____

_____

SUMMER is a time for outdoor sports, suntans and lazy days. But you don't have to give up your computer. The Long Island Atari User Group meets every month and you are welcome to join us. The next meeting is July 6, 1991.

The LIAUG Lighthouse
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Margaret Mitchell
Margaret Mitchell

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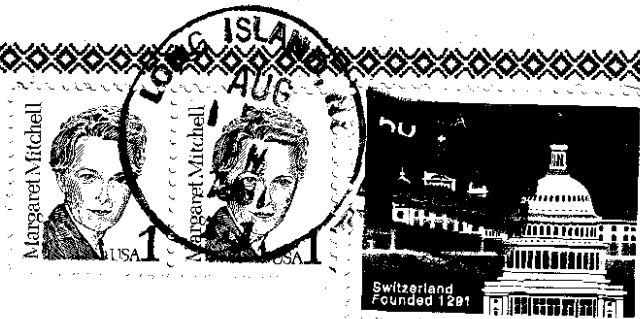
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