

Dallas Atari Computer Enthusiasts

February, 1988

Volume 9, Issue 2

NEWS!

PRODUCT
INFORMATION!

QUICK
FIXES!

FRACTAL PICTURES - A TYPE-IN PROGRAM FOR THE 8-BIT!

TABLE OF CONTENTS

President's Perspective	2
VP Comm's Report	2
DAL-ACE Vice	3
From the Editor's Desk	3
Catalog Announcement	3
Volunteers Needed	4
OMNI Features Dal-Acers' Company	4
Ask Our Experts	5
April Fund Raiser	5
Build Your Own Replacement XL/XE Power Supply	6
Silicon Spelunking: Using MIDI Ports for I/O	8
Chartpak: ST Review	10
SpeedKing: 8-Bit Review	10
ST SIG Announcement	10
Squeezings: Magic Sac Update	12
Down With the 8-Bit Wave: Beating TV Interference	13
Thus Quoth Atari	13
I Was a Teenage SysOp	15
Current Events Calendar	16
Fractal Pictures	18

upcoming activities both during and outside the monthly meetings. There will be alot of really great things coming your way in the club libraries and SIGs. I am looking into the possibility of bringing back the software reviews that we used to have where you, as members, will have the opportunity to review copyrighted material. You will be seeing reviews on our own Public Domain software and who knows, that program you've been looking for just might be in our own library. I hope to see an increase in membership activity soon and that means more people and more fun.

Now I want to say a few words to my friends. I would like to thank each and every one of you for the contributions you have made to the club. I would like to give special thanks to those of you who have made specific contributions such as volunteering to coordinate activities and special functions for the club. I want you all to please feel free to call on me or any other board member if you need to. But let's not forget about your fellow club members. Feel free to stand up at the meeting and ask about that piece of software or hardware your having trouble with. If you find a program that you really like, tell us about it. Stand up and tell everyone about that program you're trying to write and see if anyone can help. Each member is there for the other in a way. It really gives a person a good feeling to know they've helped someone or that someone took the time to help them. Give it a try. I think you'll be pleased with the results.

Well, I guess its time to get off y'all's backs now. I'll see you all at the meeting on Feburary 20th but untill then, take care.

PRESIDENT'S PERSPECTIVE

By Donny Arnold

Hello again everyone. I would like to start off by talking a little about the January meeting. As you may know, for most of us board members it was our first public appearance as board members. I believe there was just a touch of nervousness between us. I was a little nervous anyway. I want to thank all of you for making us feel so welcomed.

Over all, I think the meeting went pretty well. Disk sales were up. Membership activity was up, and member activity seemed to be up.

It has come to my attention that there might have been a little too much negativity in our presentation to you guys. This is probably true. There were quite of few club needs that had to be brought up. No one likes to hear about problem areas but there are times when they must. Please don't hold this against us though. We don't plan on holding every meeting in the same manner. I can assure you that future meetings will be held on a more positive note.

Now lets talk a little about future meetings. You'll be hearing alot of really great reports about

VP COMM'S REPORT

By Rachel Duke

It's hard to believe that it's this time of the month again. Yep, it's newsletter time again.

I hope a good many of you took my advice and logged onto the club's BBS. It's still going--getting better all the time. Also, SIG 14 has been set aside for the newsletter SIG. So, don't forget to post any articles or comments.

Both disk libraries are running smoothly and growing every month. Be sure to check with the disk librarians for the new disk(s) of the month. **SUPPORT YOUR CLUB--BUY CLUB DISKS!**

The quality of the newsletter is better than ever. Angela is doing a great job for her second issue. I'd like to thank all those members that wrote an article for last month's issue. And, as always, we welcome and are looking for any submissions.

Don't forget this month's meeting on February 20th and next month's on March 12. See ya then!

Dal-Ace Vice by Joe Gamblin

I thought the January 16th meeting went great! Some said it was a little boring, but for the first meeting of the year, with all the new business to take care of, it wasn't bad.

The ST library sales were definitely up and that's good news.

The ST disks in our library for February are really exciting!

Disk 99: Mark Johnson's 'C' compiler version 1.2b. We need someone to use and review this one for a future newsletter.

Disk 100: Mr. Packy... PACMAN for your ST is here! Hot Shot 1.8, the newest version of a GEM checkers game that looks and plays well.

Disk 101: Vanterm, a PD telecommunications program. Arcshell 1.6, the most recent ARC.TTP shell. ARC.TTP. PicSwitch 0.7, the most recent picture viewer works in monochrome too! DCFormatter.ACC, a popular DCFormatter program in desk accessory form. ver.1.1.

Disk 102: Slaygon Demo, a 3-D graphic arcade adventure. Leatherneck Demo, a Soldier/Combat arcade game. Both are from MICHTRON\MICRODEAL and look great!

Disk 103: Tanglewood Demo, a graphic arcade adventure game. This one is verrrry interesting with a lot of graphics and locations to visit.

Disks 102 and 103 need double sided drive and color.

Disk 104: Easy-Draw SuperCharger Demo, a slideshow of tiny pictures demonstrating SuperCharger's capabilities.

Disk 105: AIM Atari Image Manager 2.3, the newest version of AIM with some powerful new features. Allows 4 picture processing windows now instead of 2. The help screens are a bit more "helpful" now but still very brief. You can import DEGAS and NEOCHROME pictures in this version also.

****This program definitely deserves a full review as soon as possible. It's extremely well done.****

That's it for February. Contact me regarding anything to do with the ST library or MIDI or Dal-Ace and I will surely try to help.

Joe

FROM THE EDITOR'S DESK By Angela Burns

Well, first thing I guess I should do is apologize for the state of last month's newsletter. I know there were a lot of typos, and they were ALL my fault. What did it was what I call the Great Crash of '87, and it was bigger than the one in the stock market. I was about two-thirds of the way through with the newsletter, when everything on the disk fried. I had to start over, because I was too stupid to have a backup of work in progress. I typed for three days straight and finally got it finished, but by that time I wasn't exactly a world class proofreader. The drive problem has now been corrected, and I have learned my lesson about frequent backups, so the whole mess should not repeat itself. Your newsletter will once again be of the high quality that you deserve.

Secondly, I'm going to have to move the newsletter submission deadline up AGAIN. It turns out that we have to have the masters at the printer sooner than we can now, if we want to mail them out for you to receive before the next meeting. All articles will now have to be in by THE DAY AFTER THE MEETING. (They can be turned in at the meeting or uploaded to the board later, as long as I get them BY SUNDAY NIGHT.) I'm confident that you will all help me out on this.

I won't be with you at the meeting this month. Since the baby's due around Feb. 21, I think I should stick close to home. But I will still be available for any problems, ideas, and especially ARTICLES that you have. My phone number is on the back page (sorry, couldn't get a metro line) and I'll be on the BBS. So keep in touch!

Lastly, thanks to everyone who expressed their support and appreciation for my job as editor. I love this job, all of it - even the typing! But my favorite part is getting to see you all at the meetings, chat on the BBS, and get your feelings about the club, the newsletter, and life in general. You are what makes the job fun, and it's I who should be thanking YOU! So, thanks.

That's all for now. Until March, live long and program!

8-BIT DISK CATALOGS ON SALE NOW!

The catalogs for the 8-bit public domain disk library are once again available for sale. We have switched to a loose-leaf format to make updating your disk catalog easier for you. All you need do is purchase additional pages and tack them to the end of your existing catalog. The price is \$4.00 for members and \$5.00 for non-members, which includes a nice binder. Additional pages are twenty cents (\$0.20) each.

VOLUNTEERS STILL NEEDED!

There are still some jobs that need to be done that no one is doing. None of these volunteer positions is difficult or very time consuming, and we'd like to see some people stepping forward to help out. Positions that need to be filled are as follows:

ADVERTISING MANAGER

Being ad manager involves just making a few calls and/ or writing a few short letters to potential clients to solicit advertising for the newsletter, getting the ads to the editor by the deadline, and turning over the checks to the treasurer.

KIOSK PEOPLE

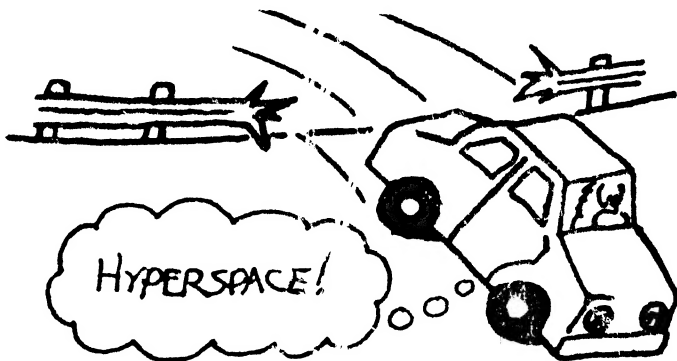
We need four volunteers per month to sit at the Dal-Ace kiosk in the Infomart lobby for 30 minutes each on meeting day. You will answer questions about the club and/or refer them upstairs to whomever can help them.

ST SIG LEADER

We need a SIG leader for the ST users' meeting at Computer Discoveries on the second Tuesday after each main meeting. All that's required is an interest in ST stuff in general.

You would be surprised at what a good feeling you can get from volunteering to do *one teensy-weensy little job* for Dal-Ace. Try it. You'll like it.

I  MY ATARI



SAM MISTAKENLY ASSUMED THAT HIS VIDEO GAME SKILLS HAD SOME PRACTICAL APPLICATION...

OMNI FEATURES DAL-ACERS' COMPANY

Congratulations to our own Jim Chaney and John Henderson, the driving forces behind DISK PUBLICATIONS, INC. Their product, THE NEW ALADDIN, was featured in the Star Tech section of the January, 1988 OMNI magazine.

As you no doubt already know, THE NEW ALADDIN is an interactive magazine-on-a-disk. It was demoed for us at the DISK PUBLICATIONS booth at last May's AtariFest, and I must say it was very impressive! It features scrolling menus from which you may select stories, interviews, news, animated graphics, games, and other magazine-type stuff.

Available for the 8-bit and ST lines of computers, as well as several other brands which shall here remain nameless, THE NEW ALADDIN is one of the best and most entertaining products around for the Atari.

Good for you, Jim and John!

Z-PORT™

Terrific Corp is pleased to offer this special offer on Z-PORT just to user groups.

Z-PORT is a 24 line digital I/O device for the Atari ST line of computers. Connecting thru the Cartridge port is an access and send information at extremely high speeds. The heart of the Z-PORT is a programmable I/O chip which has a total of 24 digital TTL lines. These lines are arranged in 3 groups of 8 lines. VIA software control these 8 lines can be defined as either input or output. The ports are latched for both output and input so constant updating via software is not necessary.

Z-PORT is programmed under the control of a software shell for Megamax C (tm) all source code and documentation is given for development. Under the control of the user the software can be easily made to "fit" practically any user requirements in the realm of A/D converters, relay controls, monitoring equipment and a variety of other I/O applications.

Z-PORT physically connects to the outside world by a 26 pin ribbon cable. All 24 I/O lines are available as well as +5 volts and ground so additional self-contained interfaces can be attached without any extra power supply.

Regular Retail price \$149.95

Special User group price \$89.95

For further information contact:

Terrific Corp 17 St. Mary's Ct. Brookline, MA 02146
(617) 232-2317

Ask Our Experts

Dal-Ace now has a panel of experts available to answer your computing questions. Whatever you're having trouble with, one of these people is around to help you with it. Current experts are listed below with their phone numbers, hours convenient to call (for those who expressed a preference), and computing specialties, if any.

Donny Arnold 240-4966 call before 10 p.m.
8-Bit general knowledge

Joe Camblin 221-7825 call from noon to 2 a.m.
MIDI & desktop publishing

Larry Dineen (817)668-7296 ... call during day
ST general knowledge

James Duke 404-8569
BBS, ST programming

Eb Foerster 357-7602 call from 7 to 10 p.m.
Turbo BASIC, SynFile, SynCalc, and Assembly language

Ron King 283-0674 call from 5 to 10 p.m.
8-Bit Hardware

John Saunders (817)566-0318
C and Assembler languages

Michael Trombley 429-6134
8-Bit general knowledge

Ralph Tenny ... 235-4035 call from 7 to 10 p.m.
ST general knowledge and hardware

Rene Tucker 223-6176
8-Bit general knowledge

Wally Wilinsky 506-0352 call from 6 to 10 p.m.
MIDI

John Winer 907-1348
Systems programming and general knowledge

DON'T MISS OUR APRIL FUND RAISER!

Dal-Ace could use a boost right now in the old bankroll, so we need your cooperation.

We plan to have an auction at our April meeting, so bring all your hardware and software goodies to donate to the cause.

Bring your wallet, as well, because there are sure to be bargains galore.

Make the News

HEADLINES

THE PUBLICATION OF DEDICATED EASY-DRAW USERS • VOLUME 1 • ISSUE 1



NEW Bundled Version!
Easy-Draw and Supercharger...\$149.95

What the new Easy-Draw Supercharger can do! The photograph was scanned into Easy-Draw and printed at 300 DPI on the HP Series II laser printer.

New Supercharger Adds PIZZAZ to all Your Pages!

The answer to your Desktop Publishing needs is here: the Easy-Draw Supercharger! The Supercharger lets you load scanned images PLUS all or part of your favorite bit-mapped picture too. Instantly, you'll have access to hundreds of images that may be used for news-

letters, flyers, ads and more! With the Supercharger, you won't be limited to screen resolution images. Using resolution independent image files, the Supercharger allows you to preview scanned images on color or monochrome screens and then print out at a much higher resolution.

Continued on page 4

with Easy-Draw!

Create professional-looking newsletters, flyers, ads, brochures, company reports, forms, technical illustrations, and more with Easy-Draw® by Migraph!

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Font Pack #1—Contains 2 fonts: Rocky and HiTech (9 pin only) \$39.95

Personal Draw Art—Has over 150 predrawn images incl. borders, vehicles, symbols \$29.95

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24-Pin Driver—For use with NEC P, Star NB and Epson LQ printers, incl. Swiss font \$19.95

HP Laserjet Plus Driver: 150 & 300 DPI drivers Plus the Swiss fonts. Works with Series II ... \$39.95

Current Easy-Draw owners may purchase the Supercharger from Migraph only. Call for details.



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For more info or to order call:
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BUILDING A REPLACEMENT XL/XE POWER SUPPLY

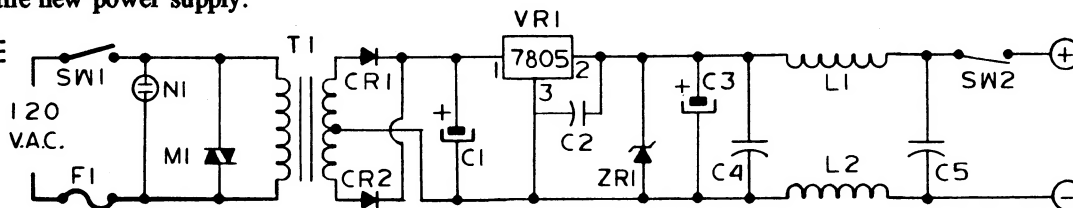
By Don Neff (MACE)

Reprinted from the Michigan Atari Magazine, 12/87

THE PROJECT

Some time ago, I wrote an article describing how to troubleshoot and repair your Atari power supply. At the time that article was written, Atari was using a two-tone (coffee and cream) power supply which was easily disassembled by removing four screws. As soon as the article was published, Atari switched to a black, sealed power supply which was not repairable. To make matters even worse, this new power supply has a higher failure rate than the old, two-tone power supply. This article provides you with the information you need to build a new power supply for your XL or XE. Figure 1 shows the schematic circuit of the new power supply.

FIGURE ONE



CONSTRUCTION

Resist the temptation to use a printed circuit board, and instead, use point-to-point wiring on the mounting lugs to construct this circuit. Begin by marking and drilling all the holes for the mounting screws, cords, and switches. Next, mount the transformer at the rear of the box with two 4-40x1/4 machine screws and nuts. Install the lug tie strips in convenient locations in the remaining space by using one 4-40x1/4 machine screw and nut for each strip. VR1 must be attached to the side of the box using a 4-40x1/4 machine screw and nut. Gently bend the legs of VR1 away from the metal of the box to avoid the possibility of shorts. Now, construct the circuit as shown in Figure 1. Pay special attention to the polarity of capacitors C1 and C3; diodes CR1, CR2, and ZR1; and the leg numbering sequence of VR1 (see Figure 2). C2 should be attached directly to legs 2 and 3 of VR1. The leads of C2 should be as short as possible.

If you are replacing an existing Atari power supply, you should cut the two power cords off of it for use on this new power supply. Otherwise, you must buy the plug and cords shown in the parts list. The plug in the list is a five-pin plug which is similar to the Atari seven-pin plug shown in Figure 3.

Unfortunately, this five-pin plug is identical to the Atari video plug for your monitor signal. If you accidentally put the power supply plug in the video jack, you will almost certainly damage your computer when you switch the power on. Therefore, you should label both of these plugs at this time to avoid getting them confused with one another later.

FIGURE TWO



THE ADVANTAGES

The power supply you are going to build will be better than your original from Atari. First, it's easily repaired if a problem develops. Second, it's heavily filtered to help eliminate interference on your monitor screen. Third, it has self-contained surge protection to prevent damaging voltage spikes. Fourth, and of special interest to SySops, the power supply can provide backup power through very short power losses (the type that make your house lights flicker but not go out). Fifth, if someone expresses an interest in it, I can show you how to modify the circuit to provide battery backup power through a lengthy power outage.

Cut the AC plug off of one of the Radio Shack two-wire line cords and replace it with the five-pin plug. Connect one wire to the two pins on one side of the plug and the other wire to the two pins on the opposite side. No connection is made to the fifth pin at the bottom.

Figure 3 shows the reassembled plug as if you are looking at the pins and the wire is extending away in front of you. The wire connected to the pins on your LEFT should be connected to SW2 at the point identified with a "+" in Figure 1. The wire connected to the pins on the RIGHT of Figure 3 should be connected to the junction of L2 and C5. Do not connect this wire to the case or to a ground. Doing so will disable the interference filter.

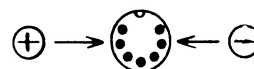


FIGURE THREE

THE CIRCUIT

M1 is a Metal Oxide Varistor (MOV), which provides the surge protection. It works by providing a short circuit to excessive voltages (such as surges). An extended period of high voltage will cause the MOV to fail and become a permanent short circuit to protect your computer. This, in turn, will blow fuse F1 to protect your house wiring. If, in the future, you find that F1 has failed and all replacement fuses also fail quickly, you should suspect that M1 is bad and replace it. NI is a neon pilot light which also contributes slightly to the surge protection.

CR1, CR2, and C1 rectify the AC to DC. Your voltmeter should indicate approximately nine volts DC across C1.

VR1 is a five-volt regulator. VR1 will get hot and must be attached to the metal case to provide a heat sink.

ZR1 is a Zener diode, which provides over-voltage protection in case VR1 fails. Remember that Zener diodes are mounted in reverse polarity compared to standard diodes. If your voltmeter shows less than three volts across C3, you probably have ZR1 installed wrong.

C3 is a five-volt storage capacitor, which acts like a battery. C1 and C3 will keep your computer running through those momentary power outages we mentioned earlier. SySops may want to extend this power backup capability by adding more C1's and C3's.

Just add the additional capacitors in parallel to the ones shown in Figure 1. The more you add, the longer your computer will run without power. But keep in mind that, for the price of several extra capacitors, you could install battery backup instead. C4, C5, L1, and

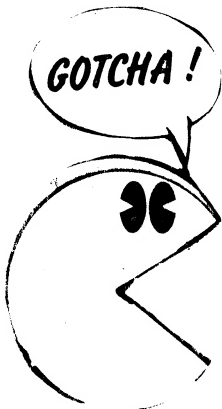
L2 provide filtering to reduce electrical noise. SW2 is an optional momentary switch to provide cold reboots without wear and tear on your console switch.

Reassemble the power supply case, making sure there are no loose wires touching the case metal. Use your voltmeter to check for five volts DC across the plug, with polarity as shown in Figure 3. If everything checks out ok, you can plug this new power supply into your computer and become an Atarian again.

NOTE FROM THE AUTHOR

This article and many of my other Atari service/construction articles are in the public domain. Any user group may reproduce my articles for free. I would appreciate receiving a complimentary copy of your newsletter containing my article. I also welcome your comments and suggestions concerning my Atari articles. You may contact me by writing to:

Don Neff
Michigan Atari Computer Enthusiasts
P.O. Box 2785
Southfield, Michigan 48037.



PARTS LIST

Item	Description	Radio Shack #
C1	4700uF Cap.	272-1022
C20	.1uF Tant.	272-1432
C30	.1F Cap.	276-1440
C4,5	47pF Cap.	272-121
CR12	3 Amp Rect.	276-1141
F11	Amp Fuse	270-1250
L12	100uH Choke	273-102
M1	MOV	276-568
N1	Neon Pilot	272-712
SW1	AC Switch	276-602
SW2	Momentary Sw.	275-619
T1	Transformer	273-1511
VR1	5 Volt Reg.	276-1770
ZR1	Zener Diode	276-561

MISCELLANEOUS

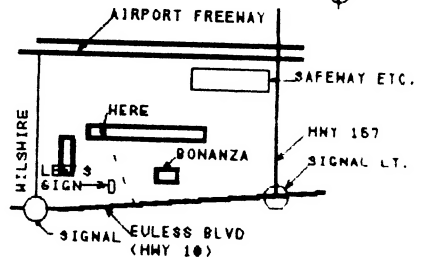
- 5 Lug Strips 274-688
- Case 270-253
- Console Plug 274-003
- Fuse Holder 270-362
- Line Cords 278-1255
- Machine Nuts 64-3018
- Machine Screws 64-3011
- Strain Relief 278-1636

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ST SOFTWARE



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COMPUTER AND PERIPHERAL SERVICE

SILICON SPELUNKING

By Brian Hall (WAUG!)

Reprinted from Michigan Atari Magazine, 12/87

Like a great cave, the ST offers many dark and musty caverns to explore. From the many I/O ports to its graphics and sound, the ST presents us with features and concepts that many programmers may never have had access to before.

We will explore various areas of the ST from a programmer's point of view. All examples will be in MegaMax C (which I highly recommend), but it shouldn't be much work to convert for use with other compilers.

The object is to study various aspects of the machine -- the concepts presented should be applicable to any language. This month's topic: "MIDI, Not Just For Music Any More".

MIDI is a standard that both defines a hardware specification and a software protocol. At the software level, MIDI defines what information can be exchanged and exactly how it can be done. At the hardware level MIDI defines the connectors, cables, and rate and method of transmission. Leaving the discussion of the use of MIDI for MIDI instruments for a later topic, we are going to look at what can be done with the ports as a means of transmitting raw data.

The ST is equipped with two MIDI ports, one labeled "MIDI IN" and one labeled "MIDI OUT". In addition, the MIDI IN port also contains all the lines needed for what is usually a separate port, "MIDI THRU". (You can make use of the "hidden" MIDI THRU feature via the purchase or construction of a "Y" cable.) The nature of separate IN and OUT ports allows you to chain devices -- the very feature that makes the MIDI ports more versatile for multi-device communications than any of the other ports on the ST!

Transmission of data is 8-bit serial (much like RS-232) and occurs at roughly 32.5K baud. And this is where the fun begins. Rather than relegate the MIDI ports to the service of MIDI instruments, you can use the ports for high-speed (relative to RS-232) data transfer. The applications are almost unlimited -- to date I've seen a LAN (local area network) called MIDINET (which is public domain and includes Modula-2 source) and a multi-user game called MIDI-Maze (commercial, from Hybrid Arts). In fact, any application in which you would like two or more devices to talk to each other with a minimum of hassle is perfectly suited for the use of the MIDI ports. Unlike RS-232, you have much less to worry about. The rate of transmission, parity, duplex, and more are already laid out for you. All you need do is get down to the meat of the task and transmit/receive what is necessary.

Since the MIDI ports are considered a device by BIOS, our programming task is greatly reduced. No devices to open or close, no initialization of parity, baud rate, etc. -- just simple I/O. To send a byte out, use

Bconout(3,Byte). To receive a byte, just save the result of Bconin(3). And to round things out, you can see if there is a byte waiting in the input buffer via Bconstat(3).

The example program (monitor.c) shows how all of this goes together in a simple program that monitors the MIDI port. While you could use defines for the functions, I prefer to use code. Defines produce faster code, but I find functions easier to modify, add debugging code to, etc. With a little modification, you could make the program echo data received at the IN port to the OUT port while printing it, and run the program on an ST in the middle of a MIDI-Maze chain of computers. Anyone for a little privileged info?

Suggested Reading:

ATARI ST Intro to MIDI Programming, Abacus book #10. (Good, but includes mistakes and poor programs.)

Synthesizers and Computers, Vol III in the Keyboard Synthesizer Library, Keyboard Magazine. (VERY good. A little dated, but very informative. Includes the full text of the MIDI 1.0 specification.)

MIDI Pinout: (*=ONLY on ST - NOT part of the MIDI 1.0 Standard)

OUT	IN
1 - *THRU Transmit Data	1 - Not Connected
2 - Shield Ground	2 - Not Connected
3 - *THRU Loop Return	3 - Not Connected
4 - OUT Transmit Data	4 - IN Receive
5 - OUT Loop Return	5 - IN Loop Return

(As seen by the ST)

```

3  1
5  4
2

```

```

/*monitor.c - monitor the midi port
** By Brian Hall, Copyright (c)1987
** Created 04/04/87 Updated 04/11/87*/

```

```

#include <osbind.h>
#include <stdio.h>

```

```

#define K_UNDO 0x0061000L
#define MIDI 3
#define CON 2

```

```

/*Return a byte from the MIDI port*/
get_midi()
{
    return Bconin(MIDI)&0xff;
}

```

```

/*Put a byte to MIDI*/
put_midi(byte)
int byte;

```



```

{
  Bconout(MIDI,byte);
}

/*Return logic TRUE if there is a byte waiting for
input*/
midi_status()
{
  return Bconstat(MIDI);
}

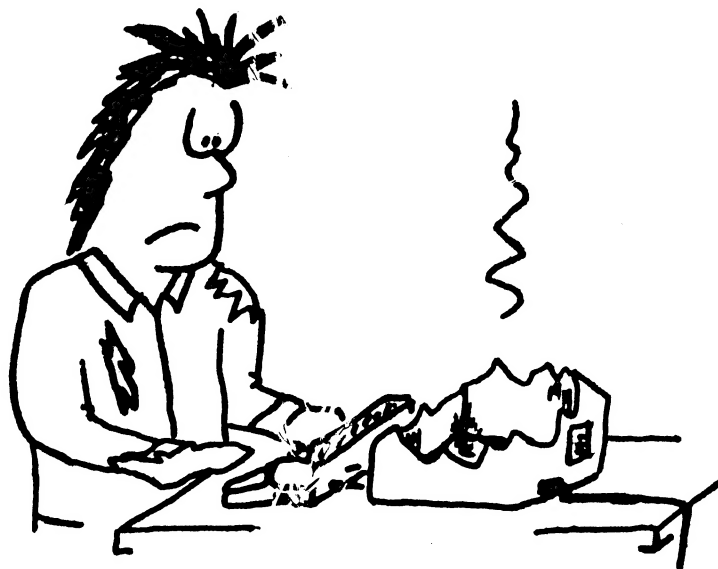
/*Get data from the input buffer (and ignore) until it
clears*/
midi_drain()
{
  while (midi_status())get_midi();
}

main()
{
  int byte;

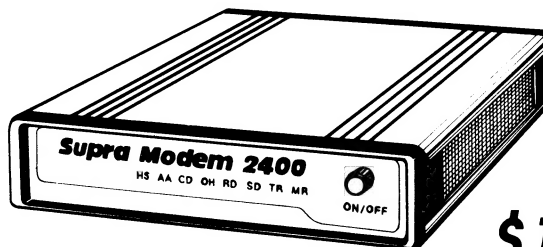
  puts ("MIDI Line Monitor--emucs!bhall--11 Apr 87");
  midi_drain();
  puts("Ready. Press UNDO to exit.\n");
  while (1) { /*An infinite loop*/
    if (Cconis() && Bconin(CON)==K_UNDO) break;
    if (midi_status()!=0) {
      byte=get_midi();
      printf("MIDI sent %02x",byte);
      if (byte<0x80) puts("(Data)");
      else puts("(Status)");
    }
  }
}

```

HENRY THOUGHT: "WELL, IT'S NEVER DONE THAT BEFORE."



SupraModem™ 2400



\$179⁹⁵

- Fully compatible with industry-standard, intelligent "AT" commands
- Asynchronous operation at **300, 1200, and 2400** bps
- Compatible with Bell 103/212A, CCITT V.22, and V.22bis protocols
- Automatic answer/automatic dial (tone or pulse)
- Programmable, nonvolatile memory stores one telephone number and default user configuration profile
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- Attractive, small case
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The SupraModem 2400 has all the features that the "other" brand modem has — but at an affordable price. And we made it inexpensive without cutting corners on features or quality.

Features such as complete support of the industry-standard "AT" command set, autodial/autoanswer, and a full set of indicator lights are standard on the SupraModem 2400. And, as if that weren't enough, we also include

features like the programmable-volume speaker, compatibility with all commonly used protocols, and non-volatile memory that remembers your preferred configuration even after the modem is turned off.

Every SupraModem 2400 comes complete with a power adapter, telephone cable, comprehensive operator's manual, and quick-reference card.

SupraModem 2400ST for Atari ST Computers -- \$219.95

Combines the standard SupraModem package, Omega Terminal communications software, and an RS-232 cable.

SupraModem 2400AT for Atari XL/XE Computers -- \$219.95

Combines the standard SupraModem package, Express communications software, and the SupraVerter interface and cable.

Available at your local dealer, or call us:

 **Supra Corporation**

1133 Commercial Way

Albany, OR 97321

503-967-9075

SQUEEZINGS

By Jack Scoville

Reprinted from the C.I.D.E.R. Press, 12/87

The MAGIC SAC is a unique product developed by David Small of Data Pacific, Inc. Data Pacific has expanded the Magic Sac product line from the three original products (Magic Sac Plus, Translator One, and Magic Printer Driver) to include the new product Magic Sac Professional.

***THE "MAGIC SAC PLUS"** - turns an Atari 520ST or 1040ST into a Macintosh. The original Magic Sac was introduced in April of 1986. It allows you to have access to hundreds of mature Macintosh applications. It retails for \$149.95.

***TRANSLATOR ONE** - turns an Atari disk drive into Macintosh disk drives. The Translator One interface is a "microcomputer-in-a-box" that enhances the performance of the Magic Sac. By itself, the Translator allows Atari disk drives to read and write Apple Macintosh diskettes and to move data between Apple Macintosh, Atari ST, Magic Sac, and IBM PC disk formats. When used with the Magic Sac, the Translator allows Macintosh software to be used with the Atari "right off the shelf". Retail price is now \$279.95.

***MAGIC PRINTER DRIVER** - turns an Atari printer into an Apple Image Writer printer. The Magic Epson Printer Driver is software that is used with the Magic Sac that allows printing on the popular Epson and Epson compatible 9- and 24-pin printers. Retail price is \$45.00.

***MAGIC SAC PROFESSIONAL** - This is really three products in one. It includes: the Magic Sac Plus, Translator One, and Magic Epson Printer Driver. This is a turn-key solution for the user who wants to take Macintosh software "off the shelf" and use it on an ST. In addition, the Professional offers the ability to transfer data between Macintosh, Atari ST, Magic Sac, and IBM PC diskette format! Retail price for this package is \$449.95.

The Magic Sac Professional is the package to use to make an Atari ST completely Macintosh compatible, down to the disk format level. If you want to upgrade to a Mac Plus or SE, or would like to have a machine at home that is compatible with the one at the office, or for use by a start-up company that needs an inexpensive Mac clone, this is the answer. The latest version provides error correction for the Magic Sac, which makes it more fault-tolerant. Mac programs which contain programming mistakes continue running. This package also supports hard disk and multi-megabyte memory configurations. The Magic Sac system is 20% faster than a Macintosh or Mac Plus and equal in speed to an SE. The hard disk is 25% faster than any Mac hard disk. The bigger screen (using the standard Atari monochrome monitor) is 30% larger.

Data Pacific maintains direct customer support by telephone and on-line and is active on BIX, CompuServe, Delphi, and GENie computer networks. Registered owners receive a newsletter containing news, tips, and an updated compatibility list. Software updates are offered at a minimal fee to cover costs of duplication and shipping.

I know that those of you who are interested have some burning questions that have not been answered. The following is a list of answers to many of your questions:

Q. Are the 64K Apple ROMs included in the Magic Sac?

A. The 64K Apple ROMs are not included with this package because of an agreement with Apple. The Magic Sac requires the Apple "64K boot ROMs" Apple p/n 342-0220-A or #342-0220-B and #342-0221-B. I am sure Data Pacific can direct you to a source for the Apple ROMs.

Q. Will the Magic Sac support the new Apple 128 and 256 ROMs?

A. No, because the ROM code will be provided in the Magic Sac software.

Q. What software compatibility can I expect?

A. Data Pacific's rule of thumb is: If the software is compatible with the Macintosh II, written to conform to the Apple Macintosh programming guidelines, and does not access hardware directly, then it is usually compatible with the Magic Sac. (See the software compatibility list at the end of this article.)

Q. Will I have to give up my clock/calendar?

A. NO! The Magic Sac includes a clock/calendar that can be used with GEM (TOS) and Macintosh emulation modes.

Q. Will the Magic Sac support Mac MIDI software?

A. The Magic Sac does not support any MIDI software. Most Mac MIDI software directly accesses the Mac serial chip in order to operate it at special speeds required for MIDI. Unfortunately, the ST's serial chip cannot be easily operated at those required speeds.

Q. Will the Magic Sac support color monitors?

A. The Magic Sac supports the Atari color monitor. However, this monitor is capable of only 200 lines of vertical resolution, and the Mac requires 342 lines of vertical resolution. The Atari "monochrome monitor is recommended.

Q. Will the Magic Sac support hard disks?

A. The Magic Sac supports both Atari and Atari compatible hard disks. The hard disk is formatted with any combination of GEM and Mac software partitions. Up to eight hard disk partitions spread over up to seven hard disks are provided.

CHARTPAK

An ST Review

By Bob Childress

I approach this review of Chartpak for the ST with mixed feelings. It is a powerful and flexible graphics package; however several problems exist in the program that cut down the overall utility of the package.

The package does not come with GDOS, but if GDOS is not present, the package bombs in medium resolution when the "select font" option is chosen. In low res, the program bombs whether or not GDOS is there on "select font" and crashes in various places in general. That out of the way, every other aspect of the program was impressive, and some dazzling displays are easily generated!

First off, the program is not copy-protected, which I consider as the minimum requirement for a serious utility.

Chartpak can handle up to 10 sets of data with each data set limited to 200 points and an overall limit of 1000 points. In addition, it can display 4 sets of data at a time on the screen or one set 4 different ways.

The data is in ASCII format, and the charts can be saved as Degas pictures. Background Degas pictures can also be loaded for an impressive show. Picture blocks can be used, as Chartpak supports a subset of the IFF standard.

Chartpak also supports HPGL for plotters and has a modifiable parameter file to adjust for other plotters. (Default is Houston Instruments PC595/695)

The documentation is very complete and well done and includes several tutorials for different types of charts, and how to import spreadsheet data from Powerledger and other similar products that can output groups of data cells as text.

One of the more powerful features is the math capabilities of Chartpak. Available are methods for Data Reduction, Standard Deviation, Averages and Exponential Smoothing which can be applied to your graphs. The completeness of the package is visible in that the Appendix includes 'C' source code for the specification file formats.

Overall I was very impressed with the power and flexibility of Chartpak. Once I learned where the problem areas were, I was able to work quickly and effectively with the multitude of options available. I hope they have fixed the bugs, but even as is, I would recommend it to data presentation users.

SPEEDKING

An 8-Bit Review By Donny Arnold

SPEEDKING
FROM MASTERTRONICS & SCULPTURED
SOFTWARE
ORIGINAL WRITTEN BY M.J. ESTCOURT
ATARI VERSION BY HAL RUSHTON

If you liked Pole Position, you'll love Speedking. It's a thrilling and intense motorcycle race with eleven different tracks, such as Daytona, West Germany, and Silverstone. You're allowed to slow down and speed up with a push of your joystick button. Shift from first to sixth gear, as well as reduce your speed by downshifting. Lean your bike hard into the corners as you try to stay on the track. Pass the other riders and if you're really good, you can even lap them. Be careful, though; they could lap you. If you wreck, simply pick up your bike and get going again.

You may choose between novice, pro, or champion levels. Race two, four, or six laps or even practice without competition. Remember that Speedking requires you to use joystick port two instead of port one like most games.

I certainly hope you enjoy this action-packed game as much as I have and will continue to.

ST SIG AGENDA

The agenda for the ST SIG at the February Infomart meeting is tentatively scheduled as a discussion of personal publishing on the ST.

The latest versions of software will be discussed, among them Publishing Partner, Easy Draw, the I.M.G. Scanner, and the proverbial MUCH, MUCH MORE!

Be sure to come and get all the latest tips for your personal publishing needs. This should prove to be a very informative discussion.

IMPORTANT NOTE

We will need for someone to bring a color monitor to the ST SIG at the main meeting. We have an ST system available, but we do NEED the monitor. Anyone planning to bring one should get together with James Duke by phone. The number is (214)404-8569.

Please, please - this is important! If we don't have a monitor to demonstrate these products, they are NOT going to come across as very interesting, I assure you!

Q. What printers does the Magic Sac support?

A. The Magic Sac supports printing on an Apple Image Writer I or II printer. Also Epson and Epson graphics-compatible 9- and 24-pin printers (using the Magic Epson Printer Driver). Apple Laser Writer support is planned for the future.

Q. Are Macintosh and ST diskettes interchangeable?

A. NO! The Magic Sac requires the use of an Apple Macintosh for a one-time transfer of software from a Macintosh diskette to an ST diskette. A transfer cable is included for this purpose, and the process takes about ten minutes per diskette. Once the software is transferred, the included Magic Sac utility programs can be used to move files between ST, Magic Sac, and IBM PC diskette formats. Downloaded software can also be moved between diskettes. NOTE: The Translator One eliminates this transfer process. In addition, it provides the ability to move files between Macintosh, ST, Magic Sac, and IBM PC diskette formats.

For more information you can write to:

Data Pacific, Inc.
Order Department
609 East Speer Blvd.
Denver, CO 80203-4240
(303)733-8158 between 9:30 a.m. and 4:30 p.m.
Mountain Standard Time

A News Flash! My wife's November issue of Current Notes just arrived with some up-to-date news on the Magic Sac. Data Pacific received a batch of mis-marked chips that systematically destroyed other chips! Needless to say, this has caused some stoppage in the delivery of the first batch of Translator One boxes. If you want a blow by blow description of what a small company has to deal with, check out message #12,34, and 42 on the ST Roundtable on GENIE. He calls the chip vendor "Raving Idiot Chip Supply, Inc."

By the by, the first production run of the Translator was limited to 100 and Data Pacific has received hard orders for 300 and counting! Those of you who want an up-to-date listing of software compatible with the magic Sac should go to the GENIE ST library 14; it is file #4413.

Also in the November issue of Current Notes is an ad offering a Magic Sac+ ROM for \$169.95; Magic Sac version of Super Paint, Stepping Out, Epstart.

Source:

Advanced Technology Networks, Inc.
Twin Chimney Office Park
10724 Baltimore Ave. (Rt 1)
Beltsville, MD 20705
(301)937-3605

I know this subject has taken up a lot of newsletter space, but is it not what this is all about? Computer Information and Data Exchange of Rochester.

PRELIMINARY MAGIC SAC SOFTWARE COMPATIBILITY LIST

Software known to be compatible. This by no means should be construed to be the final list or that all software on the list works 100%. This list is constantly updated, and updated lists are provided to registered Magic Sac owners.

Aldus Corp. - Pagemaker 2.0
Ann Arbor - Animation Tool Kit No. 1
Apple - Finder 5.0/System 3.2
Apple - Finder 5.2/System 3.2
Apple - Finder 5.5/System 4.1
Apple - MacDraw 1.9
Apple - MacPaint 1.5
Apple - MacProject 1.0
Apple - MacWrite 4.6
Apple - Switcher 5.0, 5.0b1, 5.01
B. Knick - MacPerspective 1987 3.0
Batteries Included - Battery Pak
Batteries Included - Time Link
Bishop Graphics - Quick Circuit
Blyth Software, Inc. - Omnis 3 Plus
Borland - Reflex 1.01
Borland - Turbo Pascal 1.00A
BPI Systems, Inc. - Gen. Accounting 1.00TR
BPI Systems, Inc. - Product Connection 1.00
Broderbund - Essex
Broderbund - Mindwheel
Camde Corp. - Nutri-Calc 2.4
Casady Ware - Fluent Fonts 1.1
Casady Ware - Fluent Laser Fonts
Chang Labs - Rags to Riches Ledger
Chang Labs - Rags to Riches Receivables
Chang Labs - Rags to Riches Payables
CheckMark Software - General Ledger 2.1
CheckMark Software - General Payroll 2.2
Compu Craft - Variety Pak Fonts 1.0
DataPak Software, Inc. - Mac Slots
Davidson & Associates - Math Blaster
Davidson & Associates - Speed Reader II
Davidson & Associates - Word Attack 1.0
Desktop Software Corp. - 1st Base 1.01
Devonian International - Foreign Fonts
Digital, Etc., Inc. - Turbo Maccountant 2.0
Eastern Language Systems - ALKaatib
Great Plains - Plains & Simple 1.00
Image World, Inc. - Art Nouveau 1.2
Image World, Inc. - Xmas & 1.0
Image World, Inc. - Twig, Leaf, 1.0
Infocom - Ballyhoo .97
Innovative Data Design - MacDraft 1.2a
Linguists' Software - (Fr., Ger., Span. lang.)
Lundeen & Associates - Works Plus Spell
Main Street - Main Street Filer 1.1
Manhattan Graphics - Ready, Set, Go 3
Medina Bilingual - Electro Bits 1.9
Megahaus Corp. - Mega Form 2.3
Megahaus Corp. - Mega Filer 1.01
Megahaus Corp. - Mega Merge
MegaMax, Inc. - C Compiler 2.0A
Microsoft Corp. - Basic Interpreter 3.0

Microsoft Corp. - Chart 1.0
 Microsoft Corp. - Excel 1.03
 Microsoft Corp. - Multiplan 1.02
 Microsoft Corp. - Word 3.00
 Microsoft Corp. - Works
 MindWorks Software - MindWrite 1.0
 Modern Graphics - Organic Fonts
 Options-80 - Stock Option Analyser
 Owl International, Inc. - Guide 1.0
 Penguin Software - Transylvania
 Personal Biblio. Prof. - Bibliographic 2.6
 Pleasant Graphic Ware - SmArmouse
 Quinsept Inc. - Family Roots
 Softstyle, Inc. Epstart - Magic Sac 2.5
 Softstyle, Inc. - PrintWorks for the Mac
 Software Arts - TK! Solver Financial
 Software Arts - TK Solver Mechanical E.
 Software Disc. - Record Holder 2.2B
 Solutions, Inc. - Glue 1.04
 Survivor Software Ltd. - Mac Money
 T. Maker Graphics - Write Now 1.00

DOWN WITH THE 8-BIT WAVE

By Mr. Goodprobe

Reprinted from SNACC Newsletter, 12/87

The wave! Sportscasters seem to have it in for this strange custom of sports fans across the country. This is where the spectators stand up and move their carcasses in a waving motion that is supposed to make it look like a "wave" in the stands.

We Atarians also have it in for the "wave". That annoying wave of interference you get on the TV screen while typing a letter with your trusty Atari or saving the world from the plague from the depths of outer space! Oh, for the clarity, resolution, and noise-free operation of a monitor!!! But you're financially strapped and can't afford the luxury of a monitor, or you're saving for that new ST system or maybe a doll for your kid sister. Be brave; there is hope. With a very simple and COSTLESS modification, you can clear things up in a hurry!

Get a small cardboard tube, of the type that is used to hold your favorite bathroom tissue. This is the perfect size and is readily available. Next, simply wrap the excess RF wire from the RCA jack at the back of your computer around this tube in tight, closed coils. Leave enough slack to reach the connector on the back of your TV. Now, tape down the coil. Next, turn on your system and note that as you move the coil around, the interference will decrease more at one location than at another. When the best position is found, the one with the least interference, fasten the coil in that position and you're finished. What you have done is tune the interference away from your system. Now you should enjoy a much clearer picture.

Isn't it amazing how something so simple can improve things so greatly? If you have any ideas or suggestions, no matter how complex or how simple, send them along and we'll pass them on to other Atari users.

THUS QUOTH ATARI

By Stu Woodard A.C.O.R.N.
 Reprinted from The Acorn Kernel, 1/88
 With Apologies to Edgar Allan Poe

Once upon a midnight dreary
 As I pondered, weak and weary,
 Over a printout long and grueling
 Of some old forgotten software.

As I coded, hacking, hacking,
 Suddenly they came, lips smacking,
 The Atari group
 From their Silicon Valley lair.

In my door, their clothes a'flapping
 PR-men shouting, spouting, rapping
 About their newest products,
 VAPORWARE.

Our CD-ROM, they sang to me
 In barbershop harmony,
 Will increase your knowledge
 And relieve all your care.
 Introducing our new line,
 Products that will make you shine,
 VAPORWARE.

Our PC Clone, I heard them shout,
 Is what the world is all about.

Order now;
 Don't wait 'til winter,
 And we'll throw in our Laser Printer.

If that's not enough, we've got more stuff,
 And with you we're going to share
 Our Megas, our Blitters, our Amy
 And the rest of the glorious infamy,
 God! It's so exciting this
 VAPORWARE.

So I told everyone about their newer than new,
 And very intelligent products, too.
 Then I waited and waited and waited some more,
 To see those items appear in the store.
 And when they didn't, I was told a tale
 Of FCC approval and problems so stale,
 That I could not believe that all this was true.
 But to my loyalty I clung,
 And out the window I flung
 All the common sense I dared to pursue.
 And waited with care, just so I could share
 The test of that great
 VAPORWARE.

But enough is enough,
 And though things get tough,
 There is one thing that I'll share.
 If it's on the shelf,
 And you try it yourself,
 You won't get stuck with
 VAPORWARE.

I WAS A TEEN-AGE SYSOP

By D. Who

Reprinted from SBACE Gazette, Nov/Dec 1987

During the summer of 1987, strange and horrible experiments took place at my house. Awful things. Terrible things. Things to fray nerves, to make skin crawl, and to keep one awake at night.

I became a... SysOp!

A system Operator (or SysOp) is a person who runs, at great personal expense and very little personal gain, a bulletin board system (BBS) from his house. A BBS is something designed to take all your computer equipment away from you - you set up your computer with a program to accept outside calls over your modem.

The system I ran (or, rather, staggered) was the SWAMPS (South Western Atari Message and Program Service, 213-324-0218), taken over from a friend of mine while he and his wife had a baby. I remember setting the beast up, excited and even looking forward to the days ahead. I was going to be a SysOp! I could validate users and do the housekeeping and... uh... and... er...

Aw, who cares? I have a BBS! Wow! That first day, still giddy with the thrill of it all, I sat in front of the screen, waiting for someone to call. I waited and waited and waited. Then I waited some more. I did a bit more waiting, until finally I decided to wait. After that, I yawned and then did some more waiting.

Boy, was this fun!

Eventually, people did start to call. Usually, in the middle of the night. I knew they called in the middle of the night, because when they connected, the modem gave a high-pitched beep! Then my drives ran for about half an hour... Grind, grind, whirr.

Maybe this wasn't going to be as fun as I had thought...

The joy of losing my computer to the BBS quickly became the indifference of losing my sleep to a noisy modem, which quickly became the horror of watching my drives catch fire from the heat of being on 24 hours a day. Mike, my friend, called up and said, "You might want to keep a cooling fan on them. Those older drives weren't designed to run that long."

Whimper.

After an afternoon of pure panic, I got the drives back up, and the BBS was running again. Soon after, the complaints started coming in. People were asking Mike to take back the BBS so that it could be in competent hands again. I paid 80 bucks to have a line installed for this?

Apparently. I was determined to improve, though. Mike kept saying that this was an acid test for the BBS; if I could handle it, anybody could...

Finally, after spending about two hours a day on the silly thing for about a week, the situation started to improve. The message bases were running smoothly; the number of callers was picking up; people seemed satisfied.

This, of course, is just about the time the data disk chose to get a bad sector.

For a BBS data disk to get a bad sector is just about the equivalent of a brick wall suddenly appearing in front of a speeding car. Things rapidly went higgly-piggly.

As I was attempting to straighten out the bad sector mess, I accidentally erased the message allocation map, the thing that tells the computer where each message is. This is the equivalent of dropping seven tons of cement blocks on top of the car that hit the wall.

As I recall, I screamed a lot.

The BBS was now a complete mess. I've seen explosions with more organization.

And so I took the chicken's way out; I reinitialized the BBS. I took everything and started over. This had only been done three times before in the history of the SWAMPS, in the three years of its existence. I did it after three weeks.

And then I did it again, after I messed up again.

And then I did it again again. Three times. That's got to be some sort of record...

Finally, six weeks after I took the monster over, Mike wanted it back. The price of call-forwarding all the calls from his number to mine was higher than he had expected. I didn't object...

When I first took the SWAMPS, I had visions of my own BBS when I gave Mike his board back dancing in my head. I would set it up and run it and everything! It would be MY BBS. Though I did enjoy running the SWAMPS (believe it or not), I realized now how much work goes into it. I had always respected SysOps before, but I had never realized how much they go through every day keeping those beasts up and running so myself and other users could call - for free, at that!

When you call BBSes, be kind to the SysOps, respect their rules, and give them support. The life of a system operator is not easy.

And I, personally, would rather have my nose cut off than run my own BBS...

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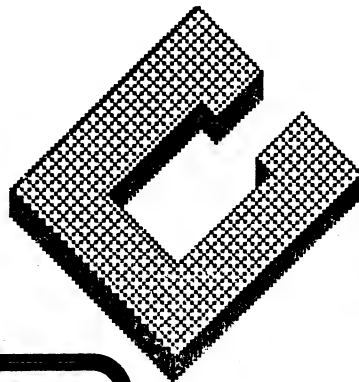
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MANY THANKS TO
MEGAMAX FOR THEIR
HELP IN PUBLISHING
THIS NEWSLETTER

RAM

SUN	MON	TUES		THURS	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14 VALENTINE'S DAY	15	16	17	18	19	20 MAIN MEETING INFOMART
21 NEWS DEADLINE	22	23	24	25	26	27 PUTT- PUTT GOLF
28 BBS SIG 8-BIT SIG	29	MARCH 1 ST SIG				

DAL-ACE SCHEDULE OF CURRENT EVENTS FEBRUARY, 1988

*** SUNDAY, FEBRUARY 14**
Valentine's Day - Have a heart; write me an article!

***SATURDAY, FEBRUARY 20**
Main Meeting at Infomart; meeting times in usual place on inside back cover.

*** SUNDAY, FEBRUARY 21**
Newsletter submission deadline.

*** SATURDAY, FEBRUARY 27**
Club get-together. How about some Putt-Putt Golf? Anyone interested will meet at the Malibu Grand Prix at I-35 and Walnut Hill Lane at 2:30 p.m. This is not a club-sponsored event - in other words, bring your own tokens!

*** SUNDAY, FEBRUARY 28**
BBS USERS' MEETING will be held at James & Rachel Duke's home at 2 p.m. The address is 5902 Preston Oaks Road, Apt. #1005, Dallas, TX. Call for directions. Phone: (214)404-8569

***SUNDAY, FEBRUARY 28**
8-BIT USERS' MEETING will be held at Jeff Golden's home from 10 a.m. to 6 p.m. Open house - come whenever and leave whenever. Bring your equipment if you can and get some hands-on help with your questions. The address is 2613 Cheyenne, Irving, TX. Call for directions.
Phone: (214)252-3268

***TUESDAY, MARCH 1**

ST USERS' MEETING will be held at Computer Discoveries at 7 p.m. The address is 12801 Midway Road, Suite 109, Dallas, TX. Call for directions. Phone: (214)484-9104

NOTE: AFTER THIS MONTH'S ST SIG, WE WILL BE NEEDING A NEW SIG LEADER. PLEASE HELP!

FRACTAL PICTURES continued from page 18

Changing the following lines in the fern program will produce the Sierpinski triangle shown on the front cover.

```
12 RFLAG=0:REM 0=NORMAL, 1=ROTATION
20 DATA 3
22 DATA .5,0,0,.5,0,0,.34
24 DATA .5,0,0,.5,1,0,.33
26 DATA .5,0,0,.5,.5,.5,.34
50 XSCALE=150:YSCALE=150
52 XOFFSET=0:YOFFSET=0
```

EDITOR'S NOTE: If you enjoy having type-in programs in the newsletter, let me know. I'll try to get more of whatever it is that YOU want to see, and drop the stuff no one likes. But I can't do it unless you LET ME KNOW!

New from MichTron...

Computer Aided Design

GFA Draft

This efficient, two-dimensional CAD program makes it easy to create circuits, scaled drawings, and detailed plans. Its features include: 255 drawing layers, printing or plotting in different colors or densities, drawing with definable "symbols", and more!

\$49.95

GFA Draft Plus

GFA Draft Plus retains all the great features of the original *GFA Draft*, but in addition, there are some great new features. These include: a streamlined user interface which consolidates related functions into a single menu selection, the displaying of values in the polar coordinate system, and new drawing modes with parallel lines, tangent lines, and line sizing.

\$149.95



MasterCAD

MasterCAD uses a simple but revolutionary concept in graphic design, which allows the user to project into 3-D any design drawn in two dimensions. Move, copy, rotate, and flip any object. Observe the object from various viewpoints, and as a transparent or solid. The features of this easy to use program make it one of the best.

\$199.95

Educational

ABZOO

Because animals are known to be fascinating for children, *ABZOO's* use of them makes learning fun! *ABZOO* is a new game designed to teach children, ages 3 to 6, letter recognition, for both reading and typing. *ABZOO's* unique approach is to divide the learning process into successive steps--from typing randomly on the keyboard through writing words that correspond to pictures.



\$39.95

Algebra I Series

Algebra I Series is a program designed for anyone interested in learning Algebra. The program guides the student step by step on a journey of understanding and achievement. It is ideal for anyone who has a mathematics phobia, or has doubted their capacity for learning complicated subjects! Features include: printed worksheets, saving work sessions, and graduated help menus.

\$39.95

Invasion

Invasion is a new arcade game designed to help youngsters improve typing skills, memorize terms, improve spelling, and learn basic math. The user must enter a correct response in time to prevent the falling problem in the sky from destroying the city below. *Invasion* is extra special because it allows you to create new problems as the child progresses. *Invasion* makes learning fun!

\$39.95

For more information
on these and other products,
ask for our latest catalog.

576 S. Telegraph
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(313) 334-5700

Dealer inquiries welcome.
Visa and Mastercard accepted.

FRACTAL PICTURES

By Ron Miller

Reprinted from The I/O Connector, 1/88

The January, 1988 BYTE magazine has a very interesting article on compressing images using fractals. The following program was extracted from BYTE and modified to work on the Atari 800XL. A graphics mode 8 screen dump subroutine was added. For a detailed explanation of the program's mathematics, refer to the BYTE article.

However, you can have fun with this program because you only need to change the data statements and plot scale factors to radically change the program output. You can see the FERN example which this program produced. Just changing lines 20-28 and 50-52 as indicated will turn out a fractal tree.

When the program finishes plotting, you can type GOTO 2000 to dump the graphics 8 screen memory to an Epson printer. Of course, you can "break" the program at any time and dump out the picture to the printer.

Illustrations of the program's output are on the front cover.

```

1 REM FERN.BAS
2 REM RR MILLER SDACE, 1 JAN 88
4 REM REF BYTE MAG JAN 88
5 REM IMAGE COMPRESSION
6 REM PROGRAM WILLPLOT A FERN ON
7 REM ATARI 800XL AND PRINT TO
8 REM AN EPSON MX80
9 REM
10 PFLAG=1:REM 0 = NO PLOT, 1 = PLOT
12 RFLAG=90:REM 0=NORMAL, 90=ROTATION
20 DATA 4
22 DATA .85,.04,-.04,.85,1.6,.85
24 DATA -.15,.28,.26,.24,0,.44,.07
26 DATA .2,-.26,.23,.22,0,1.6,.07
28 DATA 0,0,0,.16,0,0,.01
30 NUMPOINTS=20000
49 REM
50 XSCALE=30:YSCALE=30
52 XOFFSET=0:YOFFSET=75
54 PXMAX=300:PYMAX=159
56PXMIN=0:PYMIN=0
99 REM
100 REM IFS PROG FROM BYTE
110 DIM A(4),B(4),C(4),D(4)
111 DIM E(4),F(4),P(4)
112 FRAME=1000:SDUMP=2000
120 READ M
130 PT=0
140 FOR J=1 TO M
150 READ A1,B1,C1,D1,E1,F1,PK
160 A(J)=A1:B(J)=B1:C(J)=C1
170 D(J)=D1:E(J)=E1:F(J)=F1
180 PT=PT+PK
190 P(J)=PT
200 NEXT J
210 IF PFLAG=0 THEN GOTO 240

```

```

220 GRAPHICS 8:COLOR 3
230 GOSUB FRAME
240 X=0:Y=0
250 FOR N=1 TO NUMPOINTS
260 PK=RND(0)
270 IF PK<=P(1) THEN K=1:GOTO 310
280 IF PK<=P(2) THEN K=2:GOTO 310
290 IF PK<=P(3) THEN K=3:GOTO 310
300 K=4
310 NX=A(K)*X+B(K)*Y+E(K)
320 NY=C(K)*X+D(K)*Y+F(K)
330 X=NX:Y=NY
399 REM
400 REM PLOT POINTS
402 IF RFLAG=90 THEN GOTO 422
410 PX=X*XSCALE+XOFFSET
420 PY=Y*YSCALE+YOFFSET
422 PX=Y*XSCALE+XOFFSET
423 PY=X*YSCALE+YOFFSET
430 IF PFLAG=0 THEN GOTO 490
440 IF PY>PYMAX THEN GOTO 490
450 IF PX>PXMAX THEN GOTO 490
460 IF PX<PXMIN THEN GOTO 490
470 IF PY<PYMIN THEN GOTO 490
480 PLOT PX,PY
490 NEXT N
500 IF PFLAG=1 THEN PRINT PX,PY
600 END
1000 REM FRAME IT
1010 PLOT 0,0:DRAWTO 319,0
1020 DRAWTO 319,159
1030 DRAWTO 0,159
1040 DRAWTO 0,0
1050 RETURN
2000 REM GRB SCREEN DUMP TO
2010 REM MX80 PRINTER
2030 OPEN #3,8,0,"P:"
2040 PUT #3,27:PUT #3,51:PUT #3,24
2050 PUT #3,155
2060 DL=PEEK(561)*256+PEEK(560)
2070 SD=PEEK(DL+5)*256+PEEK(DL+4)
2080 FOR L=0 TO 39
2090 PUT #3,27:PUT #3,75: PUT #3,160:PUT #3,0
2100 FOR BYTE=6360+L+SD TO L+SD STEP -40
2110 PUT #3,PEEK(BYTE)
2120 NEXT BYTE
2130 PUT #3,155
2140 NEXT L
2150 PUT #3,155
2160 RETURN

```

Changing the following lines in the fern program will produce the tree shown on the front cover.

```

22 DATA .42,.42,-.42,.42,0,.2,.4
24 DATA .42,-.42,.42,.42,0,.2,.4
26 DATA .1,0,0,.1,0,.2,.15
28 DATA 0,0,0,.5,0,0,.05
50 XSCALE=600:YSCALE=300
52 XOFFSET=30:YOFFSET=75

```

Listings continued on page 16

NEWSLETTER SUBMISSIONS

Submissions are welcome in any form. It is, however, extremely helpful if submissions conform to one of these formats:

1. ASCII files with no formatting information
2. On ST disk format
3. Uploaded to the DAL-ACE BBS
4. Publishing Partner file

It is requested that any 8-bit user that he/she upload articles to the club BBS (number on back page). Articles will also be accepted if they are printed out and given to the editor or one of the officers. As a matter of fact, articles will be accepted on anything except a damp cocktail napkin.

CURRENT DAL-ACE SCHEDULE OF EVENTS

Events will now be listed inside the newsletter in a calendar for your convenience.

Infomart meeting dates for 1988 are as follows:

Firm dates:	March 12
	April 16
Tentative dates:	May 14
	June 11
	July 9
	August 13
	September 10
	October 15
	November 19
	December 17

INFOMART DIRECTIONS

From North Dallas, take either Stemmons (I-35E) or the Dallas North Tollway south. From Stemmons, take the Oak Lawn exit, turn east, and park at the Infomart. If you are using the tollway, exit right on Wycliff, go left on Harry Hines Blvd to Oak Lawn, and turn right. From the south, take Stemmons north, then follow above directions. Infomart is the big, white, steel and glass building south of the other 'marts.

GUESTS ARE WELCOME!!!

NEWSLETTER ADVERTISEMENTS

Personal ads are free to all current members. Please see the editor for details.

COMMERCIAL RATES

Full page	\$35.00
Half page	\$25.00
Quarter page	\$15.00
Business Card	\$10.00

Ads must be CAMERA READY. Copy must be received prior to the submission deadline. Mail copy to the address on the back page, or contact the advertising manager, editor, or Vice President of Communications. Copy received after the deadline will be run the following month. For contract advertisers, if no new ad is received prior to the deadline, the most recent ad will be run.

SPECIAL THANKS!

We would like to express our deepest appreciation to MegaMax, Inc. for allowing us to use their laser printer for our newsletter.

Special thanks also to our advertisers for supporting Atari and Dal-Ace. Be sure to let them know how much we appreciate their support.

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The purpose of this newsletter is to present information for your consideration. Neither the editor nor Dal-Ace make claims for the validity or usefulness of this material.

The reader is the final judge of any product or advice presented.

MEETING INFORMATION

10:00 - 11:00	8-Bit SIG
11:00 - 11:30	Disk Sales
11:30 - 12:00	Main Meeting
12:00 - 12:30	BBS Users SIG
	New Users SIG
	Newsletter Exchange
12:30 - 2:00	ST SIG

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Dallas Atari Computer Enthusiasts

DAL-ACE is an independent user education group not affiliated with the Atari Corporation. This is the official newsletter of DAL-ACE and is intended for the education of its membership as well as for the dissemination of information about Atari computer products.

DAL-ACE membership is \$16.00 per year. BBS-ONLY membership is \$9.00 per year. This newsletter is written, edited, and published by volunteers. Its availability and/or distribution may, at times, be subject to circumstances beyond the control of the club officers. Members will note that their renewal date appears on their address label. A pink label indicates that your membership expires this month.

Other user groups may obtain copies of this newsletter on an exchange basis.

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