

DALLAS ATARI COMPUTER ENTHUSIASTS



**Atari Forces Mass against inferior Computers**  
 (Atari outflanks opponents in both cost and performance)

<u>PRODUCT</u>	<u>PUBLISHER</u>	<u>LIST PRICE</u>	<u>SALE PRICE</u>	<u>USER GROUP DISC. PRICE</u>	<u>USER GROUP CASH PRICE</u>	<u>TOTAL % DISCOUNT</u>
<u>UTILITIES</u>						
BACKUP	MICHTRON	39.95	35.96	32.36	30.74	23
COPY II ST	CENTRAL POINT SOFTWARE	39.95	35.96	32.36	30.74	23
DISK DOCTOR	ANTIC	29.95	26.96	24.26	23.05	23
HARD DISK ACCELERATOR	BECKMEYER	39.95	35.96	32.36	30.74	23
LABELMASTER ELITE	MIGRAPH	44.95	40.46	36.41	34.59	23
M-CACHE	MICHTRON	39.95	35.96	32.36	30.74	23
OSCAR	SOFTLAB	39.95	35.96	32.36	30.74	23
PIE (PROFESSIONAL ICON EDITOR)	ANTIC	29.95	26.96	24.26	23.05	23
PROCOPY	PROCo PRODUCTS	34.95	31.46	28.31	26.89	23
STUFF	MICHTRON	39.95	35.96	32.36	30.74	23
SUPER DIRECTORY	MICHTRON	39.95	35.96	32.36	30.74	23
TUNE UP	MICHTRON	49.95	44.96	40.46	38.44	23
TURBO ST	SOFTREK	49.95	44.96	40.46	38.44	23
UNIVERSAL FILE SELECTOR	A & D	15.95	14.36	12.92	12.27	23
<u>WORD PROCESSING</u>						
DESKTOP PUBLISHER ST	TIMWORKS	124.95	105.95	95.36	90.59	28
1ST WORD PLUS	GST	99.95	79.96	71.96	68.37	32
FONTZ!	NEOTRON ENGINEERING	34.95	31.46	28.31	26.89	23
MICROSOFT WRITE	ATARI/MICROSOFT	129.95	103.96	93.56	88.89	32
PUBLISHING PARTNER	SOFT LOGIK	89.95	80.96	72.86	69.22	23
WORD PERFECT	WORD PERFECT	395.00	274.95	247.46	235.08	40
WORD UP	NEOTRON ENG.	79.95	71.96	64.76	61.52	23
WORD WRITER ST	TIMWORKS	79.95	59.95	53.96	51.26	36
<u>TELECOMMUNICATIONS</u>						
FLASH	ANTIC	29.95	26.96	24.26	23.05	23
INTERLINK	INTERSECT	39.95	35.96	32.36	30.74	23
MODEM, ANCHOR 2400E	ANCHOR	249.95	174.95	157.46	149.58	40
MODEM, AVATEX, 1200HC	AVATEX	110.95	99.86	89.87	85.38	23
MODEM, AVATEX, 2400	AVATEX	249.95	199.95	199.95	189.95	24
MODEM, SUPRA 2400	SUPRA	174.95	157.46	141.71	134.62	23
ST TALK	QMI	17.95	16.16	14.54	13.81	23
VT100 EMULATOR	ATARI	39.95	35.96	32.36	30.74	23
VT220 EMULATOR	MICHTRON	46.95	42.26	38.03	36.13	23
<u>EDUCATION</u>						
ATARI SCHOLASTIC SERIES	ATARI	19.95	17.96	16.16	15.35	23
ALL ABOUT AMERICA	UNICORN	59.95	40.46	36.41	34.59	42
FIRST LETTERS AND WORDS	FIRST BYTE	49.95	39.96	35.96	34.17	32
FIRST SHAPES	FIRST BYTE	49.95	39.96	35.96	34.17	32
KID TALK	FIRST BYTE	49.95	39.96	35.96	34.17	32
MATH TALK	FIRST BYTE	49.95	39.96	35.96	34.17	32
MATH TALK, FRACTIONS	FIRST BYTE	49.95	39.96	35.96	34.17	32

<u>PRODUCT</u>	<u>PUBLISHER</u>	<u>LIST PRICE</u>	<u>SALE PRICE</u>	<u>USER GROUP DISC. PRICE</u>	<u>USER GROUP CASH PRICE</u>	<u>TOTAL % DISCOUNT</u>
<u>GRAPHIC &amp; ART</u>						
ADVANCED ART STUDIO	FIREBIRD	44.95	35.96	32.36	30.75	32
AEGIS ANIMATOR	AEGIS	79.95	63.96	57.56	54.69	32
ATHENA II	ILIAD	89.95	80.96	72.86	69.22	23
CAD 3D 2.0 (CYBER STUDIO)	ANTIC	89.95	71.96	64.76	61.53	32
CHAMELEON	FUTURE	29.95	26.96	24.26	23.05	23
COMPUTER EYES	DIGITAL VISION	249.95	224.96	202.46	192.34	23
CYBER CONTROL	ANTIC	59.95	53.96	48.56	46.13	23
CYBER PAINT	ANTIC	69.95	62.96	56.66	53.83	23
DEGAS ELITE	ELECTRONIC ARTS	69.95	62.96	56.66	53.83	23
EASY DRAW 2.3	MIGRAPH	99.95	89.96	80.96	76.91	23
EASY DRAW WITH SUPER CHARGER	MIGRAPH	149.95	134.96	121.46	115.39	23
FIRST CADD	GENERIC	49.95	44.96	40.46	38.44	23
GFA ARTIST	MICHTRON	71.95	64.76	58.28	55.37	23
GFA DRAFT	MICHTRON	99.95	89.96	80.96	76.91	23
IMG SCAN	SEYMOUR-RADIX	99.95	89.96	80.96	76.91	23
MAKE IT MOVE 2.0	AVILA	49.95	44.96	40.46	38.44	23
NEOCHROME	ATARI	39.95	35.96	32.36	30.74	23
QUANTUM PAINT	EDERSOFT	49.95	40.45	36.41	34.58	31
SPECTRUM 512	ANTIC	69.95	62.96	56.66	53.83	23

ACCOUNTING, SPREADSHEETS, & DATA MANAGEMENT

A-CALC PRIME	ANTIC	59.95	53.96	48.56	46.13	23
A-CHART	ANTIC	39.95	35.96	32.36	30.74	23
BASE II	ANTIC	59.95	53.96	48.56	46.13	23
DB MAN	ATARI	249.95	212.46	191.21	181.65	27
DATA MANAGER ST	TIMWORKS	79.95	71.96	64.76	61.52	23
E-Z CALC	ROYAL SOFTWARE	69.95	62.96	56.66	53.83	23
HOME ACCOUNTANT	HABA	49.95	44.96	40.46	38.44	23
MASTERPLAN	ISD MARKETING	99.95	89.96	80.96	76.91	23
PHASAR	ANTIC	89.95	80.96	72.86	69.22	23
SUPERBASE PERSONAL	PROGRESSIVE PERIPHERAL	149.95	134.96	121.46	115.39	23
SWIFT CALC ST	TIMWORKS	79.95	71.96	64.76	61.52	23
THE INFORMER	REGENT	99.95	89.96	80.96	76.91	23
VIP PROFESSIONAL	ISD MARKETING	149.95	134.96	121.46	115.39	23

LANGUAGES

ASSEMPRO	ABACUS	59.95	47.96	43.16	41.01	32
GFA BASIC	MICHTRON	59.95	53.96	48.56	46.13	23
GFA BASIC BOOK	MICHTRON	39.95	35.96	32.36	30.74	23
GFA BASIC COMPILER	MICHTRON	59.95	53.96	48.56	46.13	23
GFA COMPANION	MICHTRON	49.95	44.96	40.46	38.44	23
LASER C	MEGAMAX, INC	199.95	179.96	161.96	153.86	23
PERSONAL PASCAL	OSS	74.95	67.46	60.71	57.67	23

PRODUCTIVITY

CERTIFICATE MAKER	SPRINGBOARD	49.95	44.96	40.46	38.44	23
DESKCART	QMI	99.95	79.96	71.96	68.37	32
FAST (DESKTOP ORGANIZER)	MIGRAPH	49.95	44.96	40.46	38.44	23
MAPS & LEGENDS	ANTIC	34.95	31.46	28.31	26.89	23
MICROLAWYER	PROGRESSIVE PERIPHERALS	59.95	53.96	48.56	46.13	23
PARTNER ST	TIMWORKS	49.95	44.96	40.46	38.44	23
PRINT MASTER FONTS & BORDERS	UNISON	34.95	31.46	28.31	26.89	23
PRINT MASTER PLUS	UNISON	39.95	35.96	32.36	30.74	23
PRINT MASTER FANTASY ART	UNISON	24.95	22.46	20.21	19.20	23



## TABLE OF CONTENTS

President's Perspective . . . . .	2
8-Bit Connection . . . . .	2
VP Comm . . . . .	2
Smart REMarks . . . . .	3
Hard Drive Hopes . . . . .	4
Is This You? . . . . .	4
Credit Where It's Due . . . . .	4
Super DOS 4.4 (Review) . . . . .	5
Dal-Ace Disk #81: Textpro (Review) . . . . .	6
GENLED Accounting Program (Review) . . . . .	6
L.A. S.W.A.T. (Review) . . . . .	7
?Professional? MIDI Sequencing for the ST: Part One (Tutorial & Product Comparison) . . . . .	8
Turbo BASIC (Tutorial) . . . . .	13
AERCO EasieST Memory Upgrade: The Second Chapter (Review) . . . . .	14
Battlezone ST (Review) . . . . .	15
Deja Vu (Review) . . . . .	15
Home Grown Software (ST Review) . . . . .	16
Base Two (ST Review) . . . . .	17
Dal-Ace Calendar . . . . .	18
Most Wanted List . . . . .	19

## PRESIDENT'S PERSPECTIVE

by Donny Arnold

Hello, Dal-Ace! Well, May is here already. The weather seems to be shaping up into what we enjoy calling "Summer". It's these summer months when the sun shines on our faces as we enjoy the great outdoors. Boating, picnics, softball, volleyball, swimming and horseback riding are all wonderfully fun activities. I personally can't wait until I can take my family camping or for my friends and I to take part once again in the excellent sport of scuba diving. DAL-ACE will even be having a couple of picnics this summer, which I hope to see you all attend if possible. But let's not forget attending our DAL-ACE meetings or logging onto your favorite BBS. Dal-ACE is your club. Without you, well, you know the rest.

My review of Super DOS 4.4 is elsewhere in the newsletter; be sure to check out this great new DOS, available now in the Dal-Ace 8-bit library.

Good luck with your SUPERDOS 4.4 and I'll see you all at the next meeting.

## VP COMM

There will be no VP Comm's report in this issue. This is due to the recent hospitalization of our Vice President of Communications, Rachel Duke.

As you are no doubt aware, Rachel has been under a doctor's care for a heart problem. You will be pleased to know that, after her heart catheterization, the problem has been located and Rachel will be with us for a long time.

Get well, soon, Rachel!

## 8-BIT CONNECTION

By Billy McLean

Greetings and salutations one and all! I hope when this article is in print we will have had the chance to meet. It appears I will be attending the April 16th meeting. Don't be surprised if you think I've dropped a bit and my data transfer rate is a bit slow. Just a little brain damage from the Sixties - far out, huh?

No need to tell you I'm in great spirits. The library is now up to date; everything is inventoried and labeled and to my best knowledge all the disks will boot and run!

Now for your part. Please create a small mountain of copy work for me. BUY! BUY! BUY!

Next I would like to know what the membership thinks about a "best of Dal-Ace" disk package. Perhaps I could persuade Michael Trombley and poll this idea on the club board.

One last detail: many of you may already be aware that a new 8-bit DOS is now available. Super DOS is for those of you who do not have special needs for a disk OS such as Sparta or Mydos. This is the one! It's easy to use and powerful. The Prez is reviewing it at this time so hang on for a more in depth account. If interested, ask Donny or myself. The price is right - just \$20.00 to Dal Ace members. This would be a wonderful opportunity to show software developers that the Atari community doesn't mind paying reasonable prices for a quality product. The price above registers the owner with full support for future updates. Not too shabby.

Well, that's that. Nothing left to say but...  
Live long and prosper!!

### NEW DISKS:

#95 Games - this is an assortment of binary games. The menu was created with Super DOS's superb. Check out TRIK TRAK; this is a bad dude!

#96 Ataritoons - it's wild! It's crazy! You're gonna love it! Uncork all that silliness and let it flow!



"Frankly, Mrs. Pilkins, it'll be a lot easier for you to pay the \$27,300 telephone bill than it will for us to find the mistake."



## Smart REMarks

By Angela Burns

I'm back I'm back I'm back! Yesterday at the Infomart was great! It was tremendous fun getting to see you all again, to talk to REAL adults again, and (of course) to show off Rebecca, the very NEWEST member of Dal-Ace.

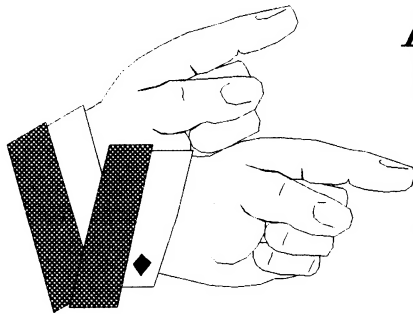
The main thing I want to do in this month's column is thank you for the terrific input to the newsletter. As I write this, I have a total of EIGHT articles from Dal-Ace members, plus the usual columns and announcements. That is the best we've done in a long time, and I'm just thrilled to death about it! I really hope that you keep this up; you're proving that Dal-Ace has some great members. I knew you had it in you!

The second thing I want to do is plug the Dal-Ace BBS a bit. By the time you read this, I will have uploaded some of the great articles from our exchange newsletters that don't make it into our own newsletter because of space limitations. Since, as I write this, I haven't done it yet, I can't tell you exactly what is there at this moment. However, I have reviews, tutorials, hardware tips, game hints, humorous pieces, and all sorts of miscellany; and it will all be on the BBS eventually. There is just so much good information out there, and I want everyone to get a chance at it. I will be leaving a message in the main message base to let you know what's there.

Thirdly, we haven't had many 8-bit pictures for our front cover (one this year, to be exact), primarily because it never occurred to me to ask you for any. Any submissions for cover art (from 8-bit or ST users) will be gratefully accepted. ST pics may be uploaded to the BBS in D.E.G.A.S. format or submitted as hard copy (in the form of a screen dump). At this time, however, 8-bit graphics must be printed out. (If some kind 8-bitter will volunteer to print them out for me, you may then upload them.) Just bring them to the meetings, or mail them to me c/o Dal-Ace (address on back page). The dimensions of the art can be anything up to six inches high by seven inches wide. (Smaller pictures might be used to illustrate articles inside the newsletter.) It would help if the art had some connection to an article, but that's not required. I've tried very hard to divide the newsletter evenly between 8-bit and ST material; now you can help to extend that equality to the front cover.

### \*\*\* NOTICE \*\*\*

The Dal-Ace editor reserves the right to edit submissions for spelling, punctuation, grammar, space, and clarity. Under no circumstances will she alter the content or meaning of your work.



*It's Here! The Accessory You've Been Waiting For. Introducing...*

# Easy-Tools™

Migraph proudly introduces Easy-Tools™, a new GEM desk accessory that works with Easy-Draw®.

If you use Easy-Draw to create technical illustrations, designs, mechanical or architectural plans, flyers, newsletters, charts or forms, then you need Easy-Tools!

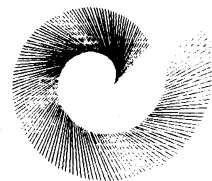
Installed right with Easy-Draw, Easy-Tools appears as an icon when Easy-Draw is run. It offers a variety of powerful tools that make it easier than ever to produce high quality professional-looking projects.

#### With Easy-Tools you'll be able to:

- Rotate any object (except text or bit-images) by ANY degree about a user defined center.
- Specify/inquire the numeric size and location of an object.
- Convert an object to polylines for further editing in Easy-Draw.

- Create polyline text labels that can be rotated by any degree.
- And Much More...

Easy-Tools offers you the power and capability to produce hundreds of new designs, like the spiral shown here, quickly and easily. You'll save time, money and effort on all your projects.



With Easy-Draw and Easy-Tools the choices are yours!

\* Easy-Tools requires Easy-Draw version 2.26 and higher. Contact Migraph for Easy-Draw upgrade information. To order, see a Dealer near you or call us direct at:

1-800-223-3729

OR

**MIGRAPH** 206-838-4677

720 S. 333rd (201), Federal Way WA 98003



## HARD DRIVE HOPES

By Doug Fuller

Sony and HP are working on a smaller format optical disc, the equivalent of a "single" audio CD. It's only going to contain about 150 MB on a 2.5 or 3 inch disc.

Tiny discs with that much info will revolutionize software and data publishing. For example, cars could come with a repair and parts manual that would play through the audio disc player to the LCD dashboard display. The player would be "free" since it would be a part of the car's stereo (probably an extra \$100 or \$200 optional feature). The Rand McNally road atlas would also be nice to have as a replacement for all those pieces of map that I have in the glove box. (Why do maps fall apart after only 2 or 3 uses anyway?) Telephone directories, Sear's catalogs, etc. would all fit nicely with room to spare on the small format. How about a national yellow pages with product prices and availability and a local or 800 number for placing orders directly from the manufacturer?

No one needs 500MB of information except the encyclopedia, unless it is from a broader base than a single business or programmer or unless it is a read/write or write once read many (WORM) drive that can be used up and discarded cheaper than paper. For example, at Sam's a box of 2500 sheets of fan fold paper is about \$20. If printed single spaced, a sheet can contain 3 to 4 kB of data in ASCII format. Thus, a box of 2500 sheets can contain about 10 MB of data. I think nothing of throwing away drafts and goofups on printer paper. On an optical disc that contains 500 MB of data in a WORM format, if the disc cost \$20 dollars, it would contain the equivalent of 50 boxes of fanfold paper at 1/50 of the cost. At the rate I use printer paper, it would take me 30 to 50 years to use up one disc. I would also save the cost of ribbons and worn out printers in the meantime.

Another way to put it in perspective is to consider how long it would take a writer to fill up a disc. The average author only can produce 2 or 3 pages of edited text per day. To fill 500 MB of space would require about 150 years, assuming that he was never sick or took a day off or had to do research on the writing to be done. Photos and other graphics do consume data more rapidly, but about the only way a human can use data in those quantities is in the sound or video format where each frame of data is barely perceived, much less studied.

The problem of the future is going to be building software to sort information so that the flood of all that is available is distilled to prevent the inquirer from being overwhelmed. "Information is power," it has been said. "Power corrupts." Where does the future of all this computer technology lead? We as humans may need to mature before we are ready for GB of information, especially if it is in a computer distilled "crack" concentration with the resulting intoxication, addiction, and corruption that is possible. Why? Why not!? Enough for now.

## IS THIS YOU?

By Terry Borchardt

This is the first time I have ever written an article for anyone who ever listened. (This is true, ask my wife). My name is Terry Borchardt, a person who has an Atari and is enjoying the use and the frustration we should all expect when the keyboard lockup and just looks back at us! Yes, this is true for all, from the oldest hacker to the newest (me). I have been in the club for about a year - from a promise that I would only buy educational programs so the children could learn - to the upgraded, two disk, two printers (a good 1027, HA HA!) - to a new piece (1200XL), so I can do what I want to when the children are on the 800XL, playing their games or "Mickey and the Great Outdoors".

I'd like to say that, at one time or another, we go through our library looking for that certain utility and forgetting to mark the disk, and having to go through the entire library, finally finding that one so badly needed, and time to go to bed so the better half can get a good night's rest and not be reminded of how late you were up making noise, and seeing how many people you'd wake up. I have no problem about this (I wish) but in all I would do it again if I had to! Yes, you would too; this is what makes us hackers what we are today; if not, then I must rest my case. In all, we love our machines (computers, logical sequence putters-in-placers); we are the people who aren't afraid to go where no man has gone before (a locked-up keyboard) and find ways to do the impossible. Dedication to one's computer.

One note: I'm glad to see that Analog mag has got to the presses again and... I hope it will be just as good as it ever has been. I hope that this article has filled space in the newsletter and will never be reprinted unless I can receive wine, women, and money(?). No, not money. I'd only spend it on new hardware and receive a sore ear if I do, so no money (too much trouble) please. Thanks for the ear and happy trails (bytes) to all.

## CREDIT WHERE IT'S DUE

The following members of Dal-Ace should receive credit for the work they are doing for the club. Volunteers are the lifeblood of any organization such as ours, and these people have provided us with a much needed transfusion of late. Hats off to:

Jeff Golden - for making up our new name tags.

Randy Randolph - for doggedly showing up for volunteer duty at the kiosk downstairs every month when no one else would do it.



## SUPERDOS 4.4

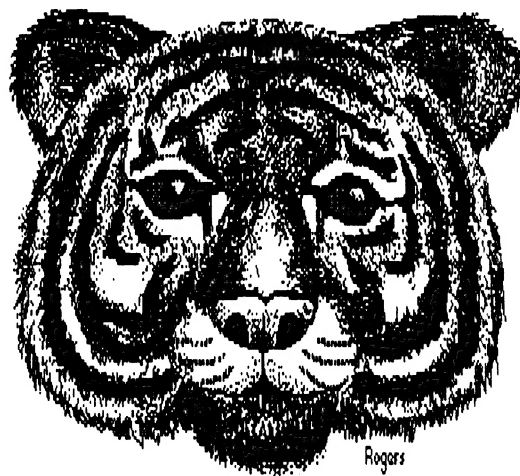
An 8-Bit Review by Donny Arnold

Now, it's time for me to review SUPERDOS 4.4. SUPERDOS has just about everything you'll ever need for file manipulation. It has everything from Run Cartridge to Verify Writes or Recover a Lost File. The screen border even changes color to identify different DOS functions. Don't let me scare you, though, its menus look just like ATARI 2.0 or 2.5 (with the exception of the drive status at the top of the screen, of course). It has got to be the best 8-bit floppy drive system DOS I've ever seen. It even lets you create a menu for automatically running a Binary file. Best yet, it's only \$20.00 from Technical Support. If you'll contact Billy McLean or myself, we'll be glad to supply you with all the info you need to become a registered user of SUPERDOS. The following is a list of SUPERDOS's features, which in my opinion is the best review SUPERDOS could ever get.

1. SUPERDOS works with all Atari 400 /800 /600XL /800XL /1200XL /65XE /130XE computers and the XE Game Machine.
2. Supports Single, Enhanced (Dual), and Double density.
3. Automatically configures to the density of the disk in the drive.
4. Density of each drive is displayed at the top of the screen.
5. Copy files between different density disks with only one drive.
6. Automatically finds and sets up largest RAMdisk possible.
7. Supports 130XE compatible 128K, 256K, and 320K RAMdisks.
8. Supports Axlon compatible 128K and 256K RAMdisks.
9. Automatically copies files with .RAM extender to RAMdisk.
10. I/O defaults to RAMdisk if drive 1 is not available.
11. DUP.SYS available instantly, no MEM.SAV (even on 800s).
12. Short DOS.SYS and DUP.SYS files leave maximum space for you.
13. RESTORE files which have been DELETED or left OPEN.
14. Directory can display DELETED and OPEN files.
15. Automatically TRACE and PATCH to recover damaged files.
16. Single keystroke menu (no Returns).
17. Clear English prompts.
18. Concise double column display lists 40 files at once.
19. Full screen scroll, won't wipe out the filename you were about to use.
20. Screen border color indicates type of operation.
21. Use upper and lower case, inverse video and numbers in filenames.
22. Adjust the key delay and repeat rate for

XL/XE (fast keyboard).

23. Write with or without verify, toggle from menu.
24. A Binary Save that even saves cartridges.
25. Support for high speed transfer with SUPERMAX and US Doubler.
26. Skewed sectors for even higher speed with SUPERMAX.
27. Format disks in any density.
28. Write DOS.SYS and DUP.SYS or DOS.SYS only.
29. Copy all .SYS files except DOS.SYS using wild cards.
30. True sector copier copies boot disks, skips empty sectors.
31. Option to format destination disk during disk copy.
32. Copy sectors and display bad sector numbers.
33. Copy to and from cassette (C:) using long or short IRG.
34. Display the configuration block for non-Atari disk drives.
35. Enter sector numbers and addresses in hexadecimal or decimal.
36. Handle up to eight double density files open concurrently.
37. Handle up to four double density drives plus a RAMdisk.
38. Easy to change file buffers and drive buffers, no POKES.
39. Copy from DOS 3 files using one or two drives and wild cards.
40. SUPERBIN - a compact boot program which displays a menu of binary files and runs them.
41. SUPERBAS - a compact AUTORUN.SYS program which displays menu of BASIC files and runs them.



**ATARI, WE ARE WATCHING  
YOU, BELIEVE IT!**



## DAL-ACE DISK #81: TEXTPRO

An 8-bit Review by Randy Randolph

Folks, for three bucks this is the best buy in town. I am no expert on things computing, but I have banged out a bunch of words with typewriters and word processors; and without question the Textpro versions 1.2 and 2.5r are the most versatile word processing programs available for Atari 8-bit machines. I have not even started to use all of the features these programs offer, and I have been using them almost daily for well over a year. Version 1.2 not only edits words, but object codes as well!

Textpro is easy to use. There are fourteen help screens you can punch up at any time that explain just about everything you need, from editing of text and programs, to formatting the printed page. The HELP key brings up a menu of these screens, and it is simply a matter of pushing the right number key to bring up the one you need.

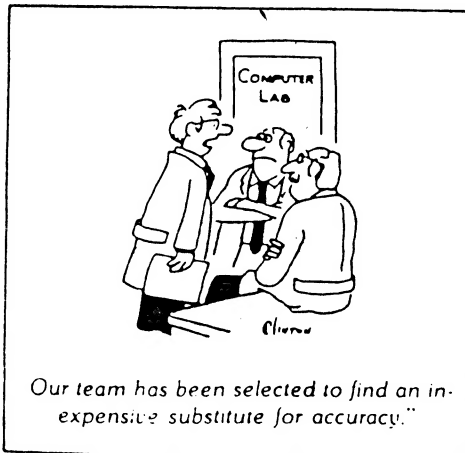
If the help screens are not enough, there are over 30 pages of documentation on the disk that explain all features in detail.

The 2.5r version makes it possible to work on a file that is larger than the editor can load at one time. A file that uses all the sectors on a disk can be edited without breaking it up into separate files. This version also includes macros that do mail-merge as well as other specialized formatting, such as form letters or invoices, and if you want more, create your own macros.

Drawbacks: Not many. It does not work with Mydos, the global replace is a little slow at the top of a long document and it does not include a spelling checker!

The lack of a spell checker can be eliminated with the Dal-Ace ANALOG #46 disk, which includes a spelling checker you can customize for yourself!

Three dollars! Membership does have its privilege.



## THE GENLED ACCOUNTING PROGRAM

An 8-bit Review by Robert W. Scroggins

GENLED is a public domain accounting program written in 1985 by Neville R. Williams from Australia. This double entry general ledger accounting program runs on any Atari 8-bit model computer with 48k, one disk drive, and a printer (Gemini 10X or better). XL/XE computers need a translator program before using GENLED.

The program has limitations because it is designed to use 48K of memory. The chart of accounts is limited to 99 accounts, and there is a maximum of 1000 entries per year. The program also can't handle any amount greater than \$65,000. Up to 10 accounts may be used in each entry. All dates MUST be entered European style (DDMMYY). Available reports include balance sheet, income statement, trial balance, transaction list and chart of accounts. You should request an income statement prior to the balance sheet in order to properly compute net income.

There are journals for receipts, disbursements, and general journal. Debits and credits are automatically taken care of in the receipts and disbursements journals; however, each receipts journal entry is limited to only one debit account, and each disbursements journal entry is limited to only one credit account. The general journal accepts multiple debits/credits. Income statement accounts must be closed out to the capital account via a general journal entry prior to starting each new year.

RUN the program from BASIC. It locks if there is no company name already on disk. To enter the company name initially, after RUNNING GENLED, hit BREAK, then type CONT, follow the prompt, and use the menu option to save data before you quit the program. To change the company name, delete the company file from DOS and start anew. Keep each month's data on a separate disk so you can get prior month reports. If that's not important to you, use only one data disk, but print a full set of reports each month. Be sure to change the date when starting a new month.

The code is fully REMarked, and documentation is good. If you're handy with Atari BASIC, you could make some nice improvements: adding an automatic request for an initial company name, a larger chart of accounts, the ability to handle more than \$65,000, or financial reports customized for your business. Leaving transaction data on disk instead of bringing it into memory would free up needed RAM (but slow down execution time for a RAMdisk!). These upgrades would be nice in a TURBO BASIC re-write.

As it stands, GENLED is a good quality public domain accounting program suitable for a VERY small business or for personal accounting on your 8-bit Atari.

This and other financial programs are available with documentation on DAL-ACE disk #93.





## L.A. S.W.A.T.

An 8-Bit Review by Howard H. Wen

Talk 'bout a cool game, man! L.A. S.W.A.T. by Entertainment U.S.A. is the only new Atari 8-bit game I know of where you don't have to spend your precious weekend sludging through a novel-sized book of documentation! For a while there, it seemed like the only games we 8-biters were going to be playin' from now on were those intellectual D&D quest-type games. But with L.A. S.W.A.T., you don't even have to have HALF a brain to play! You jus' boot the disk, plug in your fave joystick - and fire away! Talk about simplicity, man!

The game's scenario is this: terrorists (Libyans, Iranians, Russians, whoever-you-want-'em-to-be) have taken over West L.A. and are holdin' a woman hostage.

You control this little blue S.W.A.T. team guy and run through the vertically-scrolling city streets, takin' care of the terrorists wielding baseball bats. And I don't mean readin' 'em their rights, mind you; waste 'em with your machine gun! But if one of the terrorists happens to get you, he'll bash your brains in (a.k.a. the "Al Capone swing"). Then you'll control one of the two remaining backup S.W.A.T. guys who're following closely behind. B'sides the nicely-animated bad guys, you have to avoid rooftop snipers who're trying to take potshots at you, watch out for grenades, and be careful not to shoot these old men with canes who're just walking down the sidewalks, mindin' their own business. If you blast one of these geezers, you'll lose MEGA points (1000 to be exact) 'cuz you only get one point for every second you're still livin' and movin'. Once you reach the top where the street intersection is, start scramblin' down to play ball with your head. If you can successfully mow down all of 'em, Khadaffi himself runs down holdin' a lady and pointin' a gun to her head.

You have to shoot him in order to save the chick, but if you miss or wait too long, the lady dies. This ain't all that easy; Khadaffi's skating side-to-side like the maniac he is, and the lady's shakin' all over like wobbly Jello. If you win at this (which is REAL hard to do), the game plays an annoying tune, and you get to save the next city where it's more of the same stuff 'cept things are movin' and shootin' faster.

I tell you, there hasn't been an artistically violent game like L.A. S.W.A.T. since ORC ATTACK from those British-teabags at Thorn/EMI. It gets the highest rating on the "cool" scale. Fortunately, there is absolutely no redeeming social value in L.A. S.W.A.T. to get in the way of game play. The graphics are okay (we're not talkin' EIDOLON or KORONIS RIFT here), but the city's buildings, sidewalks and streets littered with overturned cars are decently drawn. The terrorists look pretty good, right down to the L.A. joggin' gear they wear and the bats they're swingin'; but the S.W.A.T. guys themselves look like wimpy janitors aiming broomsticks. However, for only \$4.24 at local Babbage's, this Atari/Commie (Commodore 64) floppy disk is a real deal. Check it out.

## Tired of Paying High Online Charges and Sign-Up Fees?

### COMPUTALK TCS™ The BBS for your Atari™

- Network of 6 Atari computers linked together.
- Compu-Gab, CB Simulation with both Public and Private areas.
- Compu-Trek, one of 5 Multi-User Online Adventures.
- Over 2,000 downloads for both the 8-bit and ST Computers.
- Accessible through PC Pursuit.
- Online Conferences, MessageBases, E-Mail, Atari News, and more!!

**★ ONLY \$25.00 for 6 Months ★**  
**No Sign-Up Fees / No Online Charges**

Call today and sign-up online for a trial account.  
(817) 589-2588 (Direct Access)  
(214) 589-2588 (using PC Pursuit)



**COMPUTALK TCS**  
P.O. BOX 18346 / Fort Worth, Texas 76118



## Computer Consulting, Ltd.

(214)490-3615

### Dbase and Paradox Programming

### Consulting On Spreadsheets And Wordprocessing

Lotus, Symphony, Excel  
MicroSoft Word - IBM/Mac  
WordPerfect, DisplayWrite 4

### IBM And MacIntosh Microcomputer Training

*Call For Government And  
Public School Rates*

**Fast, Friendly, Flexible Support**



## ?Professional? MIDI Sequencing for the ST: Part One

By Joe Camblin

Let's get the standard Midi Article No. 101 stuff out of the way first. Musical Instrument Digital Interface is a computer language allowing separate electronic musical instruments and computers to communicate with each other. You can have several types of keyboards, drum machines, MIDI guitars, computers, and in some cases little metal boxes full of synthesized sounds, "speaking" to each other and playing in perfect sync. With the right software it is possible to swap sounds between instruments, although sometimes certain qualities of the original are lost when played back from the receiving instrument.

Sequencing is the process of recording/editing, storing, and ultimately playing back of MIDI data. Sequencers DO NOT store sounds and play them back in song form. When a piece of music is sequenced on a computer, or the built in sequencing software on some instruments, what is actually being recorded and stored is the Midi language data telling the instruments to:

- \* play this note on this beat
- \* turn off this note on this beat
- \* change patches (go to another built in sound)
- \* sustain these notes for this amount of time
- \* add pitch bend to this note and so on...

Virtually all of the information related to and needed for a musical performance, (except of course human spontaneity, improvisation, mood and feel), has a corresponding MIDI number and can be recorded in a sequence and played back flawlessly again and again. Once the song is stored, and edited if necessary, your music will have the advantage of never missing a beat or hitting a sour note; unless the sequencer or one of the many computerized instruments decides to mess up on you, which anyone involved with computers knows is highly unlikely... HA!

So what features and capabilities do we need for a PROFESSIONAL sequencer? First there must be more than 16 tracks to record/edit data on or you just don't have enough room for multi-layered parts and separate tracks for pitch bend, system exclusive data, patch changes, and tons of drum and percussion parts. (Guess what instrument I play.) It's also very nice if you can mix and unmix tracks without altering any information.

Next the sequencer must be able to record tempo and time signature changes within the song or it really isn't pro stuff. Tempo range should be from 40 or 50 to at least 240 beats per minute, some can go as high as 400bpm or more, and the time signature ideally should be totally programmable by the user but has to include all the most common ones: 2/4, 3/4, 4/4 (by far the most used in popular music), 5/4, 7/4, 6/8, 12/8, and for the latest Frank Zappa tune you might need something like 17/8.

Thirdly, and in my opinion a very important consideration, is the resolution... sometimes called PPQN or Pulses Per Quarter Note and sometimes referred to as

ticks per beat, of the sequencer. This one may need a little explanation. Every time you take a breath, or blink an eye, or utter a word, there is a certain amount of time in between; right? Well, in musical performances there are certain amounts of time between notes and certain amounts of time that notes are sustained, and these 'times' have to be accounted for if you are trying to sequence a piece of music. If I only have a few ticks (subdivisions) between each beat of the music and I move the note or drum hit one tick I would have just changed the feel by a large amount in terms of "real time" and thus probably destroyed the rhythm. However if the sequencer has hundreds of ticks per beat then it can record things with a more accurate "real time" feel and allow a much finer editing of note placement. This results in a more human sounding groove. The equation looks like this: {More PPQN or a higher resolution} = {Better real time recording and more flexible MIDI data editing}. To call a sequencer package Professional it should have at least 192 PPQN and that is really being lenient in my opinion. As of this writing the ST sequencers in the Pro line all have a resolution of either 192 or 240. Currently some of the most popular sequencers for the Macintosh and the IBM world have resolutions of 480 and even 600 PPQN! Hint... Hint... It was my understanding when I bought my 1040 ST that it was faster, more powerful, and with the MIDI interface built in, ideally suited for MIDI applications. What's the problem ST developers? Is there some reason that the ST can't have or handle higher resolutions? I'd really like to know.

Other things to look for include: Step Time Recording, Microscope Editing (the ability to get at and alter every bit of MIDI data on any tick in the track), Flexible Transposing of MIDI data on a track by track or Global basis, Midi Data Filtering, (the ability to pick and choose what types of MIDI information you record on any track), Fast and flexible Quantization, (the sequencer's way of shifting notes to be exactly on the beat and in rhythm, or in some cases to be deliberately off a little so as to sound more human), Quantization methods have become very complex and very helpful in achieving a less mechanical end product. Punch In and Out is something else a Pro sequencer should allow as well as the Looping of tracks or individual parts. For live performances, Song Chaining can be a real life saver. These are extremely important features and I consider them to be the most critical, but they are by no means all of the things that today's sequencers incorporate.

Prices range from \$225 to \$575 for the six professional ST sequencers and from around \$200 to \$700 for the other personal computers. Next time I will try to compare the ST's offerings.

- Master Tracks Pro from Passport \$349
- Creator from C-Lab/DigiDesign \$349
- SMPTE Track Professional from Hybrid Arts \$575 w/SMPTE \$375 w/o
- Masterpiece from Sonus Corporation \$475
- Steinberg Twenty Four from Steinberg \$349
- Dr. T's Keyboard Controlled Sequencer from Dr. T's \$225



## TURBO BASIC

An 8-bit Tutorial by Eb Foerster

### CORRECTIONS AND CLARIFICATIONS TO DOCUMENTATION FILE.

**BLOAD:** If the program contains a run address (automatic run with L option of DOS), the command is equivalent to the BRUN command. You cannot load such a file without running it.

**DIR:** To list a directory of a disk other than drive 1, you must include a file specifier: "Dn:\*. \*". You cannot use DIR "Dn:".

**EXIT:** Documentation states "Exit a DO-LOOP loop". This command exits all loops, DO-LOOP, REPEAT-UNTIL, WHILE-WEND, and FOR-NEXT. A PROCedure may also be exited with this command. I would advise against using it for this purpose. The EXIT goes to the line after the ENDPROC command. It does not return to the line calling the procedure.

**PAUSE n:** The actual pause is n/60 seconds. To pause 5 seconds, you would program PAUSE 300.

**RENUM:** Be careful with this command. It is possible to have duplicate line numbers or create sequences of lines that are not in numerical order.

**RAND(n):** Generates a random integer in the range from 0 to n-1.

**INSTR:** If you use more than one INSTR function of the short form - INSTR(X\$,A\$) - in an expression, you will get "ERROR- 3 VALUE". The long form - INSTR(X\$,A\$,i) - returns position within X\$, not relative to start position i. The long form also starts search at i+1. INSTR("ATARI", "A" ,i) returns 3 if i=1, 0 if i=3, and 1 if i=0.

**UINSTR:** Same rules as for INSTR above apply.

**ERROR-27:** Occurs when program flow encounters a PROC. You must enter a procedure with the command EXEC.

**IF-ELSE-ENDIF:** If you use an implied GOTO within this structure, you will get an "ERROR-22 ?NEST":

```
IF X > 10
  IF Y = 5 THEN 2500
ENDIF
```

These lines will execute if the condition statements are true, but will return "ERROR 22" if one of the conditions is false. You must use the explicit GOTO statement:

```
IF X > 10
  IF Y = 5 THEN GOTO 2500
ENDIF
```

The IF-ELSE-ENDIF is designed for multi-line statements within the IF structure. However, this form of the statement may also be written on one line:

```
IF CHR$(A)="Y": PRINT "YES": ELSE:
PRINT "NO": ENDIF
```

## RUNNING ATARI BASIC PROGRAMS ON TURBO BASIC

Turbo BASIC will run most Atari BASIC programs as is without modifications. You may, however, have trouble with some programs because the speed of execution is much faster than in Atari BASIC.

An example is the use of an empty FOR-NEXT loop in Atari BASIC for timing a delay (FOR A=1 TO 100:NEXT A). Such loops are used to time note durations or to display a screen for a specified period of time. These loops will execute 3 times faster in Turbo BASIC and 5 times faster when run as a compiled program. The solution to this problem is to change all empty timing loops to PAUSE statements. The time delay will then be exact whether it is run with Turbo BASIC or as a Compiled program.

One other problem you might encounter is the use of more than one NEXT statement in a FOR-NEXT loop:

```
100 FOR A=1 TO 5
110 IF A=3 THEN NEXT A
120 ? A
130 NEXT A
```

If you try to compile these lines, you will get an error at line "130: No FOR". In other words you must have one and only one NEXT statement for each FOR statement. To compile the above lines, you would need to change the "NEXT A" in line 110 to "GOTO 130" or change the lines using IF-ELSE-ENDIF branching.

I have discovered these errors in documentation and restrictions in the use of the new commands. If you discover any others, please send them to me and I will pass them on in future articles.

### INDEXED DATA STATEMENTS

Last month, we presented a program which, when run, printed a message to the screen. It was not obvious from the program what the message would be. If you figured it out before running the program, congratulations. The program demonstrated how you can manipulate the pointer that Atari BASIC uses as an index to an item within a DATA statement. This pointer is at memory location 182. You can make use of this pointer to read specific items from a line of DATA. The example last week was kind of obscure and of no practical value unless you like writing programs that are difficult to decipher. Let's look at another example:

```
100 DIM A$(10)
110 CLS
120 PRINT "PRESS ANY NUMBERED KEY"
130 DO
140 GET A
150 IF A>47 AND A<58
160 RESTORE 220
170 POKE 182,A-48
180 READ A$
190 ? A$
200 ENDIF
210 LOOP
```



220 DATA ZERO ,ONE ,TWO ,THREE ,FOUR  
FIVE ,SIX ,SEVEN ,EIGHT ,NINE

The DO-LOOP at lines 130-210 is an infinite loop. The GET command at line 140 waits for a key to be pressed and places the ASCII value of that key in the variable A. Line 150 tests if the key is a number 0-9 (ASCII value 48-57). If true, the statements from 160 to 190 are executed, else the program loops. Line 160 makes sure that you are pointing to the desired line containing the DATA. Line 170 then pokes a value from 0 to 9 into memory location 192. The READ statement then reads the corresponding alphabetic representation of the number and prints it.

Using the RESTORE command, you can only point to a line containing a DATA statement. Using location 182, you can now point to a specific item within a DATA statement. In other words, the use of this pointer allows you to use the DATA statement as a look-up table.

Here is another program using the indexed DATA statement. This one, however has more practical value. It will test whether your joysticks are are functioning properly.

```

100 GRAPHICS 23
110 COLOR 1
120 X1=0:Y1=0
130 PLOT 80,40
140 DO
150 A=STICK(0)
160 RESTORE 290
170 POKE 182,A
180 READ X
190 RESTORE 300
200 POKE 182,A
210 READ Y
220 IF X<>X1 OR Y<>Y1
230 COLOR 0:DRAWTO 80,40
240 COLOR 1:DRAWTO
80+30*X,40+30*Y
250 X1=X:Y1=Y
260 ENDIF
270 IF NOT STRIG(0): TEXT 35, 5, CHR$
(20): ELSE :TEXT 35,5," ":ENDIF
280 LOOP
290 DATA ,,,,1,1,1,-1,-1,-1,0,0,0
300 DATA ,,,,1,-1,0,,1,-1,0,,1,-1,0

```

### PROGRAMMING PROBLEM

Here is an interesting problem for you to solve on your computer, whether you are a beginning or an experienced programmer. The NCAA recently completed their basketball tournament. Sixty-four teams were entered and played in the single elimination tournament (losers went home; winners went on to the next round). Write a program that will calculate the total number of games played in the tournament.

If you are a really good programmer, have your program calculate the number of games played in a single elimination tournament where the total number of teams are not a power of two (2,4,8,16...). In other words, some teams will have a first round bye. Give it

a try; we will present a solution for you next month.

Next month we will start examining some of the new commands in more detail.

## AERCO EASIEST MEMORY UPGRADE: THE SECOND CHAPTER

Reviewed by Tom Neitzel, S\*P\*A\*C\*E  
Reprinted from PSAN, 9/87

I wrote an earlier article in the June, 1987 PSAN regarding the installation of the AERCO EasieST memory in one of the club's 520STs. I was impressed with the overall quality of construction of the upgrade, the relative ease of installation, and the support that the factory gave over the telephone. I saw a great deal of potential in the upgrade board, since it apparently was designed to allow up to 4 meg of memory to be present in the 520. I was also told that the documentation would be forthcoming on how to make the upgrade to 4 meg work.

I have received the instructions for the modifications necessary to make the EasieST RAM upgrade function at 4 meg (using 32 each. - 1 meg chips).

To be absolutely blunt, I am truly disappointed in the instructions. They are relatively clear and appear complete, *but* I would not even *think* of attempting to use the AERCO upgrade to run 4 meg on a 520!

The AERCO memory board MMU replacement socket must be greatly modified to allow 4 meg. I consider these modifications to be far too extensive to expect most computer hobbyists to successfully complete. The changes to the boards include the addition of several jumpers, the cutting of 33 resistors (that's right, 33 of the little devils), drilling a hole and passing a wire through the board, and, most disturbing to me, the removal (breaking off) of 11 pins from the MMU socket. This is a "one-way" upgrade, no pulling out the changes and returning to the beginning.

In all fairness, the first paragraph of the upgrade instructions reads, "These instructions assume you've had lots of experience cutting traces and soldering on dense PC boards. If this is not the case, please let your dealer or AERCO perform the modifications. We charge \$40 plus return shipping." I would encourage you to pay the \$40 if you must have 4 meg of memory with the AERCO board.

I think that the basic AERCO EasieST memory upgrade is a good product for the 520 if you want to increase your RAM to 1 meg (using 256K chips) or 2.5 meg (using 16 - 1 meg chips). These two memory configurations can be handled without alteration of the basic upgrade components. I would not personally push the upgrade to 4 meg.

**!KIOSK VOLUNTEERS NEEDED!**



## BATTLEZONE ST

Reviewed by Dave Thorson, NWPAC  
Excerpted from Nybbles & Bytes, 11/87

I was a bit disappointed when I got a chance to play the ST version of Battlezone.

Battlezone, a land where you command a lone tank against insurmountable vectorized odds, where you can be shot from behind as if the code of the West never existed, where certain death zips almost peacefully by as you backtrack in a left turn for all you're worth.

Yes, the graphics are well done; close, in fact, to the original arcade classic, even down to the cracked windshield when an incoming missile finds its mark. ST Battlezone is probably a very good game for someone who hasn't played the Atari 2600 version.

I should be excited about the release of this game, I've waited over three years for it. But I still can't believe the 2600 version, crammed somehow into a 4K cartridge, can outshine a program with a megabyte of RAM to roam in! In level one, I shot some tanks and missiles, each of which was fairly predictable. I sunk a few saucers. I scored some points. In level two, more of the same. In fact, I could see no difference between any of the six game levels. The first time on the most challenging (?) level 6, I played for over twenty minutes before turning off the computer. That was only two hours after I broke the seal on the box! So this is a challenge?

The controls are sluggish (perhaps an attempt to emulate a "real" tank?) and all the pyramids and boxes strewn about the playfield tend to get in the way more than offer a calm refuge.

Even the feel of the game is slow. In the midst of combat, it seems likely that if you were quick after pressing the fire button, you would have time to boot another game on that tired old 130XE in the corner before the shell leaves the cannon of your tank.

The winning strategy seems to be to back up while turning from left to right, pressing the fire button prior to lining up on the target to give the simulated crew (?) time to load a shell into the cannon and send it off. You almost never get hit this way, and you can keep trying until you eventually hit the target. What fun!

I'm making all this sound worse than it probably is, but I thought Atari could easily improve on the 2600 version with all that ST memory and speed waiting to be exercised. In the 2600 version, the game got visibly harder, even presenting up to two enemy tanks and a saucer at the same time. The ST version never sends multiple tanks after you. The 2600 version was very responsive; you could be accurate instead of guessing; you could say, "Gee, I made a good shot!" instead of "Wow. I got lucky again." There were also several strategies to master in the 2600 version, not one.

It seems trading fully colored-in tanks for vector graphics has cost a bit of playability.

My conclusions? Try it before you buy it. Friends wonder how I do so well at the 2600 version; perhaps the ST version is what they're looking for. I still love those graphics.

## DEJA VU

An ST Review by James Miller, PAC  
Reprinted from PAC Newsletter, 2/88

Deja Vu is a nightmare come true!!! You find yourself waking in a bathroom stall with the biggest hangover you've ever had. Hmmm! What is that needle mark doing in your arm? Boy, are you in it deep! You're sittin' in some dive. There's a stiff upstairs. You don't remember your name or anything else.

The aim of this color graphic game is to find out who you are and why several people are trying to kill you, and to get yourself off the hook with the law. There is no love lost between you and the police or the mob. When you hear a siren, you had better run or the police will slap you in irons. My Gosh! It's not even safe in the sewers! Good luck, kid. You're going to need it to get off this hook.

The game works with one or two drives or with a hard drive. Don't forget to set the printer control to 960 for the time, during the course of the game, that the printer is used. It is not required or important in order to play the game; it's just a bonus. Deja Vu works fine with a 520 or 1040ST, but a color monitor is required. The manual is well written and easy to understand.

Deja Vu runs from a command window. You tell the game what to do by pointing at one of the commands and pressing your mouse button. The commands that you give will usually involve something in the room that you are in. Many of the objects you see can be picked up and placed in your inventory or dropped in another spot in the picture. When I say pick it up, I don't mean you type "get coat"; you actually point the pointer at the coat and drag it out of the picture and place it in the inventory. Whatever you drag out of the picture disappears. All of the objects in the inventory can be examined, opened, used, etc. The inventory gets quite full of neat pictures. You can save and restore the game if you get blown away, don't find an antidote for the drug in you, or get eaten by the alligator.

There are windows in the game that can be moved around the screen, brought to the front, resized, closed and opened. The program uses the full capabilities of the ST and is not another "port over" from another computer.

The only problem I have with Mindscape is the customer support. I'll admit I got stuck at one point and called them. I was put on hold (three times), listened to the local radio station while on hold (terrible station), and talked to several people before getting to the ST department. THEN I was told they didn't give hints over the phone and needed to send them \$5.00 for the hint book. I did solve it without the hint book, because I refused to pay extra. Sierra has great customer support, and I expect the same from others.

Deja Vu has great graphics and smooth operation, and it's difficult to solve. The ending is great and worth the time it takes to solve it. I give it two Hip-Hip Hurrahs!!



# HOME GROWN SOFTWARE

An ST article by Eric Einsmann  
Reprinted from CFSTUG newsletter, 3/88

## MISSION IMPOSSIBLE

It was the mid-summer of 1987. Late one night Wayne Buckholdt was heading for his fridge for a late night snack. As he reached for soda and a bag of corn chips, the ketchup bottle made a few clicks, and in a moment a micro-mini tape began to play and said, "Wayne Buckholdt, your mission (should you choose to accept it) is to take an ordinary 520ST and make it outrun a mega-ST with a blitter. This message will self-destruct in 5 seconds." As Wayne pondered this awesome task, he closed the fridge; seconds later, the ketchup bottle exploded and totally destroyed an entire box of twinkies.

While the above paragraph is mostly fiction, the mission itself is real and after several months of hard work is ready for release.

What is the name of this mind-boggling software? It's called Turbo-ST and it is truly amazing.

I'm not a software engineer, so don't expect an extensive explanation of how it works; but as far as I know, it replaces the line-A routines of the ST. The final result is a considerable increase in speed for many ST programs. It will not have the same benefit in all programs, because a lot of ST programs use their own custom routines, which in the case of Turbo-ST would be almost redundant. For example, if you have the Tempus text editor and you install Turbo-ST, don't expect Tempus to go twice as fast. But what Turbo-ST will do is make another word processor run at speed similar to Tempus. It also works well with just a plain, ordinary desktop. If you have a hard drive with a lot of files, Turbo-ST will scroll through them faster.

Just how fast does it go? Well, according to the press release from SoftTrek, the paging speed of FinalWord is increased by 75% over a standard 520 or 1040ST. St Writer's paging speed is increased by 108% and its scrolling speed by 42%. The paging speed of the Devpac editor from HiSoft is more than tripled. Turbo ST is so fast that you can't get these kind of speed increases even with a MegaST WITH a blitter!

The program itself is very easy to use because it is in the form of a desk accessory. Just click on it once to install it, and click on it once again to remove it.

Turbo-ST is well written and is impressive to see in action. Perhaps one of its best features is its retail price of \$49.95.

Turbo-ST is potentially more significant than even PC-Ditto. While PC-Ditto is a great program, it is only of use to those who want to run MS-DOS software. Turbo-ST can benefit every single ST owner. It will be exciting to watch and see how this program develops. If you are interested in finding out more, you can contact:

SoftTrek  
P.O. Box 5257  
Winter Park, Fl. 32793  
Phone# (407)657-4611.

At the March CFSTUG meeting: The March meeting was quite interesting indeed. The most well known people attending were Bob Breum (author of Easle-ST), Bill Teal (author of PC-Ditto) and Wayne Buckholdt (author of Turbo-ST). It was almost like a mini AtariFest. Bob Breum and Bill Teal gave speeches on their respective products, but the highlight of the meeting was the first, public demonstration of Turbo-ST.

Wayne Buckholdt had three ST systems set up for the demo. He had a Mega ST, a standard 520 and a standard 1040ST. The main part of the demo consisted of loading a word processor into each system and then seeing how fast each system could scroll through a large text file. As expected, the 520ST using Turbo-ST was done well before the 1040 or MegaST. In fact, both of the NON-Turbo-ST systems crashed back to the desktop because Wayne had held his finger down on the keyboard too long. Wayne also said that the general public might have a problem using Turbo-ST with programs that used illegal (as far as Atari is concerned) methods of programming. The manual I received at the meeting had the following statistics (times given are in seconds):

### Monochrome Tests:

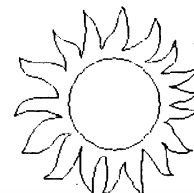
	BIOS Function 3 page	GEMDOS Function 9 scroll	BIOS Function 3 page	GEMDOS Function 9 scroll
520/1040ST (old roms)	27.785	68.155	47.680	88.585
520/1040ST (new roms)	26.405	55.890	46.350	76.345
Mega ST with blitter	22.995	44.865	43.010	65.310
Turbo ST with any ST	10.595	33.680	7.745	31.060

### Color Tests:

	BIOS Function 3 page	GEMDOS Function 9 scroll	BIOS Function 3 page	GEMDOS Function 9 scroll
520/1040ST (old roms)	28.645	68.070	48.475	88.455
520/1040ST (new roms)	27.595	56.215	47.470	76.615
Mega ST with blitter	24.875	46.675	44.805	67.075
Turbo ST with any ST	10.845	33.910	7.990	31.295

As you can see, there is a big difference. One final note, if you are planning on making a trip to the Central Florida area (Walt Disney World for example) CFSTUG meetings are on the first Sunday of every month at 1:30pm and are held at McDonald's Computer Center, 4921 E. Colonial Dr., Orlando, Fl 32803. If you need any more information, write to the above address or call (407) 894-2270. Everyone is welcome.

IT'S  
NEW  
AND  
IT'S  
HOT  
!!!!





## BASE TWO

An ST review by Steve Golden

Excerpted from Eugene ACE Newsletter, Aug/Sept 1987

DBMaster One is a data base that is simple to learn and simple to use. It was included free with the purchase of the 520ST for a short time and has since been "debugged", enhanced somewhat, and is now sold by Atari. I have been using DBMaster One for over a year and I've been very happy with its ease of use and power. I've been just as unhappy with its faults. Along comes BASE TWO. Base Two is a data base that is simple to learn and simple to use. This sounds like my description of DBMaster One, and it should. Base Two is a GEM-based data base by the authors of DBMaster One and distributed by Antic magazine through The Catalog. Base Two was written to correct the faults and include the "wish list" left out of DBMaster One.

As with all data bases, Base Two will allow you to keep track of information such as record or book collections, mailing lists, computer programs, subjects on VCR tapes, etc. The big difference with Base Two is that you can learn to use it in one sitting; and if you don't use it for a month, you don't have to re-learn how to use it. Like DBMaster One, Base Two consists of two programs, one to design the data base and one to actually use it. Each has the ability to find data based on selection criteria, to display that data, to report on that data, and to allow modifying and adding to that data. Each allows redesigning the data base without losing the existing data. Base Two and DBMaster One "feel" and look very much alike, but that is where the similarity ends.

Once a data base is created, DBMaster One does not allow its use in any other resolution. Base Two lets you switch between high and medium res at any time. It has a menu option to set or correct the system date. It lets you enter printer control codes to initialize the printer to italics, condensed, enlarged, or any other type your printer supports.

Anything you liked about DBMaster One has been incorporated into Base Two, with one exception that I'll note later. Base Two has allowed the increased use of the keyboard so you don't have to grab the mouse after keying data. When updating a record, the cursor moves from field to field when you press return. Each field is "blocked" and can be deleted by pressing the backspace or delete key. The data can also be changed by using the cursor keys and the backspace or delete key. This is much better than DBMaster One's allowing only the backspace and no cursor key use. But this also causes a problem, since the entire data field is "blocked"; and if you press delete or backspace before moving a cursor key, the data field is deleted. This is not good. Worse, there is no way to recover the data without retyping it. Since a field can be several hundred characters long, retyping might not be practical. An automatic move to a buffer that could replace the data using the UNDO key would have been a good idea. I think that more work should go into the keyboard operation of Base Two. Additional options

include defining calculation fields that can be the calculated result of other numeric fields and/or constants. These and other numeric fields can be totaled on reports.

The two most important changes incorporated in Base Two are in the reporting functions. DBMaster One's weakest link was in its report generation, which gave you almost no control over the field length and often cut off the ends of addresses and the last few digits of my phone numbers. Base Two gives you user defined, two-line headings including optional page numbers, time of day, and current date. You can place data fields anywhere on the line or on more than one line. Each field size can be adjusted as desired. Data fields defined as calculation fields can be totaled on the report. You no longer have the problem of fields that contain only numbers being automatically totaled. Another great option is allowing constants to be included in your print line. Something I really appreciate is the ability to concatenate data fields. Unfortunately, the concatenate option applies only to the entire report rather than just to selected fields. This is excellent for address labels but not for reports with fixed headings, since you never know which position a field will be placed on in a line. The report designing and modifying is very easy and fast. Base Two can store ten report definitions per base.

There are some problems with Base Two. I occasionally had a problem placing a field in the report if it was to be placed on a line between two lines containing data. I had to move the lower line's data away, place the new data, and then move the lower line's data back again. This was annoying but not "fatal". There are also some very important items missing. The search options should include logical operations such as "NOT EQUAL" and an "OR" option. Now there is only an "AND" comparison when you specify more than one field, and there isn't any way to find records that "DO NOT CONTAIN" specified criteria. Included is an option to convert DBMaster One files to Base Two, but there is no way to import ASCII files.

There are many other options included in Base Two. "DIF" file output, "Soft" page sides and bottoms, report sorting, print to disk or screen, help menus, and more. Base Two is memory based so your file size is limited by the amount of memory in your ST, though it allows very fast access to your data. Base Two is fast enough that you can use it while on the phone to customers. I usually benchmark software subjectively. I use it and if it's comfortable and I don't feel like I'm waiting, then it passes my acceptable rating. I loaded a 2300 record, 97000 byte file; and that used only 40% of the available memory in a 520ST. The same file in a 1 meg ST used 14% of the available memory. The longest I had to wait on a search was 10 seconds. More representative times were 1-2 seconds. If you don't have a data base, Base Two is an inexpensive introduction and will probably do everything you'll ever need for home use. If you have DBMaster One and you're unhappy with it, get Base Two.

Try Base Two. It's easy! It's fast! And it's even fun to design and use!



# MAY, 1988

SUN	MON	TUES	WED	THURS	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14 MAIN MEETING
15	16	17	18	19	20	21 CLUB ACTIVITY
22 BBS SIG 8-BIT SIG	23	24 ST SIG	25	26	27	28 BOARD MEETING
29	30	31 MEMORIAL DAY				

## DAL-ACE SCHEDULE OF CURRENT EVENTS MAY, 1988

- SUNDAY, MAY 8  
Make Mom proud of you - write an article for Dal-Ace!
- SATURDAY, MAY 14  
Main meeting at Infomart; meeting times inside back cover.
- SATURDAY, MAY 21  
Club inactivity. If any interest is shown, an activity will be decided upon and announced later.
- SUNDAY, MAY 22  
8-Bit SIG at Jeff Golden's 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! The address is 2613 Cheyenne, Irving, TX. Call for directions. Phone: (214)252-3268. Club get-together.
- SUNDAY, MAY 22  
BBS SIG at James & Rachel Duke's at 2 p.m. The address is 5902 Preston Oaks Road, Apt # 1005, Dallas, TX. Call for directions. Phone: (214)404-8569.

• TUESDAY, MAY 24  
ST SIG at Computer Discoveries at 7 p.m. The address is 12801 Midway Road, Suite 109, Dallas, TX. Call for directions. Phone: (214)484-9104.

• SATURDAY, MAY 28  
Board meeting - 1 p.m. The Bank. Call an officer for directions.



**HIT  
A  
HOME**

**RUN !!!**

**SUPPORT DAL-ACE TODAY!**

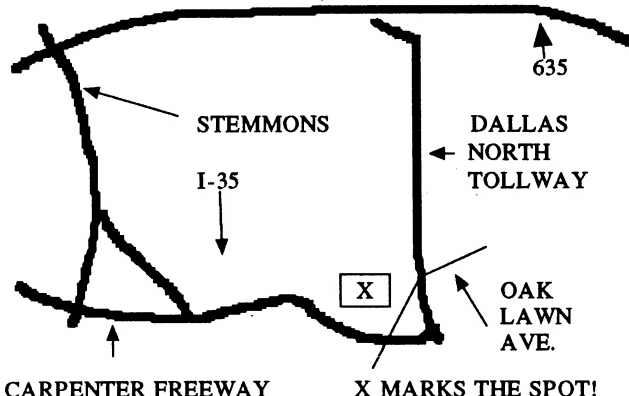


## MOST WANTED LIST (DAL-ACE EXPERTS)

- 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, Assembly
- Ron King ..... (817)283-0674 ..... call from 5 to 10 p.m.  
8-bit hardware
- John Saunders ..... (817)566-0318  
C and Assembler languages
- Michael Trombley ..... 298-5958  
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

## 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 SUBMISSIONS

Submissions are welcome in any form. It is requested of any 8-bit user that he/she upload articles to the club BBS (number on back page).

## 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.

## DISCLAIMER

The material printed in this newsletter reflects the opinions of the authors. Opposing opinions are solicited. Unless otherwise stated, the material in this newsletter is NOT copyrighted and no rights are reserved.

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.

## INFOMART MEETING DATES 1988

Firm dates: June 11, July 9.  
Tentative dates: August 13, September 10,  
October 15, November 19, December 17.

## 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

<u>PRODUCT</u>	<u>PUBLISHER</u>	<u>LIST PRICE</u>	<u>SALE PRICE</u>	<u>USER GROUP DISC. PRICE</u>	<u>USER GROUP CASH PRICE</u>	<u>TOTAL % DISCOUNT</u>
<u>ARCADE GAMES (CONT'D)</u>						
PINBALL WIZARD	ACCOLADE	34.95	31.46	28.31	26.89	23
PLUTOS	MINDSCAPE	29.95	26.96	24.26	23.05	23
Q-BALL	MINDSCAPE	29.95	19.95	17.96	17.06	43
SLAYGON	MICRODEAL	39.95	35.96	32.36	30.74	23
SPACE SHUTTLE II	MICHTRON	39.95	35.96	32.36	30.74	23
STARGLIDER	FIREBIRD	44.95	40.46	36.41	34.59	23
TERRORPODS	PSYGNOSIS	39.95	35.96	32.36	30.74	23
TEST DRIVE	ACCOLADE	39.95	35.96	32.36	30.74	23
TIME BANDITS	MICHTRON	39.95	35.96	32.36	30.74	23
TIME BLAST	TDC	19.95	17.96	16.16	15.35	23
TRACKER	FIREBIRD	44.95	35.96	32.36	30.75	32
TRAILBLAZER	MINDSCAPE	49.95	44.96	40.46	38.44	23
WIZ BALL	MINDSCAPE	14.95	11.96	10.76	10.23	32
<u>BOARD &amp; CARD GAMES</u>						
BUZZWORD	BUZZWORD	42.95	38.66	34.79	33.05	23
CARDS	MICHTRON	39.95	31.96	28.76	27.33	32
CHESSMASTER 2000	ELECTRONIC ARTS	45.00	40.50	36.45	34.63	23
PSION CHESS	PSION	59.95	47.96	43.16	41.01	32
QUIZAM!	INTERSTEL	34.95	31.46	28.31	26.89	23
SHANGHAI	ACTIVISION	39.95	35.96	32.36	30.74	23
STRIP POKER	ARTWORX	39.95	35.96	32.36	30.74	23
TRIVIA CHALLENGE	MICRODEAL	39.95	35.96	32.36	30.74	23
<u>SIMULATION &amp; STRATEGY</u>						
AUTODUEL	ELECTRONIC ARTS	50.00	45.00	40.50	38.48	23
BALANCE OF POWER	MINDSCAPE	49.95	44.96	40.46	38.44	23
BREACH	OMNITREND	39.95	35.96	32.36	30.74	23
BREACH SCENARIO DISK	OMNITREND	24.95	22.46	20.21	19.20	23
COLONIAL CONQUEST	SSI	39.95	35.96	32.36	30.74	23
EAGLES NEST	MINDSCAPE	39.95	35.96	32.36	30.74	23
EMPIRE	INTERSTEL	55.00	44.00	39.60	37.62	32
F-15 STRIKE EAGLE	MICROPROSE	39.95	35.96	32.36	30.74	23
FLIGHT SIMULATOR II	SUBLOGIC	49.95	44.96	40.46	38.44	23
GATO	SPECTRUM HOLOBYTE	39.95	35.96	32.36	30.74	23
HARRIER COMBAT SIMULATOR	MINDSCAPE	49.95	40.45	36.41	34.58	31
PRESIDENT ELECT	SSI	29.95	26.96	24.26	23.05	23
ROADWAR EUROPA	SSI	39.95	35.96	32.36	30.74	23
SILENT SERVICE	MICROPROSE	39.95	31.96	28.76	27.33	32
SUB BATTLE	EPYX	39.95	35.96	32.36	30.74	23
SUPER HUEY	COSMI	39.95	31.96	28.76	27.33	32
UNIVERSAL MILITARY SIMULATOR	RAINBIRD	49.95	39.96	35.96	34.17	32
<u>SPORTS</u>						
10TH FRAME	ACCESS	39.95	31.96	28.76	27.33	32
CHAMPIONSHIP BASEBALL	GAMESTAR	39.95	35.96	32.36	30.74	23
CHAMPIONSHIP BASKETBALL	GAMESTAR	39.95	35.96	32.36	30.74	23
CHAMPIONSHIP FOOTBALL	GAMESTAR	39.95	35.96	32.36	30.74	23
HARDBALL	ACCOLADE	39.95	35.96	32.36	30.74	23
MICROLEAGUE BASEBALL	MICROLEAGUE	59.95	53.96	48.56	46.13	23
MICROLEAGUE TEAMS DISK	EPYX	19.95	14.95	13.46	12.76	36
WINTER CHALLENGE	THUNDER MOUNTAIN	14.95	11.96	10.76	10.23	32
WINTER GAMES	EPYX	39.95	35.96	32.36	30.74	23
WORLD GAMES	EPYX	39.95	35.96	32.36	30.74	23

COMPUTER DISCOVERIES  
 12801 MIDWAY ROAD, #109  
 DALLAS, TEXAS 751244  
 (214) 484-9104

PRICE LIST

(EFFECTIVE MAY 1, 1988)

(USER GROUP DISCOUNT IS 10%. \* CASH PRICE REFLECTS AN ADDITIONAL 5% DISCOUNT.)

(PROOF OF MEMBERSHIP IS REQUIRED TO QUALIFY FOR USER GROUP DISCOUNT.)

<u>PRODUCT</u>	<u>PUBLISHER</u>	<u>LIST PRICE</u>	<u>SALE PRICE</u>	<u>USER GROUP DISC. PRICE</u>	<u>USER GROUP CASH PRICE</u>	<u>TOTAL % DISCOUNT</u>
<u>FANTASY &amp; ADVENTURE GAMES</u>						
ALIEN FIRES	PARADOX	39.95	35.96	32.36	30.74	23
BAKER STREET DETECTIVE	ARTWORX	19.95	9.95	8.96	8.51	57
BARDS TALE	ELECTRONIC ARTS	50.00	40.00	36.00	34.20	32
BEYOND ZORK	INFOCOM	43.95	39.56	35.60	33.82	23
BREAKERS	BRODERBUND	44.95	22.48	20.23	19.22	57
DEFENDER OF THE CROWN	MINDSCAPE	49.95	39.96	35.96	34.17	32
DEJA VU	MINDSCAPE	49.95	39.96	35.96	34.17	32
DUNGEON MASTER	FTL	39.95	31.96	28.76	27.33	32
GOLDEN PATH	FIREBIRD	44.95	35.96	32.36	30.75	32
GUILD OF THIEVES	FIREBIRD	44.95	35.96	32.36	30.75	32
JEWELS OF DARKNESS	FIREBIRD	29.95	26.96	24.26	23.05	23
JINXTER	RAINBIRD	39.95	35.96	32.36	30.74	23
KNIGHT ORC	FIREBIRD	44.95	40.46	36.41	34.59	23
LEISURE SUIT LARRY	SIERRA	39.95	35.96	32.36	30.74	23
PAWN	FIREBIRD	44.95	35.96	32.36	30.75	32
POLICE QUEST	SIERRA	49.95	39.96	35.96	34.17	32
SENTRY	FIREBIRD	44.95	22.48	20.23	19.22	57
SHADOWGATE	MINDSCAPE	49.95	39.96	35.96	34.17	32
SILICON DREAMS	FIREBIRD	29.95	26.96	24.26	23.05	23
SPACE QUEST II	SIERRA	49.95	39.96	35.96	34.17	32
STAR TREK, THE REBEL UNIVERSE	SIMON & SCHUSTER	39.95	31.96	28.76	27.33	32
SUNDOG	FTL	39.95	35.96	32.36	30.74	23
TANGLEWOOD	MICRODEAL	39.95	35.96	32.36	30.74	23
TAU-CETI	THUNDER MOUNTAIN	14.95	11.96	10.76	10.23	32
ULTIMA IV	ORIGIN SYSTEMS	59.95	47.96	43.16	41.01	32
UNINVITED	MINDSCAPE	49.95	39.96	35.96	34.17	32
<u>ARCADE GAMES</u>						
AIRBALL	MICHTRON	39.95	35.96	32.36	30.74	23
BARBARIAN	PSYGNOSIS	39.95	31.96	28.76	27.33	32
CHOPPER X	MASTERTRONIC	19.95	17.96	16.16	15.35	23
CRACK'ED	ATARI	29.95	26.96	24.26	23.05	23
DARK CASTLE	THREE SIXTY	39.95	31.96	28.76	27.33	32
DEATH SWORD	EPYX	24.95	22.45	20.20	19.19	23
GAUNTLET	MINDSCAPE	49.95	44.96	40.46	38.44	23
GOLD RUNNER	MICHTRON	39.95	35.96	32.36	30.74	23
HARRIER STRIKE MISSION	MILES COMPUTING	39.95	35.96	32.36	30.74	23
JUPITER PROBE	MICHTRON	24.95	22.46	20.21	19.20	23
KARATE KID II	MICHTRON	39.95	35.96	32.36	30.74	23
LIBERATOR	TDC	19.95	17.96	16.16	15.35	23
MAJOR MOTTON	MICHTRON	39.95	35.96	32.36	30.74	23
MIDI MAZE	HYBRID ARTS	39.95	31.96	28.76	27.33	32
MISSILE COMMAND	ATARI	29.95	23.96	21.56	20.49	32
ODDS	FTL	34.95	31.46	28.31	26.89	23

## DAL-ACE OFFICERS

PRESIDENT ..... Donny Arnold ..... 240-4966  
VICE PRES ..... Joe Camblin ..... 221-7825  
VP COMM ..... Rachel Duke ..... 404-8569  
SECRETARY ..... Anita Uhl ..... 492-8682  
TREASURER ..... Rene Tucker ..... 223-6176  
M.A.L. .... Michael Duke ..... 414-1132  
M.A.L. .... Marcus Arreguin .. 495-2857  
M.A.L. .... Nolan Terrill ..... 255-8357  
M.A.L. .... Duane Dauphin ..... 827-6605  
M.A.L. .... Dave Gramm ..... (214)370-7143

## DAL-ACE VOLUNTEERS

EDITOR ..... Angela Burns ..... 404-8569  
AD MANAGER . James Duke ..... 404-8569  
BBS ..... Michael Trombley ..... 298-5958  
..... Gary Fuquay ..... (817)267-2510  
8-BIT LIBRARY ..... Billy McLean ..... 285-3806  
..... Brenda Arnold ..... 240-4966  
ST LIBRARY ..... Wally Willinsky ..... 506-0352  
..... Joe Camblin ..... 221-7825

## DAL-ACE BULLETIN BOARD

Metro (817)429-6134

## DAL-ACE

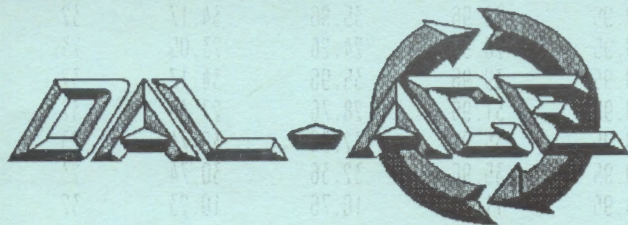
### Dallas Atari Computer Enthusiasts

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 \$10.00 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. A pink address label indicates that your membership expires this month.

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

ALL MATERIAL IN THIS NEWSLETTER MAY BE REPRINTED IN ANY FORM PROVIDED THAT DAL-ACE AND THE AUTHOR, IF APPLICABLE, ARE GIVEN THE PROPER CREDIT. LIKEWISE, PORTIONS OF THIS NEWSLETTER MAY BE REPRINTED FROM OTHER NEWSLETTERS AND ARE SO NOTED.



P.O. BOX 851872  
RICHARDSON, TEXAS 75085-1872

U.S. POSTAGE PAID  
BULK RATE  
PERMIT NO. 1203  
RICHARDSON, TEXAS 75080

