A.C.E.C.

POST
NO
BILLS

JOCBS

ATARI
RULES

SIGS

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WANTED

A FEW GOOD
PROGRAMMERS

ATARI CORPORATION

VOTE
FOR
Dr. W.G. Lieuallen

EIGHTY COLUMNS

XE > C

Published by
Atari Computer Enthuasists of Columbus, Ohio

This newsletter is distributed for current ACE of Columbus membership. Dues are on an annual basis and entitle the members to all club benefits (Newsletter, Disk or Tape of the month, group discounts, etc.). Monthly meetings, at DeSales High School (Cafeteria) on Karl Road are open to nonmembers.

Upcoming meeting dates at 7:30 pm are:

September 15
October 13
November 9

PRESIDENT
Sheldon Wesson
444 N. Pearl St.
Granville, Ohio 43023
614-587-2716

VICE PRESIDENT
Warren Lieuallen
1652 Hess Blvd.
Columbus, Ohio 43212
614-488-3977

MEMBERSHIP CHAIRMAN
Tim Adcock
7544 Satterfield Road
Worthington, Ohio 43085
614-764-9492

TREASURER
Bill Eckert
6632 Lisamarie Road
Columbus, Ohio 43229
614-891-9785

DISK LIBRARIAN
Charles Lusco
Channing Terr. #C
Columbus, OH 43232
614-863-4016

NEWSLETTER EDITOR
Mark Shuter
510 Pin Cherry Lane
Worthington,OH 43085
614-885-0663

PUBLICATIONS LIBRARIAN
Bill Morgens
4943 Botsford Drive
Columbus, OH
614-861-2431

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

SIG Notes
by Dr. Warren G. Lieuallen

        The July meeting of the ACEC Special Interest Groups
came and went on Thursday, July 24th. As always, everyone
enjoyed themselves thoroughly.

        Our perennial favorites, Charles and Charles continued
their popular demonstrations; the former delving into the
intracacies of telecommunications for beginner and
experienced user alike, and the latter continuing his
discussion of Atari BASIC and assembly language with the
assistance of the Wizard, Gary Schumacher (please refer to
the last page of last month's newsletter).

        On the sidelines, another group held discussions on
topics ranging from desktop publishing to compatibility of
the various disk drives available for the Atari system to an
impromptu demonstration of B/GRAPH and the exciting
Enhancement Disks now available on CompuServe (and our own
Disk Library).

        Due to several requests, at the next meeting I will hold
an introductory PaperClip tutorial. Anyone who would like to
know how to use PaperClip, how to use it better, or would
just like to see what all the hulla-balloo is all about, be
sure not to miss it.

        Of course, the next meeting will be the last Thursday of
the month, August 28th, at 7:15 p.m., at the Whetstone Public
Library (3909 North High Street). I hope to see you all
there.

                    A.C.E.C. PUBLICATIONS LIBRARY
                          COMPLETE LISTING
                Bill Morgens   August 11, 1986

        These publications are available to be checked out by
MEMBERS ONLY at no charge. We request that library items be
returned at the meeting following check-out so that others
may share. This listing will be updated periodically.

        The A.C.E.C. Publications Library eagerly solicits your
donations of no-longer-wanted magazines and books. Also
wanted are Xerox-type copies of Atari-related articles of
general interest appearing in other magazines such as
COMPUTER SHOPPER.

ANTIC MAGAZINE
1982 - Apr, Jun, Aug, Oct/Nov, Dec/Jan83
1983 - Feb/Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec
1984 - Jan, Feb, Mar, Apr, Jun, Jul, Aug, Sep, Oct, Nov,
      Dec
1985 - Feb, May, Jun, Jul, Aug, Sep, Oct

ANALOG MAGAZINE
1983 - #10 Feb/Mar, #11 Apr/May, #12 Jul/Aug, #13 Sep/Oct,
      #14 Nov/Dec
1984 - #15 Jan, #16 Feb, #17 Mar, #18 Apr, #19 Jun,
      #20 Jul, #21 Aug, #22 Sep, #23 Oct, #24 Nov, #25 Dec
1985 - #27 Feb, #28 Mar, #29 Apr
1986 - #45 Aug

ATART EXPLORER - April/May 1985

DR. DOBBS' JOURNAL - June 1985

CREATIVE COMPUTING - Sep 84, Jan 85, May 85

COMPUTER SHOPPER - Apr 86

BYTE - Sep 81, Feb 84, Jun 84, Oct 84

COMPUTE! MAGAZINE
1984 - Nov, Dec
1985 - Jan, Feb, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov,
      Dec
1986 - Jan, Feb

BOOKS

STIMULATING SIMULATIONS - C. W. Engel - Twelve unique
programs in BASIC

ATARI BASIC - Bob Albrecht et al

INSIDE ATARI BASIC - Bill Carris

ADVANCED ATARI BASIC TUTORIAL - R. A. Peck - A "SAM'S" book

DE RE ATARI - A guide to effective programming

ATARI OPERATING SYSTEM SOURCE LISTING - Atari Corp.

MOSTLY BASIC: Applications for your ATARI - Howard Berenbon
Books I & II

KIDS AND THE ATARI - Howard H. Carlson

We are currently exchanging bulletins with several other
Atari groups around the country and there are several issues
available for check-out. There are some quite good articles
in these exchanges and this is an excellent way to keep up
with what Atarians are doing around the country. We hope to
be able soon to publish excerpts from some of these
bulletins.

EXCHANGE BULLETINS

The listing of bulletins available is not a month-by-month
compilation. If you are currently subscribing to an
out-of-town Atari-oriented bulletin, please share your old
copies with other members by donating them to the library.

Current Notes - Washington D.C. area
J.A.C.G. - Jersey Atari Computer Group
Mile High Atari Magazine - Denver Colorado
P.A.C.E. - Pittsburgh Atari Computer Enthusiasts
Nybbles & Bytes - Phoenix, Ariz.
Milatari - Milwaukee Area Atari Users Group
S.L.C.C. Journal - San Leandro (calif.) Computer Club
Neuron - Austin (Texas) Atari Computer Enthusiasts
P.A.C.E. World - Peninsula Atari Computer Enthusiasts of
Virginia
N.O.A.U.G. News - New Orleans Atari Users Group
The Pokey Press - Atari Computer Club of the Palm Beaches
(Florida)

COMMUNICATING WITH YOUR ATARI:
THE INPUT/OUTPUT CONTROL BLOCK
by Charles W. Brown

     No matter what you do with your computer. You are using
the IOCB. What is the IOCB? It is short for the Input Output
Control Block. It is a part of the computers operating
system. It's purpose is to help the computer communicate with
it's outside devices. Those are the cassette recorder, disk
drives, screen editor, keyboard, printer, RS-232 interfaces,
and screen display. Every time you use 1 of the above you use
the IOCB. There are 8 blocks numbered 0-7 used by the Atari.
Some of the blocks are used automatically, such as when you
print something on the screen you use IOCB 0. It is always
open. In basic if you use the lprint command you
automatically use IOCB 7. The IOCB is a channel that your
data travels between the computer and it's devices. The IOCB
even transfers data between devices.

     Locations 832 through 847 are used for the 1st IOCB(0).

Locations 848 through 959 are used for IOCB 2 through 7. Each
IOCB uses 16 bytes. Lets look at IOCB 0.

LOCATION	LABEL	PURPOSE
832	ICHID	tells which device you will be using
833	ICDNO	device number such as drive #1-8
834	ICCOM	command byte used to open, close, ect.
835	ICSTA	gets the status from the device such as error #
836-837	ICBAL/H	tells the OS where the data is to be transferred from
838-839	ICPTL/H	put 1 byte device routine used by basic not OS
840-841	ICBLL/H	buffer length: tells the number of bytes to transfer
842	ICAX1	auxiliary byte 1: tells if open for read/write, ect.
843	ICAX2	auxiliary byte 2: used for certian serial port functions
844-845	ICAX3/4	auxiliary bytes 3-4 stores sector #'s when needed
846	ICAX5	auxiliary byte 6 used in note and point commands to store offset of data in sector
847	ICAX6	spare auxiliary byte

In the chart above when you see 2 numbers in the
location field. Then those locations store the low/high byte
of the data. When basic is used the data is stored for you.
In machine language you have to put the data in the proper
locations.

The ICHID is used to tell the OS what device you will be
using. The OS gets the data that is stored here. It then
looks at the device name table to know what device is being
used.

The ICDNO is used to tell what device number is being
used. This is used for the drive #. This way OS knows which
drive is being used.

The ICCOM is the command byte, it tells the OS what
action it will be taking. Examples are open, close, input,
get, print, put, and status.

The ICSTA is used to store the status of the operation.
Programmers use the location to see if the operation was
okay, or find the error number here.

The ICBAL/H stores the low/high byte of the buffer for
the data transfer. For example if you wanted to print the
variable A$. You would store the low and high byte of A$ into
the ICBAL/H. Then OS would know the memory location of your

variable. When the I/O is being done the OS will look at the
location pointed to by the ICBAL/H and print the data that is
stored there.

The ICPTL/H, I don't know too much about. It points to
the device's put one byte routine. This must be used by the
device that you are using.

The ICBLL/H is the buffer length. You store the length
of the data that you are transferring. When The I/O looks at
the location pointed to by the ICBAL/H. It only transfers the
# of bytes specified here. This way only the data that you
wanted will be affected no more no less.

The ICAX1 is auxiliary byte 1. It is used by the open
command to see what type of access is needed. Weather the
channel is opened for read, write, update or even a #6 to
read the disk directory. The optional command # would be
stored here.

The ICAX2 is auxiliary byte 2. It is used by some of the
individual devices. Some of the serial ports uses this
location.

The ICAX3/4 are auxiliary bytes 3-4. They are used to
store the current sector number on disk I/O's. Such as the
basic note/point commands. Programmers would use this
location to store the proper sector number, like trying to
access a certain sector or trying to read the VTOC or the
directory sectors.

The ICAX5 is auxiliary byte 5. It is used as an offset
to access a certain byte within a disk sector. It is also
used by the basic note/point commands.

The ICAX6 is a spare auxiliary byte.

When learning about the IOCB block. There is one thing
else you have to know about. That is the handler address
table. It is located at location 794-831. This table contains
data on each device that the computer uses. The 1st byte of
data for each device is the 1st letter of the device name in
ATASCII code. The last 2 bytes are a pointer to the actual
handler that controls that device. This is the table that the
location ICHID points to in order to get the device to
access.

Now that you have seen what the IOCB is. I will try to
show you how it is used. Lets say that we want to print
something on the screen. We will do it in basic.

PRINT "I love my atari"

Location 832(ICHID) contains a 6. This points to the

letter s in the device handler table. So it knows it is using the screen. IOCB 0 is already open for it's use so we don't have to open a channel for it, then BASIC would store a 5 into location 834(ICCOM). This is the command to perform a input function to get the data to write on the screen. Locations 836-837(ICBAL/H) have a 1408 stored in them. This location is a line buffer used by BASIC. It stores the data that is to be printed on the screen. BASIC looks at that buffer to get the length of the string to store in locations 840,841(ICBLL/H). Location 842(ICAX1) has a 12 stored in it. This is the command for keyboard input and screen output. This is about how BASIC stores the data for each command to print something on the screen.

The I/O control blocks are only for storing the data to be used. Location 58454(CIOV) is a routine that is built into ROM to do all the work. This routine gets the data indirectly from the I/O control blocks and eventually carry out the various tasks. As you can see the IOCB is a very busy area of the computer. It is also a very vital part of the system, without it our computer wouldn't be able to do very much. I hope that I have been able to show you a little bit about the IOCB. I also hope you will understand a little bit more about our machines from this.

Eighty Columns on the Atari

by Dr. Warren Lieuallen

For quite some time now, the possibility of having an eighty column screen (as opposed to the forty column screen that we are all so familiar with) on the eight-bit Atari computers has been discussed, announced, and even realized by a few. But for the most part, significant expense and hardware modification has been required to achieve this new look.

Many other computer systems have an eighty column screen: IBM and all the clones, the (choke) Amiga, modified Apples, and even the Commodore 128! It is widely accepted by many that serious word processing, and business applications in general are not practical, or even possible without eighty columns.

We all know better of course, having had the intelligence and foresight to purchase and use Atari computers systems. As I write this article I am word processing on a forty column screen, and doing it quite seriously, I might add! I have used spreadsheets and business graphics packages, and have even run The Bookkeeper a time or two. However, the fact remains that there are

times when having eighty columns on the screen would be
desirable (otherwise, all our word processors wouldn't have
print preview, would they?). A good example is that of
trying to align columns of figures or text on the printed
page. Even with careful use of the print preview features,
it often turns out that the page must be printed several
times before it turns out correct. How much easier this job
would be if we could just see the entire page on the screen
-- all eighty columns.

     Well, now you can. There are now available several
methods by which an eighty column screen can be simulated on
the Atari computer system. They all work in a similar
manner, and basically involve "drawing" the characters on a
Graphics 8 screen. This is because the resolution of a
Graphics 8 screen is 320 by 192 pixels (without the text
window at the bottom, so it's really Graphics 24). If each
character were only four pixels wide (instead of the usual
eight), eighty characters would just fit across the screen.
And that's exactly what happens. The characters are
redefined as graphic bit patterns four pixels wide, and the
operating system is redirected to use complicated drawing
routines for all screen output -- that's the tricky part!

     All of the commercially available eighty column packages
require some hardware modification of some type. There is
one product called the Ace 80 cartridge, or the Ace 80 XL for
XL computers. This device is a cartridge, just like the
others we are used to, and is inserted into the appropriate
cartridge port before booting the system. A review of this
new product appeared in a recent issue of ANALOG, so won't be
repeated here (I really don't know anything other than what I
read!).

     A second device is the Omniview 80 chip, which as the
name suggests, is an eighteen-pin IC chip. This chip
replaces the old operating system chip inside the computer.
Installation depends upon which computer you have (800 XL,
1200 XL or 130 XE), and whether or not the OS chip is
socketed or soldered. In any event, once this chip is in
place, the standard default screen can be changed to an
eighty column format by merely pressing Control-A, and then
pressing System Reset. The eighty column text is
surprisingly readable, even on a color TV set (the worst of
all possible display mechanisms for 80 column text).

     However, the eighty column feature is only available
from BASIC, or assembly language programs which do not reset
or interfere with the "redirection" of the operating system
to the Omniview routines. What this really means in plain
English is you can only use the Omniview 80 from BASIC, from
the SpeedScript 80 word processor included with the chip, or
from programs you write yourself. I have tried all of the
word proccesors I own (nine, at last count!), and none of

them will use the eighty column screen. The Omniview 80 documentation includes modifications which can be made to several versions of Letter Perfect and Data Perfect, but I have not done these yet.

The Omniview 80 also includes new floating point math routines which are considerable faster than the ones in the Atari OS. Running a benchmark test, I found the Omniview routines to be approximately 75% faster than the Atari routines. However, in my day to day usage of the computer, I did not notice any significant differences in program execution time. Applications which make heavy use of mathematical functions should benefit from Omniview's speed.

Finally, the Omniview replaces the operating system in the XL machines with one which much more closely approximates the old OS of the 800 machines. This means that the translator disk is no longer needed. If you have any programs which needed "OS translation" before, you will appreciate this feature.

The final possibility is the Video 80 program, written by Charles Brannon. This program creates a new input/output device for the Atari, the "V:" device. This device includes the eighty column screen handler, as well as supporting a window feature, with user definable margins all the way around. A demonstration of these two features combined with each other is impressive. However, the limitations of Video 80 are even more restrictive than those of Omniview 80. Programs using Video 80 are limited to those you write yourself, although both BASIC and assembly language should remain valid possibilities. Secondly, the logical line length is shortened to eighty characters, rather than 120 as in Atari BASIC. Lastly, this program requires the Translator disk on XL machines.

These limitations notwithstanding, it is hard to beat the price/performance ratio of Video 80, as this program is in the public domain and therefore free. If nothing else, it serves as an excellent introduction to the world of eighty columns, and will allow you to decide whether to invest further in this field, or to be glad that your Atari displays forty legible characters per line. I am currently working on a BASIC word processor to work with Video 80, but due to both the shortcomings of BASIC and myself, this program will be of limited usefulness. If anyone would like to collaborate on this project with me, I would be delighted.

Atari is supposedly developing an eighty column device for the 130 XE. This rumor has surfaced before, once even being included as part of a new monitor under development. However, the latest information has this device nearing completion, into beta testing, and being readied for the mass market. Only time will tell if this product does exist, and

if it will work with non-130 XE's.

Batteries Included had a BI-80 board under development for the Atari systems, but cancelled it at the end of 1985. Another product called the Bit-3 board was supposed to include an eighty column driver for the 800 computers. The last time I saw an ad for this product, it cost $249.00; I don't know if it is still available or not.

NEWS FROM THE ATARI BBS

SUMMERTIME PROMOTIONS

As if the Summer wasn't hot enough, Atari has launched three computer promotions designed to make things even hotter.

For the 520ST, we are offering a free monochrome monitor when you purchase a 520ST cpu and one SF354 disk drive. We expect to see a variety of promotions based on this one. A complete monochrome system for $499 is one good attraction, as is the 520ST for $199 with purchase of drive and monitor.

For the 8-bit computers we have two promotions. We have added some software to spice up the 65XE package. The position of this promotion is as an advanced game machine, and we are bundling 4 software cartridges and a joystick with the 65XE CPU. The packages are: Star Raiders, Pac Man, Donkey Kong, and Sky Writer. This is an $85 value of free products with an under-$100 computer! We expect this to be a great attraction as the video game market heats up again this year.

The second 8-bit promotion is our continuing 130XE package deal. Get a 130XE with a disk drive and a printer, plus the AtariWriter Plus word processing program and four other software titles (Music Composer, Star Raiders, Defender, and Home Filing Manager), for only $399. A version of this package with the 65XE in place of the 130XE is also available at a $349 list price.

CES REPORT: Atari Sparking PC Comeback

Atari's leadership in the comeback for personal computers was apparent than at the recent Consumer Electronics Show in Chicago. Although computer products were in a section of the show floor that is not exactly prime territory, Atari's booth attracted huge crowds throughout the show. The feeling was more upbeat than it has been for several years. There were more exhibitors and attendees than in the past few CE Shows. A strong sign of Atari's role in the comeback was the presense of Atari computers in virtually every booth in the computer section.

Atari had the biggest and most prominent booth in the computer section. The entrance was flanked by two special displays: "See the Power of Atari" featuring video digitizers, and "Hear the Power of Atari" with music synthesizers. These exhibits were divided evenly into 8-bit and ST products.

Within the booth 36 tables were set aside for third party software developers. Again, half the displays were for XE products and the other half were for ST. Atari was careful to emphasize both sides of our computer product lines in a show of overall strength and support. Despite the predominance of publicity for the ST line, the XE computers are still alive and doing well.

The move toward added presence of the 8-bit products proved to be well timed, thanks to Atari's biggest competitor in this market. Commodore was present in only a small way, with a room tucked far away from the main floor. A few visitors were able to see company personnel trying to generate some enthusiasm for their latest attempt to generate corporate revenue -- the "64C" computer. This repackaging of the venerable Commodore 64 managed to add little in the way of utility, simply adding a new disk of software along with a new case design. For this they have raised the suggested price to $200.

There did seem to be some enthusiasm among mass merchants, all right. Most of them paid quick visits to the Atari booth to talk business. It looks like Commodore is trying to replace the 64 with the XE. Thanks, guys!

Back to the Atari world, many of the software vendors at CES had new announcements of products. Batteries Included has announced a wide range of ST titles in the productivity category, including Thunder!, their realtime spelling checker; I*S Talk, a terminal program with a slew of features (also including spelling checker); DEGAS Elite, an enhanced version of their top-selling title; PaperClip Elite, an advanced word processor; HomePack ST, an enhanced version of their 8-bit best seller; and more, bringing their product line to an even dozen ST titles by year's end. MicroProse had Silas Warner, the author of many top-selling computer games like Castle Wolfenstein and Robotwars, demonstrating a beautiful version of his new Silent Service for the ST. Baudville, Epyx, Firebird, and Strategic Simulations were some of the software companies showing ST titles for the first time in their booths. Many other vendors announced expanded support of all Atari products at the show (or immediately after).

Atari was also helped by two user groups in the area, the Chicagoland Atari User Group (CLAUG) and the Suburban Chicago Atarians (SCAT). A word of advice to dealers -- don't underestimate the ability of user groups in your area! They have often shown they are willing and able to come to the aid of Atarians. Atari is proud to have such a devoted collection of users. Thanks, folks!

ST MONITOR CABLES AND CONNECTORS AVAILABLE

A small company in the Pittsburgh area is now selling ST monitor cables and connectors. Many customers have asked us for these cables for connecting 520ST's (with modulators) to video cassette recorders. Now it is possible.

You can get just the connectors for wiring your own cables, or you can buy cables with RCA plugs or with ST monitor plugs (for use as replacements or for longer cables), or they will make special customized cables for you. Contact At Your Service, 2856 Leechburg Road, Lower Burrell, PA 15068, Attn: Mark Spires, or call 412-335-4477.

LATEST SOFTWARE TITLES FROM ATARI CORP.

The newest release from Atari this month is DB Master One, an
enhanced and improved version from the one given away as part of a
promotion last Christmas. We think you'll be impressed. This package is
available now in inventory from Atari.

Brand new in Atari's line of products is dbMan, the database from
Versasoft. Atari has picked up the marketing rights to this product. It
is available for immediate shipment. Just to refresh you, this package
is a dBase III clone with many extra features. Later in this issue we
talk about some of the ways we're using databases in our own operations
here at Atari headquarters.

For the 8-bit computers, we want to remind you that the Atari
Planetarium and Star Raiders II are also available in current inventory.
Both of these titles have been very well received at the recent CES and
Comdex shows, as well as in favorable reviews in upcoming issues of
computer magazines.

NEW SOFTWARE PRODUCTS ANNOUNCED BY THIRD PARTIES

Aside from the flood of announcements at Comdex and CES, many other
companies have jumped on the Atari bandwagon lately. It's nice to have
momentum!

Baudville Inc. has three new titles of home and educational
software: Video Vegas (blackjack, poker, slots, and keno), Guitar Wizard
(teaches guitar playing), and Ted Bear's Rainy Day Games for young
people. These products are available for the 8-bit Atari computers.
Their phone number is 616-957-3036.

Epyx has released new products for the 8-bit and the ST lines.
World Karate Championship for the 8-bitters is a realistic graphic
animation of the martial arts. For the ST, Epyx is shipping Rogue and
their revamped Temple of Apshai Trilogy. Epyx plans to release Winter
Games, World Games, Super Cycle, and Championship Wrestling for the ST
series as well.

Polarware/Penguin Software has released Oo-Topos for the ST.
Polarware has drastically cut prices on their software titles to make
them even more attractive to the public -- currently they are selling
most games at a $19.95 list price.

Strategic Simulations (SSI) has released Gettysburg: The Turning
Point for the 8-bit Atari computers. At CES they were showing off
preliminary versions of Phantasie for the ST, scheduled for release in
late Summer.

For the 8-bit products, Batteries Included is shipping Paper Clip
with Spell Check, a word processor with integrated dictionary.

ST SOFTWARE: THE LATEST IN DESK ACCESSORIES

The latest highlights in the ST software world are some very powerful desk accessories. These programs stay resident in memory and provide features that can be used at any time by programs which take advantage of the GEM environment.

From Michtron, we have Cornerman. This program is much more powerful than the acclaimed Sidekick package for the PC. It includes features like: a full ASCII chart in a scrolling window; a calculator with decimal, hex, binary, and octal functions; a note pad; a phone dialer; a clock (which appears in the upper right corner of any GEM screen); and many more. Cornerman is probably most suited for a 1040ST, since it uses up quite a bit of RAM, but it has quickly found itself to be indispensible in my ST.

A recent arrival here will probably give Cornerman a run for its money. Macro Manager from Blue Moon Software (distributed by Shanner International) is a very complete accessory. It's calculator works in algebraic or reverse polish notation and also includes financial functions. It also contains a weekly planner with project time reporting; electronic card file database; alarm clock calendar; and an electronic typewriter feature.

One of the most necessary products is the latest from Batteries Included, called Thunder (a poke at Turbo Lightning?). Thunder is a realtime spelling checker for GEM applications. While you are typing, it checks your spelling and rings the bell if you make an error. By clicking on the desk accessory menu, it will tell you what word was wrong and offers you a choice of corrections. Thunder comes with a 50,000 word dictionary. It is expandable to 2 more dictionaries, one with supplemental words and the other with replacement words -- you give it a word and an automatic replacement, for words you commonly misspell and for abbreviations which are automatically expanded for you.

MORE THAN 200 FREE ST PROGRAMS AVAILABLE

Did you know that there are more than 200 public domain programs for the ST available from a central source, not to mention the more than 100 ST pictures and 100 8-bit programs? If you were signing into the Atari Corp. BBS regularly, you'd know this and a lot more. The Atari Base is the official BBS of Atari Corp. located at headquarters in Sunnyvale. You can also get any questions you have answered by our staff experts. There is a private section for dealers and for service centers as well.

Speaking of service centers, Randy Hain, Atari's manager of service, will be getting active in the Atari BBS as well to provide up-to-the-minute information to registered service centers. So make sure you're tuned in to Atari's own information exchange.

The Atari Base BBS can be reached by any computer with modem by calling 408-745-5308, any time any day, 300 or 1200 baud.

ST APPLICATIONS NOTE: DATABASE MANAGEMENT

One of the strongest uses for a computer is to manage your data. Recently there have been several strong software titles for the Atari ST computers in this category. Two of these, DB Master One and dbMan, have found their way into many different departments here at Atari. We thought we'd share our experiences.

Sam Tramiel's secretary uses DB Master One to manage his business cards. As the president of Atari, Sam meets a multitude of people. Rather than deal with an unweildy pile of cards, he has them typed into this program. When he needs to contact someone, the information is available almost instantly. This particular ST is equipped with a monochrome monitor to take advantage of the very high resolution, displaying 50 lines of information on the screen at a time.

In the service department, Randy Hain also uses DB Master One. He keeps track of service centers and applicants. He has created many custom report formats for his own use and for use by others in the company. For example, when the customer relations department asked for a list of all service centers with complete addresses so customers can be referred to them, he quickly changed one of the existing reports to create the customized one that was needed.

Both of these departments started using DB Master One with its original release last Winter. Since then, they passed reports of problems and requests for additional features back to the program's designers. Most of their requests were implemented in the latest release which has just become available to you.

For more sophisticated data management tasks, we are making extensive use of dbMan. With the features of dBase III, we have drawn on the experience of people in the company to create very complete applications.

The customer relations department is using the ST for order processing. They process a tremendous number of requests for manuals, spare parts, and other items. Instead of typing and filing and manual report generation, the entire process of order entry and reporting is automated. The inventory items and their descriptions are in one file, open orders are in another, and sales tax for the state in a third. Orders go through the system faster and more accurately than ever. Because dbMan is a true relational database, more files can be added as the department learns how this program can help them even more. We don't just start with the solution, it grows as we think of more ways it can help us.

Likewise, the finance department uses dbMan to store and track outstanding loaner systems to members of the press and others. Each system can be tracked so we always know what our outstanding inventory is, which machines are overdue, and who within Atari is responsible for each computer sent. This information was impossible to maintain with the older manual system.

As time goes by we are finding more and more ST's cropping up within our own company. Along with the applications mentioned here already, we find them used by secretaries for word processing, by the controller and other finance people as spreadsheets, by the data processing department as terminals, and of course by the programmers as development tools. It may seem obvious that Atari would use its own computers, but there were once many IBM PC's and DisplayWriters and Wang systems here to do the same jobs that are now being done better by our own inexpensive ST systems. Our Chairman makes us all work our hardest and save every penny we can -- the ST is part of the way we do our jobs.

WRITE ENABLE SWITCH
for the Atari 1050 Disk Drive
By Tom Kerschen (Sparky)

This modification allows you to write on the back of a disk, or to write on any protected disk without notching the disk. The switch allows you to use the NORMAL operation of the disk drive, ALWAYS ALLOW writing to a disk, or NEVER ALLOW writing to a disk.

PARTS NEEDED (1) DPDT Switch with CENTER OFF (Radio Shack #275-620); (1) LED (Radio Shack #276-068); 6 feet of 24 gauge insulated copper wire.

TOOLS NEEDED Small Needle Nose pliers; Phillips screwdriver; Low wattage solder iron; Small drill 1/4 inch bit

GETTING STARTED Remove the (6) screws from the bottom of the disk drive and take the top and front of the drive off. Now you need to decide where you would like to mount the switch. I have mine mounted in the front on the left hand side with the LED right above it. You will need to position the switch and drill a 1/4 inch hole. Now, position the LED and drill a 1/4 inch hole, be sure to watch and leave room for the switch. Solder a 16 inch piece of wire onto each of the 6 terminals of the switch. Wire in the switch and LED as per the following drawing

```
            SWITCH BOTTOM

J11 pin 2 --| O  O |-- LED short lead

J11 pin 1 (cut wire)--| O  O |--J11 pin 3 (cut wire)

Top Sensor(cut wire)--| O  O |-- Sensor Lamp(cut wire)
```

To help make the drawing make sense, the J11 connector is located in the back left of the main board of the drive. It is the 4 wire plug closest to the front. They are numbered from 1 to 4 starting at the front of the disk drive. Cut the wire going to connector pin 1 and solder a wire coming from the middle terminal of the switch to connector J1. The other end of the wire you just cut solders onto the wire from the switch that's labeled (top sensor cut wire). The wire from the switch that is labeled (J11 pin 2) solders with the existing wire on the connector pin 2. Cut the wire going to connector pin 3 and solder the wire coming from the 2nd middle terminal of the switch to connector pin 3. The other end of the wire you cut solders to the wire coming from the switch labeled (sensor lamp cut wire). Solder a wire with the existing wire on connector pin 4 and hook it up to the long lead of your new LED. That completes all the wiring. Make certain that all the wires are properly connected and the connector J11 is hooked back up. Reassemble the case, watching so the new wires don't get pinched under the sides or between the screw stands. You no longer need to punch the notch into your disk to write to the back. With the switch down you are in the NORMAL position. With the switch in the middle position you are in the PROTECTED position, (that is you can not write to even a notched disk), and in the up position you are in the WRITE ALLOWED position. If you have questions or problems call the PALACE BBS (316)683-4605 and leave mail to the SYSOP or Sparky (CO-SYSOP) and I'll try to answer them for you. We also have mods to increase Atari computers up to 576K. Enjoy.

CHANGING ATARIWRITER PLUS
by Ed Mondragon (with a little help from his frien

For those of you who have an RX-80 printer and have been experiencing trouble writing a printer driver using Atariwriter Plus's print driver editor here is help. If you tried using the built in FX-80 printer option you will notice extraneous printing along the paper margins. The reason you get this is the FX-80 can print in proportional spacing and the RX-80 doesn't have that option. When your RX-80 sees a command to start or stop proportional spacing it gets confused and prints part of the command that it doesn't understand out on the paper. Use a good utility program that enables you to call up individual sectors and edit them. I used Sherlock 1050. Call up sector $1E1 (481 in decimal) and you will see the following:

```
   Sector 481    $1E1
01   0F 00 00 00 00 00 00 00........
09   00 00 00 00 00 00 00 00........
11   00 00 00 00 00 00 01 06........
19   00 00 01 9B 03 18 20 00.......-.
21   03 18 20 01 01 08 01 14..-.....
29   01 0E 02 18 48 02 18 47....H..G
31   00 03 18 4A 12 07 18 33...J...3
39   12 98 18 33 24 07 18 33...3$...3
41   00 98 18 33 24 08 18 70...3$...P
49   30 18 54 18 50 12 08 180.T.P...
51   70 30 18 54 18 50 0F 08p0.T.P..
59   18 70 31 18 54 18 50 12.p1.T.P.
61   09 18 70 30 18 50 0F 18..p0.P..
69   53 30 09 18 70 30 18 50S0..p0.P
71   0F 18 53 31 08 18 70 30..S1..p0
79   18 54 12 18 40 00 E2 70.T..@..b.
```

Now go into edit hexadecimal mode and edit it to read (only change what is UNDERLINED). NOTE: I am starting at byte 41, not byte 1.

```
   Sector 481    $1E1
41   00 98 18 33 24 07 18 35...3$..5
49   18 54 18 50 12 07 18 35.T.P..5
51   18 54 18 50 0F 09 12 18.T.P....
59   50 18 35 18 54 18 45 08P.5.T.E.
61   18 35 18 50 0F 18 53 30.5.P..S0
69   08 18 35 18 50 0F 18 53..5.P..S
71   31 07 18 35 18 54 12 181..5.T..
79   40 02 18 34 00 00 E2 70M..4..b.
```

Check, double check and then triple check your work to make sure there are no typos. Now you have modified the FX-80 printer driver, taking out proportional print and rearranging your fonts to: G1 = pica default (also to cancel italics; G2 = condensed; G3 = emphasized; G4 = superscript; G5 = subscript; G6 = elite; G7 = italics

You can really get fancy and change the menu option to read "RX-80" instead of "FX-80". All you have to do is find the sector using Sherlock 1050's search option (look for "FX-80" in ATASCII) and changing it using the ATASCII edit mode. Remember, this is only for the 48K version of Atariwriter Plus. I didn't figure this solution all by myself. I wish to give credit to Bill Proctor, Jim Frost and especially Trent Dudley. I also have a modification for the MX-80 on the 130XE version. If anyone ne it give me a call at 988-9400 and I will get it c Ed Mondragon

XE CONSOLE KEY FIX
... that really works.
SUPPLIED BY THE CHAOS BBS (517) 371-1106

I found that I was not alone when I started having trouble getting my console keys to work on the ATARI 130XE the CHAOS club used for its BBS. It seems that very many of the machines develop this problem. I asked around and found several others that had done as I did, opened the keyboard and cleaned the button contacts, only to get good results for a week or so before losing them again. I then received a couple reprints of articles suggesting hardware fixes. I tried a couple that did not work, but one that worked the best came from Alan Haskell (printed in the SBACE GAZETTE, April/May '86). Heres how, with a small modification to save you the trouble I made for myself trying his recommended installation. You will need a small phillips head screwdriver, needle nose pliers, a small soldering iron, and three 3k (3,000 ohm) quarter-watt resistors. The smaller the resistors are physically, the better.

1. Turn over the XE computer and remove the 4 screwss that hold it together. Turn the computer over again and remove the top half of the case.

2. Lift out the keyboard and gently pull the ribbon out of its connector. DO NOT OPEN THE KEYBOARD as cleaning internally will not help, and you may damage the carbon tracks on the baking sheet inside.

3. Remove the motherboard from the lower half of the case by removing the Phillips screws holding it.

4. Remove the top and bottom metal sheilds from the board by carefully straghtening the bent tabs that go through the board.

5. Observe the top and underside of the connector you pulled the keyboard ribbon out of. As seen from the top as you would look at the computer normally, there are 24 connections, with connection #1 at te left and #24 at the right. Connection #3 (from the left) is the ground connection. The last 4, #21, #22, #23, #24 are the START, SELECT, OPTION, and RESET connections. When a connection is made from these points to the ground, the computer will know one or several of the keys are being pushed. Due to a design problem, the console keys have a bit too much resistance to always register even when you really lean on them. So, we will install the three resistors between the connections and ground so as to "leak" a bit more around signal to the computer. That way, not nearly so good a connection is required by the actual keys when pressed.

6. Identify the proper pins on the bottom side of the circuit board. We will install the resitors under the board.

7. Solder one end of all three resitors together. Then connect this common end to the ground connection (pin 3). Then solder the free end of the resiters, one each, to pins 21, 22, and 23. (The reset system never seems affected, nor any other keys.)

8. Be certain that the wires on the resistors do not touch each other nor any other circuitry! Use as little solder and as short a heating time as possible. Tape the resitors to prevent shorting if needed, and press close to the circuitboard.

9. Reassemble the shields to the board, bending back the tabs to hold it all together. Look inside to be sure the resitors do not touch the lower shield.

10. Complete the re-assembly, taking extra care not to stress or insert the keyboard ribbon too many times. The spring contacts bend easily, and the conductive coating on the ribbon, if scratched through, will cause the keyboard to be useless. Don't worry too much, thats hard to do if you are careful. (The original mod suggested pressing the resistor leads into the connector so as to make it solder-free and simpler.... but that "simplicity" ruined my connector and made hour more work! Solder it!)

11. Test the repair. Power up the machine and type in this one line basic program:

    10 PRINT PEEK(53279):GOTO 10

Then type RUN. You will see a row of 7's down your screen. Push OPTION. They should turn to 3's. SELECT will give you 5's, and starts will give you 6's. Combinations will give other numbers from) to 7. If each key responds, you have finished the repair. This has permanently fixed the problem on dozens of XE's. It has restored my keys to "feather touch" after a long siege of having to boot 5 or 6 times mashing the OPTION key trying to get a boot without BASIC. It WILL work for you. John Nagy, SYSOP of the CHAOS BBS (517) 371-1106

XL POWER SUPPLY

This project replaces the power supply for the ATARI 800XL. The design eliminates several of the shortcomings of the original equipment supply. The OEM version has only protection for the primary of the transformer. According to Don Curtis, there is a fusible link in the primary to protect the AC line. There is NO protection for the ATARI. When the supply goes into thermal runaway, the voltage can go up to 12v, making your IC's history. Ask Dave Lloyd!!

PARTS LIST: Radio Shack
276-1146   3AMP Full Wave Rect.;   270-739 fuseholder
272-1020   2200 mfd. @35V Cap.;   275-635   Switch
271-131   2 ea 1 OHM, 10 WATT Res.
276-568   MOV spike suppressor
270-1285   2 Amp Slo Blo fuse
273-1511   12.6V @ 3AMP Transformer
           Gateway Electronics
78H05   3amp, 5V regulator (TO-3 Diamond case)
TO-3 Socket;   TO-3 Heat Sink Diode
6.2V 3Amp Zener

Reclaim the cords from the ATARI supply (the ONLY salvagable items!) Primary Wiring: Hook the line cord to two terminals of a terminal strip. Hook the MOV across the line. Wire the transformer, one side to the line, the other through the switch to the other side of the line. Secondary: Wire the Red leads to the AC input of the bride rectifier. The black wire is not used. To another terminal strip, hook the minus output of the bridge to chassis ground. Hook the capacitor with the positive side to the positive side of the rectifier on another terminal of the strip. Also from this terminal, hook the two power resistors in series to the input of the regulator (pin1). From the output of the regulator, run a wire to the fuse holder. From the other end of the fuse hook a wire to the terminal strip. Attach the +5V lead to the ATARI here. Also wire the Zener (Black Band to positive.) from this point to ground. Check with a voltmeter for 5V BEFORE hooking up to the 800XL! Make sure the polarity is correct. Check over and button up the supply. You're ready to go. Theory. Just a simple supply. Only wrinkle is the Zener Diode. It should crowbar the fuse before the ATARI smokes. I have been using this supply for 4 months now without a problem. If you have any questions, leave me E-Mail on the Skyline Board.(303-457-0320) Craig Scherer

ACE of Columbus
P.O. Box 849
Worthington, OH
          43085

DR. WARREN G., LIEUALLEN
1652 HESS BLVD.
COLUMBUS, OHIO
43212
12/10/86