

START ^{#1 Guide To Atari ST}

Volume 4, Number 11 June 1990 USA \$14.95 • Canada \$19.95

ON DISK

Crossword Creator
Warrior ST
Wordle
Bugs!
Fun Pages



DISK INSIDE

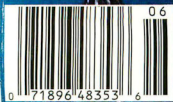
SOVIET GAMES

...AND MORE!

WIN A LYNX!

11

HOT GAMES REVIEWED



0 71896 48353 6

Rings of Medusa



GAME OF THE YEAR 1990!

You'll love
this game—
We
guarantee it!



Discover on your own if this claim is true as you, the young Crown Prince of Morenor, challenge the evil goddess Medusa. Conduct trade, gamble in the Casino of the Trolls, find treasures, equip an armada of ships and engage in sea battle. Hire and fire warriors for your land army and go into battle. Explore 33 cities, 13 castles and 3 islands. Find the five magic rings of the kingdom and put them together in the Temple of the Athenians. It is your only hope to call Medusa into battle.

- 3500 Kbyte of data, over 500 Kbyte of digitized sound
- Beautiful graphics, excellent strategy and game action
- Weeks and months of game experience

STAR GAMES
708 W. BUFFALO AVE., SUITE 200
TAMPA, FL 33603

Can't find RINGS OF MEDUSA? For orders only, call: 1-800-783-8023. Retail price: \$49.95. Available for: Commodore Amiga, IBM PC, Tandy, 100% Compatibles and Atari ST. All product and brand names are trademarks or registered trademarks of their respective companies.

Increase your publishing power.



Migraph Hand Scanner.

Add scanned graphics to all your projects quickly and easily with the Migraph Hand Scanner.

The Hand Scanner provides a scanning window over 4" wide with four scanning resolutions: 100, 200, and true 300 and 400 dots per inch. It also offers adjustable contrast, three dither settings for scanning halftones, and a special setting for line art.

Build your own library of images. Logos, photographs, books, illustrations . . . provide you with an unlimited supply of art.

Touch-Up,[™] Migraph's high resolution image editor, lets you scan and edit your images. Powerful editing tools include crop, invert, resize, flip, cut and paste, multiple zoom levels, a full array of paint tools, and much more.

When your images are "pixel perfect", import them into your favorite ST publishing programs like Calamus, Fleet Street, PageStream, and Publisher ST. In addition, several

save formats let you use your images on the PC and Mac.

The Migraph Hand Scanner and Touch-Up. Powerful tools for professional publishing.

See your dealer today for more details or call us direct. Dealer inquiries invited.

For all Atari ST and Mega systems with monochrome or color monitors, 1MB memory and 3.5" DS disk drive.



200 S. 333rd St., Suite 220

Federal Way, WA 98003

(206) 838-4677

(800) 223-3729 (Pacific Standard Time)

CALAMUS OUTLINE ART[®]

OUTLINE ART is a vector-oriented, graphic generation tool. Multiply your creativity through the many functions which you will find in this program.

OUTLINE ART supplements the CALAMUS DTP system with a great number of new functions and effects. A extract from the extensive list of functions include:

- A user interface, quite similar to that of CALAMUS.
- Complete Vector Graphics Editor for lines, Bezier curves, control paths etc..
- Capabilities to generate freely-definable raster areas.
- Creation of rayed objects, ie; from a font to a central point.

■ Nearly unlimited possibilities for the manipulation of text, characters and text attributes such as:

- rastered, transparent, outlined, rotated, stretched, compressed and cursive styles...
- circular text and text along a freely-defined vector path...
- projection of raster areas and text on vector outlines...
- conversion of text into vector objects...
- kerning functions...
- Functions can be freely combined and applied to all CALAMUS fonts.

■ Integrated, fully programmable calculator with a pre-defined and extendible library of transformations such as:

- shift, rotate, mirror, enlarge/shrink, project onto a sphere (globe, cylinder, cone), etc..
- An intelligent clipboard and copy functions, allowing the automatic generation of transformation sequences.
- loading and saving in .CVG format (CALAMUS Vector Graphic), making possible the integration into and optimal printing through CALAMUS on all supported output devices in all resolutions.

In addition, we convert CVG to EPS file format.

Note : DynaCADD, our complete 2D and true 3D Computer Aided Design and Drafting Package, allows the importation of Calamus Vector Graphic format, (CVG). Which can then be output through all output options supported by DynaCADD, ie: CAMM-1, Plotters etc.,... An excellent solution for the Sign Making Industry.

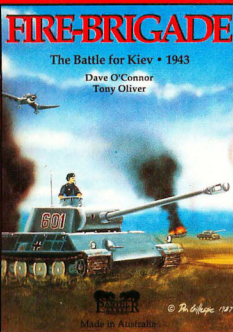
Calamus Outline Art has a suggested retail price of US \$289.95

For more information or to place your order, contact your local Atari Dealer or contact us directly at: ISD Marketing, Inc., 2651 John Street, Unit #3, Markham, Ontario, Canada, L3R 2W5, Tel: (416) 479-1880, Fax: (416) 479-1882



ISD MARKETING
ISD MARKETING
ISD MARKETING
ISD MARKETING





WINNER

- Charles S. Roberts Award - Best 20th Century Computer Wargame
- Apple Developer Award - Best Entertainment Package
- ACE Rated 910 - ACE
- 'a milestone for computer wargames' - Computer Gaming World
- 'sets a standard for other game makers to follow' - Strategy & Tactics
- 'an outstanding product ... it is the state-of-the-art' - Wargamer
- 'a real winner' - Breakout
- 'a sizzler' - ZZAP
- 'Brilliant...Buy this one and buy it NOW' - Fire & Movement

Available for:

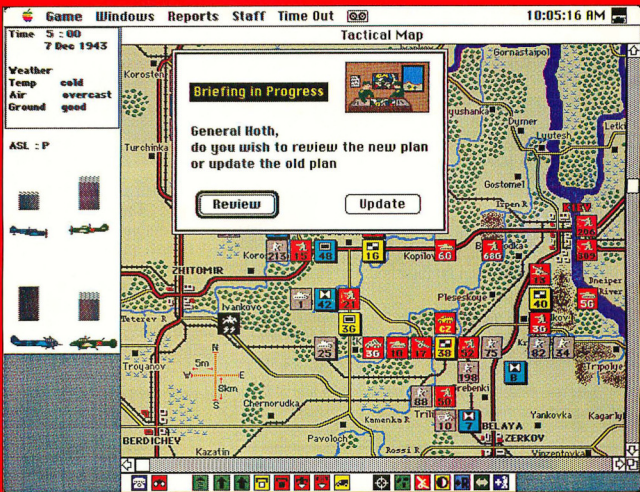
<u>Format</u>	<u>Stock No.</u>
• Macintosh	PG104/M
• IBM	PG104/I
• Amiga	PG104/A
• Atari ST	PG104/ST
• Apple IIGS (To Be Advised)	

Mac Color Upgrade

Version 2.0 supports mono, 16 and 256 colors or greys; is MultiFinder compatible; and will run on a Mac Plus, Mac SE or Mac II. Requires 1Mb of RAM for mono, 2Mb of RAM for color.

Includes the exciting "Clash of Titans" scenario.

Upgrades available only to registered users direct from our US or Australian office. Return original disk and rego card, if not already sent. Cost = \$20.00.



Mac II screen dump

Wanted - scenario developers for our new Flashpoint project. Contact Dave O'Connor in Australia or Al Vannyo in our US office.

Can't find Fire-Brigade at your local retailer?

North American customers call 1-800-628-7472 for Visa/MC orders (use item stock number when calling) or send order form with check, money order or Visa/MC authorization to our US office. Allow 1 - 3 weeks for delivery. Cost = US\$60.00 for Mac v2.0, US\$80.00 for other formats, plus US\$3.00 shipping and handling per item. (Maryland customers add 5% sales tax) Sorry, no COD orders.

Elsewhere, buy direct from our Australian office - call (062) 81-5150 or fax (062) 47-2943 for Visa/MC/BC orders. Cost = A\$70.00 for Mac v2.0, A\$60.00 for other formats, plus A\$10.00 per item for overseas air mail.

US distributors - for the Atari-ST version call Sideline Software at 800-888-9273. European and Australian distributors - Mindscape Int. Distributor and dealer enquiries welcome. Contact Dave O'Connor in Australia on (062) 81-5150 or Al Vannyo in the USA on (301) 977-3379.

Please send Fire-Brigade Mac IBM Amiga ST to:

Name _____ Tel. _____

Address _____

City _____

State _____ ZIP/PC _____ Country _____

Charge to my Mastercard Visa Bankcard

Account No. _____ Exp. _____

Signature _____

Mail to - Panther Games, PO Box 5662, Derwood, MD 20855 USA
or Panther Games, PO Box 8, Hughes, ACT 2605 Australia

Panther packs the punch!

Mark Williams Raises C Programming To A New Level.

New source level debugger, *csd*, cuts development time in half!

Now, on top of the world's best C compiler, Mark Williams brings you *csd*, the world's only source level debugger for the Atari ST!

With *csd*, you actually debug in C. Forget about trying to find bugs in clunky assembler and struggling with long dumps. *csd* gives you the interactive advantages of an interpreter plus the speed of a compiler. An indispensable companion for Mark Williams C.

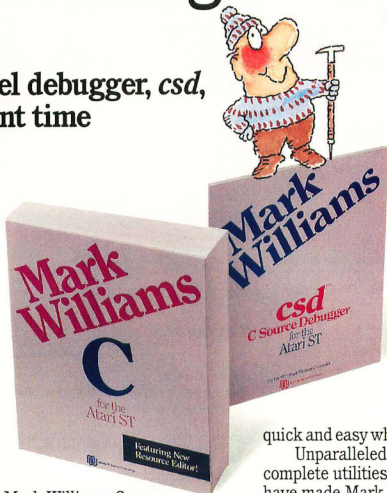
Reviewers have been raving about the IBM version of *csd* for years:

"csd is close to the ideal debugging environment... a definite aid to learning C and an indispensable tool for program development."

—William G. Wong, *BYTE*

"This is a powerful and sophisticated debugger built on a well-designed, 'serious' compiler."

—Jonathan Sachs, *Micro/Systems Journal*



WE'VE UPPED COMPILER PERFORMANCE, TOO!

Our new **Resource Editor** makes creating window driven interfaces with icons, alerts, pull down menus and dialogue boxes a snap. And its exclusive compiler/decompiler lets you directly access resources, making changes

quick and easy while simplifying project management.

Unparalleled compiler speed, fast, compact code, complete utilities and outstanding documentation have made Mark Williams C the preferred compiler for the Atari ST. Reviewers enthusiastically agree:

"Mark Williams C may be the best implementation of C on the Atari ST to date... not only for the experienced, professional developer, but also for the weekend programmer."

—George Miller, *COMPUTE!'S Atari ST Disk and Magazine*

"... the all-around best choice for serious software development on the ST."

—Douglas Weir, *Analog Computing*

COUNT ON AN UPSTANDING REPUTATION.

Mark Williams has been producing and improving quality programming tools since 1976. A good reason why the Mark Williams C compiler is the one chosen by Atari. And just one more reason you should choose Mark Williams, too.

SPECIAL UPDATE OFFER AVAILABLE NOW!

If you already own Mark Williams C, a special update offer is available for version 3.0 and *csd* by calling Mark Williams. If not, there's never been a better time to ask your Atari dealer about Mark Williams C and *csd*. Or you can order by calling **1-800-MARK-WMS**

FEATURES

Mark Williams C For the Atari ST

- ★ New! Resource Editor includes compiler/decompiler for direct access to resource text
- ★ New! Peephole optimization—faster compile times and faster code
 - Full access to AES/VDI libraries with complete documentation and examples
 - Source and object code for RAM disk cuts compile time in half
 - Integrated edit/compile cycle: editor automatically points to errors.
 - MicroEMACS full-screen editor with commented source code
 - Full K & R plus ANSI extensions
 - Microshell Command Processor, a powerful UNIX style shell
 - Complete symbolic debugger and assembler

- Powerful utilities: make, linker, archiver, egrep, sort, diff and more
- Over 600 pages of documentation with more than 100 sample programs

New! *csd* C SOURCE DEBUGGER:

- Cuts development time in half!
- Debug in C source code not assembler
- Provides separate source, evaluation, program and history windows
- Ability to set trace points and monitor variables
- Can interactively evaluate any C expression
- Can execute any C function in your program
- Trace back function
- On-line help screens

MARK WILLIAMS C FOR THE ATARI ST: \$179.95
csd C SOURCE DEBUGGER: \$69.95
60 DAY MONEY BACK GUARANTEE

 Mark
Williams
Company

601 North Skokie Highway, Lake Bluff, Illinois 60044
© 1988 Mark Williams Company

START ^{#1 Guide To Atari ST}

JUNE 1990

VOLUME 4, NUMBER 11



GRETZKY CHALLENGE PAGE 24

Features

- 20 COMRADE ALEXEY**
The Soviet Union's One-Man Game Industry
by Amy H. Johnson
- 24 THE GRETZKY CHALLENGE**
Hockey Great Becomes Software Consultant
by Scott Wasser
- 36 WHO'S BUYING NOW?**
Women Won't Spend Bucks Until Game Makers End Sexism
by Amy H. Johnson



FOR THE FUN OF IT PAGE 41

- 50 BUGS!**
by Greg "Maddog" Knauss
- 52 CROSSWORD CREATOR**
Now Making a Crossword Puzzle is Easier than Solving One
by John L. Hutchinson



- 60 WORDLE**
A Tough and Jumbled Game
by Eric Slick



- 64 WARRIOR ST**
A Dual-Player Duel
by Evan and Jason Black



- 80 FUN PAGES**
Instant Amusement For Your Kids



CROSSWORD CREATOR PAGE 52

Reviews

- 41 FOR THE FUN OF IT**
START Reviews 11 Of The Hottest Games For The ST
- 87 WORDFLAIR**
One Package, Five Programs
by Dan Fruchey

Departments

- 9 EDITORIAL**
- 11 DIALOG BOX**
- 13 ALERT BOX**
- 16 START'S SCENARIO CONTEST!**
Send Us The Best Of Your Worst
- 17 NEWS, NOTES AND QUOTES**
Atari Update, European Report
- 66 DISK CONTENTS**
- 67 DISK INSTRUCTIONS**
- 84 ST/MIDI CONNECTION**
Reflections
- 93 PRODUCTS UPDATE**

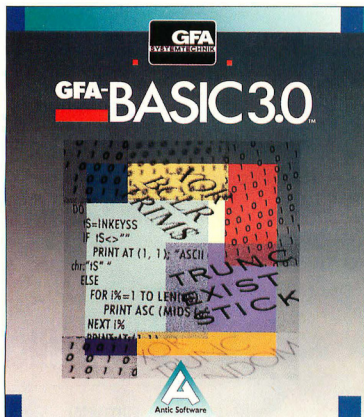


Indicates programs included on START Disk

Q: Which has the greatest speed, elegance and ease of handling?



1. The Porsche 928™



2. GFA BASIC 3.0™

A: GFA BASIC, of course.

Sure, both are designed in Germany by engineers dedicated to being the best. And although Porsche has a truly enviable record on the race track, only GFA BASIC 3.0™ can claim to be the fastest of its kind. With over 300 commands and the ability to substitute a single keyword for a screenful of conventional code, GFA BASIC 3.0 boosts your programming speed like nothing on wheels.

Once compiled, you have the fastest running program you can write without an assembler.

Faster than C. Faster than Pascal.
Faster than Modula 2.

And naturally, faster than any other BASIC.

Even writing code is fast, because GFA BASIC 3.0's remarkable smart editor instantly checks your syntax as you enter lines.

Sure, the Porsche 928 is the epitome of automotive elegance and timeless design. But it can't compile your program. Not only will GFA BASIC 3.0 compile your program, but you'll only have to compile it once. That's because in GFA BASIC 3.0

you debug interactively in the interpretive mode. Just try that with a Porsche 928.

Sure, the Porsche 928 is unique. It is designed for the independent spirit with high performance requirements.

GFA BASIC 3.0 is *perfect* for expert and first-time programmers alike. Designed specifically for the computer it runs on, GFA BASIC 3.0 enables you to easily exploit all the special capabilities of your Atari ST™.

Sure, the Porsche 928 handles like a dream. But just try to get a handle on one for only \$139.95. From Antic Software, \$139.95 gets you GFA BASIC 3.0 and the compiler.

Quite simply, **nothing in the world can write or compile your program faster, better, and easier than GFA BASIC 3.0.**

Of course, the Porsche 928 still *looks* sexier than GFA BASIC 3.0. But we're working on that.

GFA BASIC 3.0 with Compiler...\$139.95
upgrade from GFA BASIC 2.0\$ 69.95
Return original disk

Don't get left behind by the fastest—BUY the fastest!

Drive to your favorite software dealer, or call 1-800-234-7001 now!



Product #110

START

#1 Guide To Atari ST

PUBLISHER
James Copparell

EDITORIAL

Thomas R. Byron, Editor
Amy H. Johnson, Programs Editor
Marla Deike, Junior Editor
Jim Pierson-Perry, Music/MIDI Editor

Contributing Editors: Tom Hudson, Jim Kent, Stephen Mortimer, Mard Naman, David Plotkin, David Ramsden, Andrew Reese, David Small

Contributors: A. Baggetta, Evan Black, Jason Black, Heidi Brumbaugh, Dan Fruchey, Dave Gregg, Wolf Griffey, John L. Hutchinson, Greg "Maddog" Knauis, Donald Maple, Greg Perez, Eric Slick, Scott Wasser, Dr. John Watson

CREATIVE SERVICES

Julianna Osojka, Director of Creative Services
Jim Warner, Art Director
Daniel C. Goodwin, Associate Art Director
Wendy Johnson, Advertising Production Coordinator
Edward Caldwell, Cover Photography

ADVERTISING SALES

Denny Riley
Director, Advertising Sales, (415) 957-0886
John Fellner
Western Region, (415) 957-0886
Michael Evans
Eastern Region, (415) 957-0886

CIRCULATION

Ira Epstein, Circulation Consultant
Ann Dunlap, Fulfillment Manager

ANTIC PUBLISHING, INC.

James Copparell, President; Richard D. Copparell, Director;
Lee S. Isgur, Advisory Board; Mark Shir, Controller

ADMINISTRATION

Fidez Bituin, Accounts Receivable Supervisor

General Offices, Catalog Customer Service: (415) 957-0886, 8 a.m. to 4 p.m. Pacific Time. START, 544 Second Street, San Francisco, CA 94107. Credit Card Subscriptions and Catalog Orders: (800) 234-7001. Subscription Customer Service: For change of address and inquiries, include subscription labels and write to START Subscriptions, P.O. Box 535, Mt. Morris, IL 61054, or call (619) 485-7754, 9 a.m. to 4:30 p.m. Pacific Time.

June 1990, Volume 4, Number 11. START Magazine (ISSN #0889-6216) is published monthly by Antic Publishing, Inc., 544 Second Street, San Francisco, CA 94107. Third-Class postage paid at Columbia, MD. Subscriptions (for 12 issues with disk): \$79.95 in U.S., California \$85.35; Canada \$97.95; Foreign surface \$104.95; Foreign airmail \$158.35; Foreign subscribers (not including Canada) must send full payment. Payment in U.S. funds only. POSTMASTER: Please send address changes to START Magazine, P.O. Box 535, Mt. Morris, IL 61054.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publisher. START is an independent periodical not affiliated in any way with Atari Corp. START is a trademark of Atari Corp. All references to Atari products are trademarked and should be so noted. START is a trademark of Antic Publishing, Inc., an Information Technology Company.
Copyright © 1990 by Antic Publishing. All Rights Reserved. Printed in U.S.A.

Editorial

IN LIKE A LION ...

March was an interesting month for Atari Corp. The sudden layoff of approximately 15 percent of the total U.S. workforce came as a surprise to everyone. Not long afterward, Atari fired the entire staff of *Atari Explorer*, its popular bi-monthly magazine.

Mead Ames-Klein, the new president of Atari Computer (U.S.), is apparently the mastermind behind the layoffs. Although he declined a full interview, he did explain that the move was made to streamline operations. He dismissed allegations that the layoffs were a result of Atari's shrinking profits and inability to effectively move product.

The firing of the *Atari Explorer* staff is shrouded in a little more mystery. The official Atari line is that the magazine is still in business, only the staff was let go. How they intend to publish without editors is the first mystery. The second mystery is the role played by the editorial in the undistributed Spring 1990 issue, a copy of which I have. In it, editor Betsy Staples blasts "one penny-pinching sycophant in Atari's accounting department" who was late paying the magazine's printing bills. This in turn caused delays in distribution. The cover date was changed from March/April 1990 to Spring 1990 and Staples wrote the editorial feeling the readers deserved "the straight scoop."

Of course, in both cases, it would be too easy to condemn Atari for what appears to be poor decision making. It's a terrible thing to lose your job in the first place but even more so when it's through no fault of your own, as it was in the case of the layoffs (though the severance pay was reportedly quite generous). And I had great respect for the editorial staff of *Atari Explorer*. David Ahl, Betsy Staples and John Jainschigg expertly produced a quality magazine.

But if Atari needs to make operations more efficient, that's fine as long as it results in products getting out the door and an increase in sales. Further, what was said in the *Atari Explorer* editorial was damaging to Atari and they had every right to respond to it as they did — it's their magazine. On the other hand, the editorial's gripes were genuine. Still, thousands of magazines sit on a loading dock somewhere in New Jersey. The potential loss in both subscriber and advertising revenue could be quite high. What will Atari do?

I leave you to draw your own conclusions. In the meantime, START maintains its strong position in the Atari market and will continue to bring you quality ST coverage. At this writing, the World of Atari show in Anaheim is only a few weeks away. Watch for a full report soon. ■



Tom Byron

TOM BYRON
START Editor

Dialog Box

Double-Sided Format Supporters Speak Out

No! Do not discontinue the Heidi format! You really have not given it a chance to sink in. Initially, I had problems with it too, but I learned to follow directions and everything worked out fine. Changing back again will just create more confusion.

Ed Glembotski
San Luis Obispo, CA

I'm sorry to see you drop the Heidi format. It worked just fine and gave us an opportunity for valuable additional programs and data. The instructions were too complicated, but I think that was the only problem.

Col. Jack Mathews
Falls Church, VA

Many factors contributed to the double-sided format's demise. The decision to discontinue it was a hard one to make and we too were sorry to see it go. However, we are currently looking at some viable alternatives and will keep you updated as to our progress. — START Editor.

Way To Go, Earl!

Kudos to Earl Tomar for Word Puzzle Designer (START, December 1989). What a great educational program! I've used this for my son's spelling words. We load in all his spelling units and then print two or three patterns of the week's words. He takes the puzzles to school and his teacher copies them for all the spelling classes on that unit. Thanks.

Jayne Johnston
Kingsport, TN

Arkanoid II Exists

I just read in the April issue that Arkanoid II: Revenge of Doh was not going to be released for the ST. This

really surprised me, especially since I've been playing it for almost a year on my ST. Revenge of Doh is available in the Precious Metal package from Ocean Software, which also contains Super Hang-On, Captain Blood and Xenon. I've seen the Precious Metal package in several mail-order ads. I purchased mine from BRE Software for \$34.95.

Matt Brady
Visalia, CA

Thanks for the information, but some clarification is in order. Taito is the official North American distributor for such games as Arkanoid and Bubble Bobble. As we reported in April 1990 "News, Notes & Quotes," Taito of America has ceased development on the ST. The copy you found is a European import. — START Editor.

Wanted: One Buyer's Guide

One of the most useful issues you ever published was the START Buyer's Guide (Special Issue Number One). It's been two years without a sequel. The Softguide programs are helpful, but they're not the same as a buyer's guide. I want to know (in more detail than Softguide) what's currently available and what's not (i.e., are DEGAS Elite and Abacus books and programs still retailing?). Please, another buyer's guide.

David Finkelstein
Philadelphia, PA

START was a special ST buyer's guide in the works tentatively scheduled to be released in the latter part of this year. As to your specific questions, Electronics Arts has discontinued DEGAS Elite from their product line. Abacus is still going strong. Their most recent release was The Complete Guide to the Atari Portfolio. The address and phone number for Abacus is 5370 52nd

Street SE, Grand Rapids, MI 49512, 800/451-4319. — START Editor.

Eureka

I only recently discovered START and I'm very impressed. You have dispelled any doubts I had in the Atari system. I hadn't realized there were so many ST programs available. However, I cannot find a word processor that meets my needs. I want to write books and academic papers so I need a word processor with features such as footnotes and margin settings. Any suggestions?

John Perry
Winnipeg, Manitoba

In the April 1990 issue of START, Dan Fruchey wrote an extensive buyer's guide to word processors that we think you'll find helpful in making your decision. Most ST word processors let you set margins. At this time, only WordPerfect, 1st Word Plus and WordUp handle footnotes. — START Editor ■

SUBMISSION INFORMATION

START welcomes submissions. Please include both hard copy printouts of articles and program listings as well as disk files on ST compatible disks. Media will be returned if self-addressed, stamped mailer is supplied. START assumes no responsibility for unsolicited editorial materials.

Do you have questions about using your ST? Is there something you're not clear about? Every issue, START's editors listen to your comments and answer your questions in Dialog Box. Let us hear from you! Our address is:

**Dialog Box, START
544 Second Street, San Francisco,
CA 94107**

Or leave us a message on CompuServe using the Antic Online Mailbox — just log on and type GO ANTIC.



1st STOP Computer Systems

7085 CORPORATE WAY ♦ DAYTON, OHIO 45459



Games

10th Frame Bowling	29
1943 Battle of Midway	19
Action ST 2	34
Bride of the Robot	25
Bridge Player 2150	36
Bubble Bobble	18
Canfield Square	23
Chambers of Shavlin	23
Chaos Strike Back	23
Chariots of Wrath	28
Chess HQ	23
Chess Player 2150	28
Chronomyst	28
Cluckie Egg	23
Double Dragon II	34
Emmanuel (Adult)	23
Eyes of Horror	23
F16 Strike Eagle	23
F16 Combat Pilot	31
F40 Pursuit	26
Falcon	28
Falcon Mission Disk	15
Fight Simulator II	28
Games (Winter Edition)	29
Gato	23
Gamma II	23
Gold of the Realm	25
Gold Rush	24
Goldrunner 2	23
Golf	23
Grand Prix Master	23
GunsHIP	31
Hole in One Golf Plus	18
Hostage	27
Indiana Red October	33
ILudicus	22
Indiana Jones Adventure	33
Joker Poker	33
King of Chicago	15
Kings Quest 3	23
Kings Quest 4	23
Knight Force	28
Kult	28
Leisure Suit Larry	23
Leisure Suit Larry 2	35
Leisure Suit Larry 3	35
License to Kill	23
Lock On	23
Manhunter, New York	28
Manhunter, San Francisco	28
Maniac Mansion	28
Moon Walker	23
Night Hunter	24
No Escape	25
North & South	28
Oil Imperium	28
Omega	29
Onslaught	28
Pictionary	28
Populous	31
Populous the Promised Land	18
Quartz	28
Quest for the Time Bird	35
Raffles	25
Red Lightning	27
Red Storm Rising	36
Sex Vixens from Space	25
Shuffleboard	28
Shuttlecock	28
Silk Worm	23
Soldier 2000	23
Space Quest	23
Slay St. Fire	29
Ship Wars 2	23
Stunt Car Race	28
Summer Challenge	11

2150 1st STOP Computer Systems ALTERATIVE - DS/DD - 3.5" Disk Drive \$139

Terry's Big Adventure	23
Time	21
The Deep	23
Tin Tin On the Moon	23
Titan	28
Trojan Outrun	23
Ultima 4	35
Zany Golf	19
Zero Gravity	18

Fleraccessory	20
FM Melody Maker	93
Fonts - Borders	22
Fontz ST	22
Forem BBS	44
Forth ST	29
G+ Plus	19
Generation Gap + (Family Tree)	28
Genesis Molecular Modeler	48
GFA Basic w/Compiler	83
GFA Draw Plus	64
GFA Programmers Reference	22
GFA Writer/Script	48

Holive	23
Hyper Fonts	28
Instant ST	23
Juggler 2	28
KCS Level 2	209
Laser C	112
Laser Debugger	48
LDW Power Speedboat	87
Lotto File	15
Macro Mouse	21
Maps & Legends	21
Mark Williams C	35
MasterKey	39

D Spooler	28
Omnivox	28
PageStream	116
Partner Forms	18
PC Dibs (IBM Emulator)	66
Personal Finance Manager	62
Phasar 4.0	57
Print Master Plus	23
ProCopy	99
Plo Mid	23
Prospero C	119
Prospero Fontal	119
Prospero Postcard	86
Protest	99
Quick ST	23
Revolver	23
Rolo Base Plus	17
Scan Art (Easy Draw)	29
Sculpt 3D Interior Design	18
Signum	119
Spectrum 512	41
ST Control	48
Stalk the Market	47
STalker	18
STOS Maestro	53
STOS Maestro Plus	53
STOS Spite 600	22
STOS Game Creator	39
Superbase 2	62
Superbase Personal	47
Superbase Professional 3.0	199
Swillar	23
Symbol & Slogans (DTP)	23
Tampos 2	28
Touch Up	116
True Basic	58
Turbo Jet	35
"Turbo Kill, hard drive"	25
Turbo ST	31
UltraScript Font PS 22	124
UltraScript Font PS 35	179
UltraScript ST-81M 804	124
UltraScript ST-L1	137
Unisnap	33
Universal Item Selector III	16
Utilities Plus	36
VIDI-ST	159
WEFCOS	28
Word Fair	58
Word Master	25
Word Perfect 4.1	139
Word Quest 2	18
Word Up 3.0	62
Word Writer ST	47

Productivity

1st Word Plus	59
3 Dimensional Graphics	39
ACCes!l	18
Accounts, ST ver 2.0	37
Accounts, ST ver 1	41
Art & Film Director	43
Art Gallery 1 & 2	29
Art Gallery 3 - Fantasy	18
Asson Plus	23
Award Maker +	23
BBS 3.0	47
Beeper Card	124
Binder Pack (Easy Draw)	21
C Source Debugger	39
Cad 3d Carlson Design Disk	17
Cad 3d Developers Disk	19
Cad 3d Fonts #1	19
Cad 3d Fonts #2	19
Cad 3d Future Design Disk	19
Cad 3d Human Design Disk	19
Cad 3d Microbit Design	19
Cad 3d View 2 (with Cybermodel)	47
Cad 3d Video Tiling Design	19
Calamus	167
Calamus Font Editor	57
Calamus Outline	164
Circut Maker II	58
Cleanup ST	28
Code Head Utilities	18
Copypil II (Professional)	153
Cyber Control	35
Cyber Paint (ver 2)	46
Cyber Script	49
Cyber Texture	29
Cyber VCR	36
Data Trieve	32
dEMAN	168
DC Utilities	19
Design Ideas	23
Designers Toolkit	39
Diamond Back	23
Disjunct 1.22	28
Draft	113
Drafts - Architectural Symb	89
Drafts - Populous Arch Symb	89
Drafts - Mechanical Symb	89
Draw Art Professional	18
DTP Desktop Publisher ST	77
Dyna Cadd	384
Dyna Cadd 1.7	639
Easy Draw	56
Easy Draw Font Pack #1	23
Easy Draw	28
wSuperCharger-DS/DD	84
Easy Tools-for Easy Draw	28
wSuperCharger	28
Easy Drawing Graphics (DTP)	23
Flash	17
Fleet Street Deluxe	28
W/ULtraScript	116

◆ Top 25 Sellers! ◆

NeoDesk	28
ACCes!l	18
Turbo ST	31
Populous	31
Falcon	28
Word Perfect 4.1	139
Chaos Strike Back	23
Diamond Back	23
ProCopy	19
Word Up 3.0	62
G+ Plus	19
Code Head Utilities	18
1st Word Plus	59
Multi Desk	18
Battle Chess	31
TV Sports Football	32
LDW Power	87
HotWire 1.4	23
Calamus	167
Emmanuel	34
Universal Item III	16
DB Man 5.2	168
Falcon Mission Disk	15
Word Writer ST	47
PageStream	116

Math Blaster +	29
Math Wizard	23
Maths Beacon Teaches Typing	34
Memory Master 1 Bentley Bear	18
Memory Master 2 Bentley Bear	18
Mixed Up Mother Goose	18
Pre-Calculus	28
Probability	28
Read & Review	28
Readarama	28
Speller Bob	23
Trigonometry	28
Winning the Pool	11

Hardware

1 Meg D Rams	10
256K D Rams	3
4 Player Adapter (Leathernack)	12
Best Mouse	38
CM515 Monitor Cable	18
Cardless Mouse	49
Discovery Cart Opt 0	134
Discovery Cart Opt 2	174
Disk drive cable, 6ft	13
Drive Master	29
Duplicate Bitz	36
ESB 16 Bit Drive Back Up	144
Epyx 50K Jockey	64
Ergo Stick (JoyStick)	18
Fast Tap Backup 155 Meg	789
Freedom Stick (Cardless)	42
GCN 16 Bit Drive Back Up	144
ICD Hot Adapter	96
JoyStick Ext. Cable (107)	4
JoyStick Ext. Cable (107)	11
Kraft Ken Jockey	56
CM515 Color Monitor	269
Max Flight Yoke	64
Mid cable 5'	5
Mid cable 10'	8
Mid cable 15'	10
Mid cable 20'	12
Mid cable 25'	14
Modern cable	9
Monitor Master	29
Mouse Master	24
Printer cable, 10 ft	9
Printer cable, 10 ft	6
SGS Net Starter Kit	119
SGS Net Station Node	84
Speace 128	122
Speace 128 ROMs	124
Utilities Plus	36
Speace GCR	224
ST Ripkey 4	87
ST Time (Internal Clock)	41
Turbo 16	259
Twenty Board	35
Video Key	64
Z RAM 2/4 Meg Board	119
Zoon 2400 modem	113

Educational

AB Zoo	18
Biology Vol. #1	13
Biology Vol. #3	13
Calculus	28
Computer Guide Solar System	32
Decimal Drawing	23
Describe Math	28
Fracton Action	23
Generic Disk 3.5	0.62
Inform & ADY Subj. Book	13
Mega 2 & Mega 4 Dust Cover	7
Mega Touch Springs	10
Moose Mail Deluxe	6
General Store Bentley Bear	23
Kinderama	4
Magical Anagrams Bentley	18
Magical Math 3 Bentley Bear	18
Magical Myths	28

Misc.

1640 ST Cover	7
Asst. ST Book	13
Disk Label (100 pack)	1
Disk Label (500 pack)	5
Generic Disk 3.5	0.62
Inform & ADY Subj. Book	13
Mega 2 & Mega 4 Dust Cover	7
Mega Touch Springs	10
Moose Mail Deluxe	6
General Store Bentley Bear	23
Printer stand (Crays) Lays	7
Printer stand (w/checkbox)	13
SC1224 Dust Cover Only	11
ST Subject Book	13

HOURS: M-F 9 a.m. - 6 p.m. EST
 SAT 10 a.m. - 3 p.m.
 ALL 50 STATES CALL TOLL FREE
1-800-252-2787
 For Order Status or
 Tech. Info, Call (513) 438-0551



ORDER INFO: SEND SELF ADDRESSED STAMPED ENVELOPE FOR FULL CATALOG. NO EXTRA CHARGE FOR CREDIT CARD ORDERS - COD \$4.95 - Next day delivery extra - Alaska & Hawaii UPS Blue Label only - APO & FPO - Ohio residents add 6.5% sales tax - Allow 10 business days for personal or company checks - Returns subject to 20% restocking fee - Defective items require return authorization number for repair or replacement - Prices subject to change without notice and apply only to mail order - Minimum shipping \$4 - We check all credit card orders for validity.

ALERT BOX

CAD-3D Confusion

Several people complained that they could not use the files they created with CAD-3D version 1.0 in the CAD-3D Animator, nor use the .HI and .LO example files which came on disk (March 1990). The problem is that the animator is looking for some extra files.

CAD-3D saves objects in files with the extender .3D. In order to use ANIMATE.PRG, you also must create a .DLT and a .Plx file. Low resolution results in a .P11 file; high resolution results in a .P13 file. The .Plx file contains the first frame of your animation. The .DLT file catalogs the changes in the position of the camera and lights.

Within CAD-3D, put the first view of the object in the Camera screen and press [Alternate]-[R] to start recording. This creates the .Plx file. Now change the camera position to the next scene you want recorded, then press [Alternate]-[R] again. This begins placing subsequent views of your object in the .DLT file. Repeat this step until your animation is complete. Now you can go to the Animator.

Double-click on ANIMATE.PRG, choose Load from the File menu, then select the folder which contains your animation. It is best to place each animation in its own folder because the Animator automatically assumes that the first file with a .Plx extender is the one you want to run.

Unfortunately, the example files on the March disk are unusable. We apologize for any frustration you experienced.

PHASAR Fuddle

PHASAR version 3.0 (April 1990) does require a .CFG and a .REG file to run properly, but they contain data unique to your financial situation so you should create them yourself. No .CFG file was included on the disk; select Set User Preferences under the Setup menu to create one. The .REG file we put on the disk contains tutorial data; make a backup of it, then create your own by selecting Create New Register File under the Setup menu.

Which Way to the Revolution?

In the Dialog Box in the April 1990 issue we published the wrong address to write to for information about the Revolution. Address all queries to: Artisan Software, P.O. Box 849, Manteca, CA 95336. We apologize for any inconvenience we may have caused. ■

Unleash the Power
of your Printer with

UltraScript™
ST&ST-1

Print high quality text
and graphics . . .

Upgrade your ATARI® personal computer system with PostScript® language printing capabilities.

Access a wide variety of PostScript applications with UltraScript ST.

Scale, rotate, outline, shadow, crop, shade, halftone, and pattern fill both text and graphics.

Add PostScript compatible fonts as you need them.

Break the PostScript price barrier:

UltraScript ST supports the SLM 804™ laser printer and includes 27 typefaces for only \$195.

UltraScript ST-1 supports virtually any dot matrix, ink-jet, or laser printer and includes 27 typefaces for only \$195.

Available at your local ATARI dealer or order direct from IMAGEN.



IMAGEN Corporation
P.O. Box 58101
Dept. USST
Santa Clara, CA
95052-8101

For More Information Call:
800/635-3997 or
408/986-9400

The following are trademarks or registered trademarks of their respective companies: QMS, UltraScript, of QMS, Inc.; IMAGEN of IMAGEN Corporation a QMS Company; Atari ST, SLM804, of Atari Corporation. Copyright © 1990 IMAGEN Corporation, a QMS Company.

Order Toll Free **Computerability** Order Toll Free
800-558-0003 consumer electronics **800-558-0003**

ATARI ST PRODUCTIVITY SOFTWARE

1st Word Plus..... 62.05	Architectural Design Disk... 18.95	Easy Score Plus..... 88.95	Hot Wire Plus..... 38.95	Musical Studio 88..... 35.95	Scan Art..... 30.95
30 Word Processor's Disk... 18.95	Cardinal Design Disk... 18.95	Easy Tools..... 30.95	Hyper... 32.95	Newletter..... 24.95	Scan Pix Illustrations... 33.95
30 Font Package 1 or 2... 17.95	Future Design Disk... 19.95	Easy Track II..... 62.95	IB Copy..... 21.95	Noe Disk 2.0..... 27.95	Scan Pix Pets and Animals... 23.95
30 Plotter & Printer Driver... 17.95	Human Design Disk... 18.95	Engers..... 49.95	IB Disk Utility..... 21.95	O Spooler..... 30.95	Scan Pix Religious & Hol... 23.95
30 Pool..... 22.95	MicroBot Design Disk... 19.95	Flash 1.6..... 19.95	IB Hard Disk Backup..... 21.95	OmniPage ST..... 21.95	Signum II..... 89.95
AI2-Zoo..... 18.95	Video Tiling Design Disk... 18.95	Flat Street Publisher 3.0... 234.95	Interlink..... 24.95	Page Stream..... 122.95	Spectrum 512..... 43.95
Adv. of Shindub..... 20.95	CVSoft Textura..... 24.95	Flat Street Pub. Dlx... 124.95	Juggler 2.0..... 32.95	Page 1-18 or A..... 23.95	ST Control..... 49.95
Asop Fables..... 26.95	Cyber VCR..... 43.95	Font..... 22.95	K-Graph 3..... 48.95	PC Ditto..... 64.95	Super Charged EZ Draw... 82.95
All About America..... 39.95	Dash..... 24.95	Fracton Action..... 23.95	Keyboard Contr Seg 1.7... 149.95	Phaser 4.0..... 54.95	SuperBaz Personal..... 46.95
Animal Kingdom..... 23.95	Delatage..... 17.95	G + Plus..... 22.95	Keyboard Contr Seg. Lvl II 189.95	PrintMaster Plus..... 24.95	SuperBaz Personal 2... 74.95
Arban Nights..... 28.95	Demage II..... 17.95	GRA Basis 3.0 + Compiler... 89.95	Key..... 48.95	Art Gallery 1 + Bundle... 24.95	SuperBaz Pro 3.0..... 89.95
Award Maker Plus..... 23.95	DB Man womplot..... 167.95	Graphmaster..... 36.95	Khanna..... 23.95	Art Gallery 3..... 19.95	Tax Advantage..... 87.95
Base Two..... 36.95	DD Utilities..... 16.95	Hard Disk Accelerator..... 24.95	LaSer C 2.0..... 114.95	Fonts & Borders/PM..... 22.95	Thunder..... 25.95
Baltanamo..... 184.95	Decmal Dungeon..... 23.95	Hard Disk Sentry..... 31.95	Debug/Laser C..... 47.95	Pro Copy..... 22.95	Thunder Up..... 122.95
Calamus Outline..... 172.95	Degas Elite..... 39.95	Hard Disk Turbo Kit..... 19.95	LDW Power..... 92.95	Prospero C..... 124.95	TuneSmith..... 83.95
Casual Nights..... 63.95	Demanded Back..... 24.95	Hard Drive Turbo Kit... 37.95	Map and Legends..... 22.95	Prospero Fortum..... 124.95	Turbo ST..... 89.95
Codahed Utilities 3.0..... 19.95	Digi Spec..... 29.95	Hi Soft Basic..... 48.95	Mark Williams C..... 99.95	Prospero Pascal..... 94.95	UltraScript-ST-1..... 124.95
Copylet 2..... 153.95	Draw Art..... 114.95	Hi Soft C Interpreter..... 64.95	Mark Williams CBD..... 40.95	Read & Rhyme..... 24.95	Unilapac..... 32.95
Cyber Control..... 36.95	Draw Art Pro..... 43.95	Hi Soft Pro Basic..... 92.95	Math Blaster Plus..... 32.95	Read-A-Rama..... 28.95	Utility Plus..... 37.95
Cyber Paint..... 48.95	Dyna Cad..... 599.95	Hi Soft Draw Pak..... 62.95	Math Wizard..... 23.95	Reply 4..... 88.95	Video Key..... 64.95
Cyber Sculpt..... 48.95	Easy Draw..... 82.95	Hi Soft Wars..... 30.95	Maths Beacon Typing..... 31.95	Revolver..... 39.95	Word-Up 3.0..... 64.95
Cyber Studio, The..... 49.95	Easy Grade..... 58.95	Hi Soft Sewed..... 25.95	Meditia..... 22.95	Rotand D110..... 69.95	

EDUCATIONAL SOFTWARE SPECIALS Bently Bear Series & Arakis

BRAND NAME 3.5" DISKS • DOUBLE SIDED • DOUBLE DENSITY \$8.95 • 100% ERROR FREE • BOX OF 10 W/PURCHASE	BENTLY BEAR SERIES Buy Any 3 Titles for \$59.00!	ARAKIS Buy Any 3 Titles for \$39.00!	EPYX 500XJ JOYSTICK \$10.95 OFFER GOOD V/ ANY PURCHASE
Alphabet Tutor..... 21.95	Memory Master 1..... 21.95	Algebra 2 Vol 2..... 15.95	Chemistry Vol 2..... 15.95
Equation Builder..... 21.95	Memory Master 2..... 21.95	Algebra 3 Vol 1..... 15.95	Geometry Vol 1..... 15.95
General Store..... 21.95	Spelling Bee..... 21.95	Biology Vol 1..... 15.95	Geometry Vol 2..... 15.95
Magical Math 1..... 21.95		Biology Vol 2..... 15.95	Physics Vol 1..... 15.95
Magical Math 2..... 21.95	ARAKIS	Biology Vol 3..... 15.95	Physics Vol 2..... 15.95
Magical Math 3..... 21.95	Algebra 1 Vol 2..... 15.95	Biology Vol 4..... 15.95	Statistics Vol 1..... 15.95
Magical Anagrams..... 21.95	Algebra 2 Vol 1..... 15.95	Chemistry Vol 1..... 15.95	Trigonometry Vol 1..... 15.95

SOFTWARE PRICES HAVE NEVER BEEN THIS LOW!
ATARI ST RECREATIONAL SOFTWARE

After Burner..... 30.95	Crystal Castles..... 21.95	Hero's of the Lance..... 25.95	Kristal, The..... 31.95	Outrun..... 30.95	Space Ace..... 36.95
After The War..... 27.95	Dark Castle..... 28.95	Hero's Quest..... 37.95	Lancelot..... 25.95	Paladin..... 24.95	Space Harder..... 30.95
Alcon..... 32.95	Demons of the Desert..... 22.95	Hero's Quest II..... 37.95	Leisure Suit Larry..... 24.95	Paper Boy..... 24.95	Space Quest 1 or 2..... 30.95
Alcon..... 19.95	Defender of Crown..... 31.95	Hero's Planetarium..... 33.95	Leisure Suit Larry 2..... 37.95	Pipe Dreams..... 25.95	Space Quest 3..... 37.95
Allen Syndrome..... 24.95	Deja Vu..... 30.95	Hovagat..... 28.95	Leisure Suit Larry 3..... 37.95	Pirateat..... 28.95	Star Command..... 31.95
All aboard..... 16.95	Deja Vu II: Las Vegas..... 30.95	Howl of Shadow..... 25.95	License to Kill..... 21.95	Platoon..... 24.95	Star Fleet 1..... 34.95
Altitude Base..... 36.95	Demon's Winter..... 25.95	Hyrka Book of Games..... 21.95	Lombard Rally..... 24.95	Police Quest..... 30.95	Star Flight..... 31.95
Alternate Reality-City..... 24.95	Double Dragon..... 14.95	Imper for Red October..... 31.95	Loon..... 38.95	Prefi Quest II..... 37.95	Stellar Crusade..... 56.95
Ariels of Rome..... 22.95	Double Dragon II..... 24.95	Imperian..... 31.95	Manhunter New York..... 30.95	Police Quest III..... 37.95	STOS The Game Creator..... 39.95
Aqueduct..... 25.95	Dragon Force..... 31.95	Indiana Jones: Action..... 26.95	Manhunter San Fran..... 32.95	Populous..... 32.95	Strider..... 14.95
Archipelago..... 24.95	Dragons of Flame..... 25.95	Indiana Jones: Graphic..... 31.95	Maniac Mansion..... 28.95	Data Disk..... 19.95	Strip Poker 2..... 24.95
Arkisoid II..... 19.95	Dungeon Master II CHAOS... 24.95	Invasion..... 24.95	Matrix Mousader..... 21.95	Powdermilk..... 25.95	Stripz..... 22.95
Arms..... 26.95	Dungeonmaster..... 24.95			Priest..... 24.95	Stunt Track Racer..... 29.95
Awesome Arcade Act. Pack..... 30.95	Eliminator..... 21.95	EUROPEAN SOFTWARE The Latest Imports!		Pro Tennis Tour..... 25.95	Superman..... 24.95
B.A.T..... 31.95	Empire..... 31.95			Puffy's Saga..... 25.95	T.V. Sports Football..... 32.95
Bad Buddies..... 24.95	Escape from Singe's Castle..... 42.95	Asterixitz..... 34.95	Ghosts and Ghosts..... 27.95	Putz..... 19.95	Tempus 2..... 49.95
Balance of Power: 1990..... 32.95	Exxon..... 22.95	Between the Mafle..... 27.95	Glark..... 30.95	Rambo III..... 19.95	Test Drive..... 24.95
Balkaitz..... 21.95	Eyes of the Lion..... 24.95	Blood Wyck..... 34.95	Hard Rider..... 27.95	Rampage..... 30.95	Test Drive II..... 27.95
Batman..... 24.95	F-15 Strike Eagle..... 14.95	Borodino..... 37.95	Leadboard Duo Pak..... 27.95	Rastan..... 24.95	Tetlati..... 21.95
Battle Chess..... 31.95	F-18 Combat Pilot..... 32.95	Drakhon..... 38.95	North and South..... 34.95	Rebel Universe..... 24.95	The First Blast Hour..... 36.95
Battlehawk 1042..... 30.95	Falcon..... 29.95	Eerie..... 39.95	Proof Metal..... 27.95	Red Lightning..... 38.95	Thunder Blade..... 30.95
Battle of the Robots..... 37.95	Operation Atlantis/Arakis... 18.95	Evangelista..... 27.95	Robo Warrior..... 34.95	Red Storm..... 29.95	Tune and Magic..... 25.95
Barbarian II..... 24.95	Ferrari..... 31.95	Fighter Bomber..... 37.95	Tried 2..... 34.95	Red Fish'n..... 29.95	Tones of Lore..... 25.95
Bugs Angle..... 28.95	Ferrari Formula One..... 31.95	Future Wars..... 34.95	Waterloo..... 34.95	Renegade..... 19.95	Titan..... 28.95
Bresch..... 24.95	Frenchie Freddy..... 30.95	Ghostbusters II..... 34.95	Xenon 2..... 34.95	Rick Danger..... 24.95	Tower of Babel..... 34.95
Bresch II..... 30.95	Fire and Forget..... 24.95	Iron Lord..... 25.95		Risk..... 28.95	Turbo Out Run..... 31.95
Bugs of the Robot..... 37.95	Fire Trip..... 31.95	Jack Nicholas Golf..... 34.95	Micro League Baseball II... 37.95	Road Ranger..... 14.95	Ultima..... 22.95
Bridge 5.0..... 21.95	Fim Zone..... 23.95	Jed..... 30.95	1989 Season Disk..... 14.95	RWF Honda..... 25.95	Ultima IV..... 38.95
Buggy Bobble..... 19.95	Firestone..... 22.95	Jeff..... 30.95	Monopoly..... 24.95	RVF Honda..... 22.95	Ultima V..... 37.95
Captain Jack..... 19.95	Flash Gordon..... 22.95	John..... 28.95	Neochron..... 27.95	Scrabble..... 24.95	Uninvited..... 30.95
Centra..... 24.95	Flight Simulator II..... 30.95	Jok..... 30.95	Newsworld..... 22.95	Shadow of the Beast..... 30.95	Uninvited II..... 30.95
Chase..... 24.95	Foole Errand..... 31.95	Joel..... 21.95	Never Mind..... 21.95	Shadocage..... 30.95	Universe III..... 31.95
Chemmaster 2000..... 28.95	Galactic Conqueror..... 29.95	Joel..... 21.95	Night Hunter..... 25.95	Shark Attack..... 24.95	Vigilante..... CALL
Clue..... 25.95	Gauntlet II..... 32.95	Keith Van Eron's Pro Soccer 21.95	Olds..... 20.95	Shinobi..... 30.95	War in the Middle Earth... 30.95
Codename Joeman..... 37.95	Gold Rush..... 24.95	Killing Game Show..... 21.95	Olga..... 25.95	Shuffluff Cafe..... 25.95	War Ship..... 36.95
Code's Request..... 37.95	Gold Strike..... 31.95	King's Quest 1,2 or 3..... 30.95	Omiga..... 32.95	Shred Service..... 14.95	Wargame Construction Set... 22.95
Combat Course..... 24.95	Guns'n'Blip..... 35.95	King's Quest 4..... 37.95	Operation Wolf..... 19.95	Shred Service..... 14.95	Warlock..... 23.95
Comq. Guide/Solar System..... 36.95	Harley Davidson..... 30.95	Knight Fever..... 28.95		Skeat or Die..... 25.95	Ways Grande..... 30.95
Conquest of Camelot..... 37.95	Harder Combat Simulator... 30.95			Slates for Fun..... 30.95	Weird Dreams..... 25.95

ORDER INFORMATION: Please specify system. For fast delivery send cash/charge or money order. Parcel and company charges add 14 business days to fleet. Shipping Postmaster's C.O.D. orders are \$4.00. In Continental USA include \$2.00 for postage. All other foreign countries \$5.00. Master Charge and Visa include card #, expiration date and signature. We residents please include SK sales tax. HI, AK, FO, PU, Puerto Rico and Canadian orders, please add 6% shipping, minimum \$6.00. All other foreign orders add 10% shipping, minimum \$10.00. All orders shipped within the Continental USA are shipped next business day. All other foreign orders shipped when they exceed the minimum amount, you will be charged the additional amount to get your package to you quickly and safely. All games are new and include factory warranty. Due to our low prices on our software, we cannot honor our return policy. Return cost is \$10.00. All items are sold as is. All defective returns must be made within 30 days of purchase. Prices and availability subject to change without notice.

NO CREDIT CARD SURCHARGE INFORMATION

(414) 357-8181 FAX (414) 357-7814
 P.O. Box 17882 Milwaukee, WI 53217

Since 1982

STR 5-90

Order Toll Free **ComputAbility** Order Toll Free
 800-558-0003 *Consumer Electronics* 800-558-0003

Seagate SUPER SALE

ST-125N 20 MEG	\$235	ST-225N 20 MEG	\$255
ST-138N 30 MEG	\$255	ST-277N-1 60 MEG	\$345
ST-157N 49 MEG	\$295	ST-296N 80 MEG	\$379
ST-157N-1 49 MG-28ms	\$319	ST-1096N 80 MEG-24ms	\$435
ST-177N 60 MEG	\$379		

SupraDrive HARD DRIVES

• • • SUPRA SPECIAL • • •

30 MB SUPRA DRIVE - ST	\$499 DEL*
40 MB SUPRA DRIVE - ST (QUANTUM)	.....\$629 DEL*
80 MB SUPRA DRIVE - ST. (QUANTUM)	.....\$1099 DEL*

DOUBLE-SIDED FLOPPY DRIVES

Master 3S
\$129 DEL*

• • • • •
Indus GTS100
\$169 Del*

AUTHORIZED

COMPUTERS

- 520ST
- 1040ST

DRIVES

- MEGA FILE 30/60
- SF 314



ATARI DEALER

MONITORS

- SM 124
- SC 1224

LASER PRINTERS

- SLM804
- SLM804-PCV

SUPRA MODEM SPECIAL

PACKAGE INCLUDES:

- SUPRA 2400 EXT.
- Flash V1.6 Software
- ST Modem Cable

\$129

* INDICATES FREE DELIVERY IN THE CONTIGUOUS 48 STATES

FAST HARD DRIVE KIT

SINGLE 3.5" DRIVES

ST-138N 30 MEG	... 569 DEL*
ST-157N-1 49 MEG	... 629 DEL*
ST-177N 60 MEG	... 689 DEL*

DUAL 3.5" DRIVES

2-ST-138N 30 MEG	... 849 DEL*
2-ST-157N-1 49 MEG	... 969 DEL*
2-ST-177N 60 MEG	... 1089 DEL*

FEATURES: Built in time clock with battery backup • Low-noise fan for efficient cooling • Under-monitor design requires no additional desk space and provides a monitor stand for ST computers • Adjustable legs adjust the monitor and provide cable clearance • Allows booting directly from the hard drive • Handler provides error checking on the DMA bus
ALL HARD DRIVES ARE SEAGATE SCSI.

PRINTERS



NX 1000 multifont 2..	\$158
NX 1000 Rainbow	....\$205
NX 1500	.....\$295
NX 2410	.....\$275
NX 2415	.....\$385
XB 2415	.....\$415
XB 2415	.....\$545
XR 1000	.....\$325
XR 1500	.....\$415
Laser 8 II	.....\$1745

Panasonic

KX-P 1124

	\$277
1180	.....179
1191	.....229
1624	.....419
1695	.....439

EMULATORS

PC-DITTO II	.....\$249 DEL*
PC SPEED (AMERICAN)	.....\$379 DEL*
PC SPEED (EUROPEAN)	.....\$329 DEL*
SPECTRE GCR	.....\$229 DEL*

ATARI EXTRAS

Drive Master	.....35 6 W Surge Protector	..... 14
Monitor Master	.....35 Z RAM	..... 119
Mouse Master	.....35 ST Time	..... 43
Mouse House	.....5 Vidi ST	..... 149
Tweely Board	.....35 Computeyes Color 250	... 179
Video Key	.....65 Discovery Cartridge	..... 129
3.5" Drive Clean Kit	.....6 Migraph Hand Scan	.....429 DEL*

PRINTER RIBBONS

PANASONIC BRAND

1124	.....\$8.95
1180	.....\$8.95
1191	.....\$10.95

STAR BRAND

NX 1000 MULTI 2	....\$5.95
NX 1000 RAIN	.....\$7.95
NX 2410	.....\$15.95
NX 2415	.....\$15.95

JOYSTICKS/MICE

Epyx 500 XJ	.....10.95
Gravis Joystick	.....34
Gravis Mousestik	.....85
Kraft Mazemaster	..... 9
Maxx Flight Yoke	.....75
Wico Bat Handle	..... 17
Wico 3 Way	.....22
Wico Ergo Stck	.....18
Cordless Mouse	.....95
DVT HD Tape Back-up	.....149

GOLDEN IMAGE MOUSE \$49

CASIO CT-650 WITH MIDI \$309

IMG SCANNER \$59

A DARK AND STORMY NIGHT



Everyone has at least one game scenario in them, but most should never be written. Well, now's the time to release those caged monsters. We want your purplest prose, your corniest plots. Flex those puns! Dare to parody! Enter START's Bulwer-Lytton Game Scenario Contest, named for the 19th-century author of a forgettable novel with an unforgettable opening, "It was a dark and stormy night."

PRIZES

- Grand prize is an Atari Lynx game machine and the Lynx-designed games.
- First prize is 10 ST games.
- Second prize is a one-year subscription (or renewal) to START magazine.
- Third prize is two hint books from Silicon Valley, *Falcon* and *King's Quest Companion*.

CONTEST RULES

1. Maximum length of 100 words.
2. No handwritten entries will be accepted.
3. Entries must be received by July 31, 1990.
4. The totally subjective decision of the START editorial judges is final.
5. Contest is not open to Antic employees or their families.
6. All entries become the property of Antic Publishing and will not be returned.

Winning entries will be published in the December 1990 issue of START.

News, Notes & Quotes

BY STEPHEN MORTIMER, START CONTRIBUTING EDITOR

Inside Atari

Mead Ames-Klein has been named new president of Atari Corp., replacing David Harris in that position. Harris' appointment, which was announced in April's "News, Notes and Quotes," now appears to have been intended as temporary only, until a permanent successor to Mike Morand could be found. Ames-Klein comes from the Koala Springs beverage company and is noted for his marketing skills (this is reminiscent of John Sculley coming to Apple from Pepsi). Ames-Klein will oversee both Atari Computer (U.S.) and the entertainment division.

Also riding the merry-go-round is Bob Thomas and Associates, which replaces Marken Communications as Atari's public relations firm. Their address and phone number are 228 Manhattan Beach Blvd., Manhattan Beach, CA 90266, 213/376-6978. Bob Thomas and Associates is a subsidiary of the San Francisco advertising firm Chiat/Day.

The good news from Atari is that the Laser Brain Epson-printer emulator has been released as freeware. Laser Brain is an improvement on the buggy Diabolo emulator, which was incompatible with many software packages. Written by Germany's DMC, Laser Brain works with a monochrome system and multiple, user-installed fonts. Since it's freeware, Atari won't guarantee its compatibility or future upgrades.

Still waiting for release are MIDI-Tasking, Cookie Jar, Expandable Control Panel and the new GDOS that supports scalable outline fonts.



Fat Bits

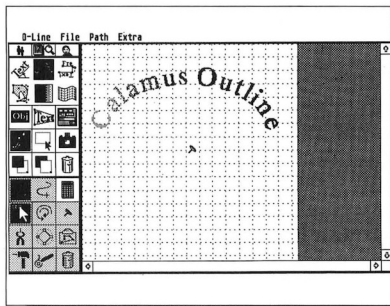
- Advertisements for the Stacy, which received Class-B FCC certification allowing non-consumer sales, appeared in the March issues of *Keyboard* and *Electronic Musician* magazines (most recent issues at press time).

- IBM and the West German conglomerate Siemens have agreed to jointly develop the next generation of memory chips. Research on the 64-megabit chip will take place at IBM's Advanced Semiconductor Technology Center in New York, another facility in Vermont and in Munich. The companies plan to ship a finished product by the mid-1990s.

- Calamus Outline, a \$289.95 art package similar to the Mac's Adobe Illustrator, was released recently to an enthusiastic public. In order to establish Outline as the standard in illustration software, ISD bundled an Outline-to-Postscript conversion program with it. ■

Wireless Data Network

Motorola and IBM announced a new wireless data network that will give portable computers across the country access to their fixed counterparts. A Motorola terminal is needed to use the network, which is expected to be fully operational later this year. You can either use the terminal as if you were a remote site linked by telephone lines, or it can serve as a modem for other computers, such as the Stacy or Portfolio. Atari has reportedly demonstrated a system using the Motorola terminal's modem function.



ISD is now shipping Calamus Outline.

If you have a hot tip let us know at News, Notes & Quotes, START Magazine, 544 Second Street, San Francisco, CA 94107

SQ44-ST 44 Megabyte Removable Cartridge Hard Drive

Complete Systems From

\$899

Features a SyQuest Drive and One 44 Meg Cartridge
2 Year Warranty - Cooling Fan, I/O Host, Clock, & I/O
Software - Rated 25 Ms.600K/S - Free Partcopy.
Backup Software from Start - Autoboosting, Ready to Run

Shoe Box Case \$899

2 Drive Slots IBM Style- 7" Wide x 7" High x 15" Deep

Single Drive Case \$919

Compact Size - Fits in a Briefcase

6" Wide x 2.75" High x 13" Deep

Under Monitor Case \$929

2 Drive Capacity - Ready for 2nd SCSI Drive

15" Wide x 3" High x 14.25" Deep - 95 Watts

Add a Seagate Hard Drive

49MB ST157NI, 28Ms \$379

85MB ST296N, 28 Ms \$499

Floppy Drive installed 3.5" or 5.25" \$99

External 3.5" DSDD Drive \$139

Carler Graphics & Computers

3006 North Main St., Logan, Utah 84321 Since 1985

Free Shipping on Pre-Paid Orders

call (801) 752-2500 or order

Pricing is for Cash/Check, Visa-MC-AMEX-COD-Accepted

Overnite and Saturday Delivery Available. Credit Cards add 3%

DAMAGED DISK ?

Subscribers: simply call our distributor at (619) 485-7754 and ask for a new one.

Newsstand buyers: send your damaged disk to:
START Customer Service
544 Second St.
San Francisco, CA 94107
We'll mail you a new one.
Allow three weeks for arrival.

European Report

BY DONALD MAPLE, REPORTING FROM WEST GERMANY

Racist Games Spread

Along with the resurgence of the extreme right in the political arena, a disturbing number of racial and neo-Nazi computer games have spread throughout Europe, especially in Germany and Great Britain. These games — "Concentration Camp Manager", "The Anti-Turk Test" and "Paki-bashing" — can be found in schools, where the youth seem to be titillated by the games' forbidden nature and not fully aware of their implications. Some of these programs are original and some mimic commercial software; obviously people have spent a lot of time creating this "entertainment."

Sex!

And now that I have your attention — a serious subject. The Organisation Against Sexism In Software (OASIS) is a London-based group founded to fight sexual stereotyping in software. For example, how many times have you seen a game advertisement featuring a macho hero decorated with scantily clad female-oids? Oasis is concerned with the attitudes that produce such work, and how they apply to and affect both sexes. For more information and a bimonthly magazine send a U.S. equivalent of five British pounds to:

Sandra Vogel, OASIS
3 Alden Court, Stanley Road
Wimbledon, London SW19 8RD
Great Britain

Computer Spies Convicted

German citizens Dirk Brzesinski, Peter Karl and Markus Hess were convicted of espionage Feb. 15 for cracking American military computers and selling their telephone numbers and access codes to the KGB. They received \$54,500 for the secrets from their Soviet contact, "Serge," although Brzesinski claims their main motivation was to help the Soviets raise their technology to the level of the West. The three were sentenced to between 20 and 24 months in prison. The fourth member of the group, Karl Koch, allegedly committed suicide before the trial by setting himself on fire in a forest near Hannover. (Editor's Note: *This was the group hunted by astronomer-turned-spycatcher Clifford Stoll, who told his story in The Cuckoo's Egg, reviewed in the February 1990 issue of START.*)

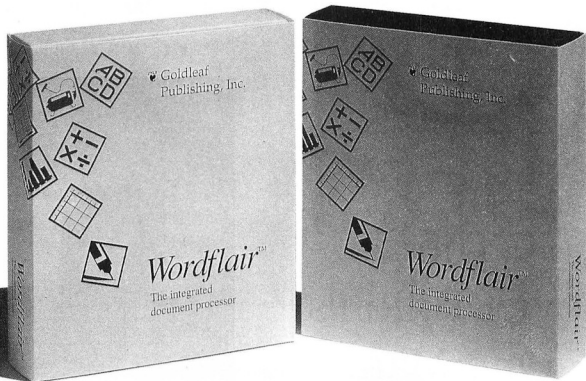
Computer Court

Great Britain's courts will soon automate their summonses, giving the job to a 16MB Data General Eclipse computer. The system is expected to send out an average of 3,000 letters per day, but is capable of generating up to 10,000. The computer will handle only cases involving fixed amount payments such as utility or credit card debts.

First Apples, Now Broccoli?

The Systems Exchange, a London-based computer company, announced plans to build an "ecologically-sound" machine. The casing for this IBM-compatible is made from a mix of polyurethane (vegetable oil) and coal ash and is sold with a radiation-free monitor. Now that the technology is available, will we soon see a "green" ST? ■

Write with flair!




Introducing Wordflair™

Wordflair is a new, integrated document processor for Atari ST family computers. More than just a word processor, Wordflair also contains features for calculations, graphing, page layout, importation of graphics, and mail merge. Wordflair's unified design makes it easy to create eye-catching documents without having to move from program to program.

Fast. Simple. Elegant.
Solutions for compound documents.

© 1990 Goldleaf Publishing, Inc.
Wordflair is a trademark of Goldleaf Publishing, Inc.

Wordflair creates compound documents fast. Wordflair's ease of use and its ability to create presentation quality documents offer you incomparable value. Pair up Wordflair with your favorite Atari ST computer. Requires 1 Meg of RAM. GDOS and G+Flair included. Hard disk and monochrome monitor suggested. \$99.95 SRP. To order, see your Atari dealer, or call 415/243-9605.

 **Goldleaf Publishing, Inc.**

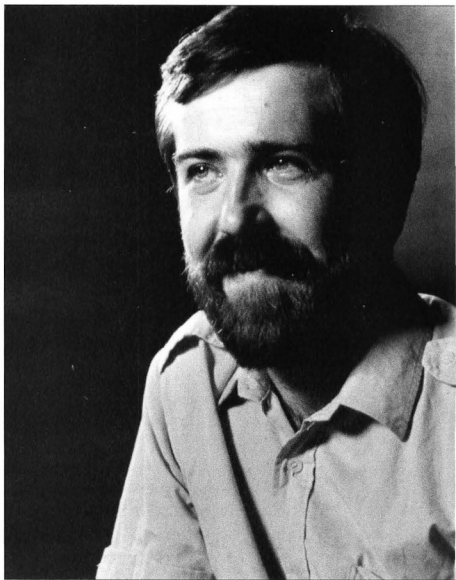
700 Larkspur Landing Circle, Suite 199
Larkspur, CA 94939
415/243-9605

Comrade


BY AMY H. JOHNSON

The
Soviet Union's
One-Man
Game Industry

Alexey Pazhitnov
didn't plan to be
a global wunder-



kind, but the runaway success of Tetris made his name famous within the computer entertainment industry. When a star lives halfway around the world, however, few people get a chance to learn much about him. START caught up with Comrade Alexey on his whirlwind tour of the United States and peeked at the man behind the mega hit.



Alexey

START PROGRAMS EDITOR

Alexey Pazhitnov doesn't want to face two more journalists quizzing him about sales, software and the Soviet Union.

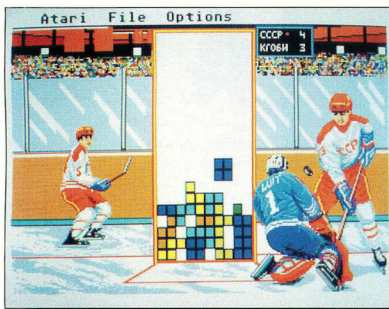
But publicity is a skill all successful entrepreneurs need to master and he approaches his task with grace and good humor, a little stunned to find himself a hot story in America. After all, he only invented a little game of falling blocks, a little game called Tetris, a little game that has sold millions of copies worldwide and made the modest Soviet mathematician a Western symbol of the emerging, glasnost-era capitalist.

Dressed in jeans and a grey sweater, the bearded, 34-year-old father of two looks more like the academic he is than the vanguard of a shifting economy. But ever since he arrived in America, landing in the middle of the swarming sales pitch that is the Las Vegas Consumer Electronics Show, he's been riding a public-relations blitz like a Cossack on a calvary charge.

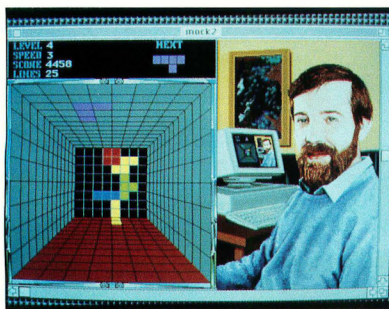
In San Francisco he attended a press reception in his honor at a plush hostess suite at Union Square's St. Francis Hotel. Local press and Soviet diplomats nibbled quiche squares and mingled with executives from Spectrum Holobyte, Pazhitnov's American publisher, who had obligingly installed computers loaded with his latest creation, Welltris, a 3D version of Tetris. (Spectrum estimates that the ST version of Welltris will be released around Christmas). The author patiently posed for pictures, answered questions and autographed game boxes. "PLAY TETRIS!" he boldly wrote across the spires of St. Basil's cathedral.

Tetris Takes Off

People have been playing Tetris since 1985. "When Tetris became popular it was like a fire in Moscow," Pazhitnov remembers. The first ▶



Tetris was a smash hit in America.



Welltris is a 3D version of Tetris. Both Tetris and Welltris were illustrated with graphics inspired by the photography book *A Day in the Life of the Soviet Union*.

version of the game was written for an old-technology DEC-compatible computer with no graphics. Pazhitnov formed the game pieces, a quartet of blocks, with square bracket characters. The game play was simple: rotate the different configurations of four blocks (Tetris is a play on the word tetra, which is derived from the Greek tetrares, meaning four) so that when they fall to the bottom they form a solid line across the screen. The line disappears; the blocks keep falling. You lose if the blocks stack up to the top of the screen.

This deceptively simple task, the product of a mathematician's abstract, ordered mind, proved universally addictive. The game became a favorite pastime at the U.S.S.R.

Academy of Sciences Computing Center (Academy Soft), where Pazhitnov still works as a programmer, designing CAD/CAM, speech recognition and psychology soft-

ware. When a spruced-up version was ported to the IBM PC with the help of then-16-year-old hacker Vadim Gerasimov, Tetris spread throughout the East Bloc, leaping the Iron Curtain into Western Europe, where it was picked up for U.S. distribution by Spectrum Holobyte.

It was a spectacular hit in America — the first computer game from the Soviet Union — selling well over 100,000 copies and spawning versions for the Nintendo Gameboy and video arcades. It swept most of the 1988 Software Publishers Association Excellence in Software Awards for the entertainment category: Best Action/Strategy Program, Best Entertainment Program, Critic's Choice: Best Consumer Program and Best Original Game Achievement. And it's earned Pazhitnov enough money to make him well-off by Soviet standards.

Ironically, it's success was accidental. Tetris started life as an intellectual exercise.

"The best way to study new equipment is to write a small program," claims Pazhitnov, who speaks fairly fluent English. "I prefer to write games or puzzles."

Wanting only to see his little test program published, Pazhitnov assigned his rights to Academy Soft, whose director launched it westward. There was no other direction to go.

Softwhere?

The U.S.S.R.'s software market is virtually non-existent since the country lacks an installed computer base to support it, says Pazhitnov, who owns an IBM AT with an EGA

Pazhitnov has been riding a public relations blitz like a Cossack on a calvary charge.

board and what may be the only Nintendo Gameboy system in Moscow.

"When I write a game I take in mind this (foreign) market, not the Soviet market," he says. He keeps up with developments overseas through the computer press (BYTE and PC

World) and foreign businessmen.

Even as he cocks one eye westward, Pazhitnov continues to write games that he likes to play. "Why do I have to write a hit each time?" he asks rhetorically, alluding to pressure to produce a smash follow-up to Tetris.

He refuses to cater to one segment of the foreign market: shoot'em up games. He doesn't like to play them and he doesn't want to program them. People who play his games, he brags, "have to think."

Pazhitnov is a prolific programmer, showing software houses about 10 games on this, his first, trip to America. He no longer gives away the rights to his work, having contracted with a joint venture company named Dialogue. He expects his third American release this summer, another geometric puzzle he calls Swap and Drop, but which Spectrum Holobyte wants to publish as Hatris.

"It's another kind of thinking, another kind of playing," he says, trying to differentiate number three from Tetris and its derivative, Welltris. It's the end of a two-hour

ATARI IN EASTERN EUROPE

The recent U.S. proposal to lift trade sanctions to Eastern Europe was met with guarded enthusiasm by Atari Corp. The proposal was made to COCOM, a 15-nation group that regulates technological transfers to the East Bloc. At press time, COCOM had not announced a decision.

Max Bambridge, an Atari spokesperson, said the company's position on lifting trade sanctions is that "the free availability of computing power is not to our disadvantage."

Bambridge acknowledged that due to the East Bloc's lack of consumer goods, like personal computers, "we have to plan to have long-term relationships where we can go in and provide support services, if needed, and sell upgrades."

Atari will most likely pick East Germany to begin its marketing push, building on the company's current success in West Germany. "They (East Germany) may have the most viable of the economies in Eastern Europe right now," Bambridge said. "I would be extremely surprised if they did not turn out to be a major player very quickly."

(Editor's Note: *Although no official East German branch exists, Atari reportedly commands between 30 and 50 percent of the 16-bit computer market there, due to the ST's availability in hard-currency stores. Atari presently manufactures 8-bit machines in co-venture with the Soviet Union.*)

— Richard P. Greenfield

Learning the Business

Pazhitnov is quickly losing that innocence. He learned a lot during the Tetris negotiations, he says. The U.S.S.R. lacks the army of lawyers, financiers and managers available to U.S. dealmakers, so Pazhitnov, the point man of the Soviet software revolu-

tion, has fought alone to master the unfamiliar contracts and agreements vital to his new business. Paperwork isn't his favorite thing, he admits, but he accepts its necessity calmly; like interviews, it's now part of his job. Pazhitnov readily slips between jobs, from shy scientist to businessman. Upon meeting someone he whips out an embossed business card like any power-suited M.B.A. His cards, however, reflect the global nature of his enterprise; one side is in English, the other in Russian.

That dual nature is what has caught the eye of American businesspeople, eager to equate Perestroika's restructuring with embracing capitalism. About 150 of them crowded into the "First U.S.-Soviet Personal Computer Seminar," held at San Francisco State University the day after Pazhitnov's press reception at the St. Francis. Conference organizers expected a third that number. Pazhitnov, the accidental entrepreneur, sat on a panel during the conference, facing the news camera along with the expatriates, Soviets and Americans promoting new trade ties. He didn't speak much. Always the gentleman, he told the audience he was happy to be in the United States and how much he liked the country. He didn't mention that sales pitches and public relations appearances barely left him time to take a brief walk around San Francisco. Like any quick study, he told the audience what they wanted to hear. And the audience embraced him, the Soviet Union's one-man game invasion, harbinger of other Cossocks charging the trade barriers. ■

An Atari ST version of Welltris is planned for a Christmas release.

interview and clearly tired, Pazhitnov vaguely describes his new game as requiring the player to swap and distribute two different objects, matching them with others on the screen, then dropping them. His candor disarms Spectrum's assistant marketing director, Rita Harrington, who later shrugs off Pazhitnov's premature announcement of a product for which the company has yet to develop packaging or promotion as the price to pay for his politeness and business innocence.

interview, has fought alone to master the unfamiliar contracts and agreements vital to his new business. Paperwork isn't his favorite thing, he admits, but he accepts its necessity calmly; like interviews, it's now part of his job.

Pazhitnov readily slips between jobs, from shy scientist to businessman. Upon meeting someone he whips out an embossed business card like any power-suited M.B.A. His cards, however, reflect the global nature of his enterprise; one side is in English, the other in Russian.

THE GRETZKY



CHALLENGE

Hockey Great Becomes Software Consultant



BY SCOTT WASSER

Sure, programmers have developed hundreds of sports simulations for the home computer, but how many can claim a legend as one of their consultants? Bethesda Softworks teamed up with Wayne Gretzky, star of the Los Angeles Kings, and other hockey experts to bring to the ST what may be the best hockey simulation ever.

You can hear the excitement in Chris Weaver's voice when he talks about Wayne Gretzky Hockey, an ice hockey simulation that he flatly states will be "the biggest entertainment program of the year for the ST."

Bolstering his claim is the Software Publishers Association award for Best Sports Simulation of 1989. And the game ought to be the best, considering who he had helping his development team — one of the National Hockey League's best players, superstar Wayne Gretzky.

Weaver says Gretzky contributed more than just his name to the simulation. Although playing hockey 10 months a year — first in Edmonton and now in Los Angeles — made it difficult for Gretzky to visit company headquarters in Maryland, he corresponded with the folks at Bethesda Softworks by phone and mail.

"And whenever he was here in the (Washington, D.C.) area, he came to the lab," Weaver says. "When Wayne wasn't available and we needed something, we used the Washington Capitals as our experts.

"The Capitals went way beyond the call. They deserve a lot of recognition for their involvement. They let us come and study their games, talk to their players and helped us any way we asked. And they received absolutely nothing for their services, other than our undying gratitude." ▶

SUPERCHARGER

BY
TALON

THE FIRST EVER EXTERNAL PC BOARD FOR ATARI ST COMPUTERS A FULL MS-DOS PROCESSING SYSTEM THAT SIMPLY PLUGS INTO THE DMA PORT, WITH NO NEED TO OPEN YOUR COMPUTER. SUPERCHARGER IS PACKED WITH FEATURES AND CAN BE USED WITH ALL MACHINES FROM 520ST TO MEGA 4 AND EVEN THE STACY LAPTOP

FEATURES:

- 100% compatible with MS-DOS programs (non protected) • Norton Factor 4.4 • Supports all hard disks • Supports serial and parallel ports • Uses "hotkey" to toggle between Atari and PC programs at the same time without having to reboot in DOS mode • Turns the Atari mouse into a PC mouse • Supports internal and external 3.5" and 5.25" floppy drives • Leaves the cartridge port free for use • Supports both monochrome and color Atari monitors (CGA color and Hercules emulation) • Supports some AT programs, such as "286 windows" • Simple to set up and easy to use - no soldering, no wiring, no cutting.

INCLUDES:

- 512K RAM, making it extremely fast and can easily be expanded to one megabyte of RAM. The extra RAM can be ordered separately, and can be installed prior to shipping. • Socketed for an 8087 co-processor. Co-processors can be ordered separately, and can be installed prior to shipping. • NEC 8 mhz V30 processor • DMA cable with thru-port • Built in bus which will be adapted in the future to accept PC expansion boards (VGA card scheduled for April '90) • Comprehensive hard disk utilities software • An attractive color coordinated ABS plastic case • MS-DOS 4.xx • 5V DC external power supply • Easy to use operating manual • Registration card for software updates and 12 month warranty.

All this for the incredible price of just

\$399.00*



OMNISWITCH

BY
TALON

Multi-Sync For Atari

\$89.95*

NOW, FOR THE FIRST TIME YOU CAN HOOK UP YOUR ATARI TO A MULTI-SYNC MONITOR WITH THE INCREDIBLE OMNISWITCH.

FEATURES:

- **MULTI-SYNC MONITOR PORT:** Gives your Atari the ability to use a multi-sync monitor. Color or monochrome with the touch of a button. (low, medium and high resolutions)
- **COLOR AND MONOCHROME MONITOR PORTS:** If you do not have a multi-sync monitor, Omniswitch allows you to plug in color and monochrome monitors and switch between them. No more cable swapping!
- **FLOPPY DRIVE PORTS:** Enables you to use two external floppy drives instead of one! (uses 3.5" and/or 5.25")
- **AUDIO JACK** to plug in to your amplifier. • **VIDEO JACK** for monochrome video output.

MULTI-SYNC MONITORS AVAILABLE - CALL \$\$\$

*ALL PRICES SUBJECT TO CHANGE. • SHIPPING AND HANDLING EXTRA

TALON TECHNOLOGY

243 N. HIGHWAY 101 • STE. 11 • SOLANA BEACH, CA. 92075

ORDER TODAY

619 792-6511

WE ACCEPT VISA/MASTERCARD

Weaver also is grateful to Doug Carpenter, who currently coaches the Toronto Maple Leafs. Carpenter led a team of three NHL coaches who rated the skills of real-life hockey players so that they could be programmed into Wayne Gretzky Hockey.

Understanding the Game

To understand the various players' and coaches' involvement, it's necessary to understand a little about Wayne Gretzky Hockey.

Wayne Gretzky Hockey was an ambitious project for Bethesda Softworks, which is a division of the engineering research and development firm Media Technology, Ltd. Weaver initiated the project with a simple goal in mind: he wanted to create the most realistic sports simulation ever produced for a computer.

"One of the very reasons we chose hockey," Weaver says, "is because it

was one of the most difficult sports simulations we could do. In hockey, unlike football or baseball, the computer doesn't have time to think between plays. If you can program a good hockey simulation, you can program anything.

Weaver explains his philosophy: "Graphics do not make a good game any more than storyline makes a good game. They are an intrinsic part of it, but only a part. What we really want to do in our sports simulations is create a model of the sport we're simulating. Graphics is only part of that model."

Wayne Gretzky Hockey typifies that attitude. At first glance, the initial impact is underwhelming. It lacks the dramatic 3D, on-the-field perspective offered by some other sports simulations.

But playing the program for a few minutes leads to a new appreciation. The great strength of Bethesda's

program is the faithful way it translates ice hockey, with all its subtle nuances, to the ST.

"I'd Never Do That"

"We took the time to sit down with literally three or four dozen hockey owners, players and general managers," Weaver says. "That included the time we spent with actual players looking over our shoulders at the game and saying things like, 'No, I'd never do that in that situation.'

"The culmination of that is the players in the game have their own artificial intelligence. If you're playing the game, and a defenseman with the puck has opposing players coming at him, instead of just passing to an open man he'll try to go around the other players to retain control of the puck."

Weaver continues, "That's what a real hockey player would do. And that's something that's not pro-

AUSTRALIA

SOFTWARE DEVELOPERS

Braden Ray Software is seeking quality commercial and shareware software to distribute to the small but growing and enthusiastic Australian ATARI market.

Please contact: Steve Eads

Braden Ray Software

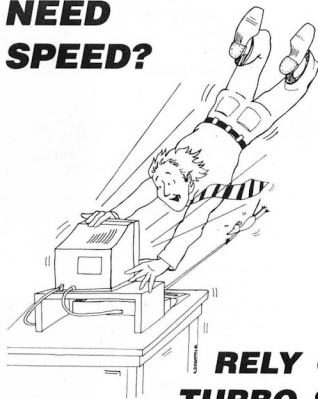
Box 143, Magill SA 5072 Australia

PH. 011-61-8-390 3018 FAX 011-61-8-364 0925

Down-under Distributor for:

ST INFORMER, **MIDI RESOURCE** &
the popular *Universal Item Selector*

NEED SPEED?



RELY ON TURBO ST!

Turbo ST turns your Atari ST into a speed demon. Check out **Turbo ST** at your local dealer or download our free demo from your favorite bulletin board.

Upgrades to version 1.8 are only \$5 with your original disk. For more information, call (407) 657-4611, or write to SofTrek, P.O. Box 5257, Winter Park, FL 32793.

grammed into the game. It's not a canned move. The player does that because it would be the most logical thing to do in a real hockey game."

The computer-generated players who make those moves in Wayne Gretzky Hockey are based on real-life athletes. Maple Leafs coach Carpenter and two other NHL coaches rated current and former players in 11 different skill categories (nine for goalies) for the simulation.

"By using skill categories for the players, we can actually create a signature of that particular player," Weaver explains. "The game is realistic enough that if a player is not rated properly, he's not going to play the game the right way — the way he would in real life."

True-to-Life Simulation

Weaver chuckles as he tells the story of Gretzky's most recent visit to Bethesda Softworks headquarters in

Rockville, Maryland. Gretzky, who was accompanied by then-Los Angeles Kings teammates Bernie Nichols and Marty McSorley, stopped by to check out the final version of the game.

While Weaver was showing off the simulation, McSorley pulled a chair up to the computer and leaned over so that his nose was only inches from the screen. The hulking defenseman's head rotated back and forth for 10 minutes while his puzzled teammates and Weaver watched.

According to Weaver, McSorley finally jumped up and proclaimed, "It's amazing. He [an on-screen player] did exactly what I would have done if I were on the ice." ■

Scott Wasser is a freelance writer who lives in Sbaertown, Penn. He wrote the desktop publishers comparison in the April 1990 issue of START.

AT A GLANCE

Game:	Wayne Gretzky Hockey
Company:	Bethesda Softworks P.O. Box 7877 Gaithersburg, MD 20898 (800) 677-0700 or (301) 926-8300
Price:	\$49.95
Summary:	Engrossing and realistic.

To some fans, ice hockey is a sport of power and violence. To others, it's a well-choreographed dance of finesse and precision. And to still others, it's a strategic battle of wits; a chess game on ice. Bethesda Softworks' Wayne Gretzky Hockey is all of these. It is one of the most complete, realistic and engrossing computer sports simulations ever created for the Atari ST.

Six different 20-man teams are provided in Wayne Gretzky Hockey, but you can also create your own with the roster editing function. Each player is rated in categories such as quickness, power, puck control and shooting. The program lets you study the rosters to set up forward lines and defensive pairings and select a starting goalie. Gretzky's own suggested line combinations are included as default settings.

Virtually every aspect of pre-game set-up is handled through menus. By simply highlighting items, you select either mouse or joystick control, the length of periods (the game is played in real-time) and speed (normal, slow or novice).

You can coach and skate, coach only or skate only. As a coach, you set up the lines (including power play and penalty killing units), decide when to make substitutions and dictate team strategy. As a player, you can decide what position to play and then make all the moves associated with it. You control the speed, posi-

The Most powerful MIDI sequencing software for Atari has gotten even better!

Master Tracks Pro™ for Atari ST features 64 tracks of real time and step recording, our exclusive Song Editor™ and legendary graphic editing. Professional features include controller chasing, fit time, 32 MIDI channels and a built-in Sysex Librarian. Master Tracks Pro now provides a cue sheet for keeping track of hits, locking markers and the ability to lock up to SMPTE via MIDI Time Code with the MIDI Transport.™

For more information see a Passport dealer near you or call (415) 726-0280 for details on the Next Generation of Music Software™.

PASSPORT.

Passport, 625 Miramontes Street, Half Moon Bay, CA 94019 (415) 726-0280

WAYNE GRETZKY HOCKEY

REVIEWED BY SCOTT WASSER

tioning, shooting and checking of any of the skaters. You can even demand a pass from your teammates or grab an opponent to slow him down.

Player control is surprisingly easy. The skater you control is distinguished by a different color helmet and follows an on-screen cursor. To shoot or pass the puck, you move the cursor quickly over your target, then press the mouse or fire button.

About the only limitation you face as a coach is that your repertoire consists of five basic plays and you cannot draw up your own. As a player you can-

Are you skating on thin ice? Wayne Gretzky Hockey can fix that. Pick your puck against the class champ in this ultimate simulation from Bethesda Softworks.



Gretzky's own suggested line combinations are included as default settings.



Created with consultation from the superstar himself, Wayne Gretzky Hockey is so realistic, you'd better don a parka and gloves to play.

not play goalie or decide what type of shot your on-screen persona will take.

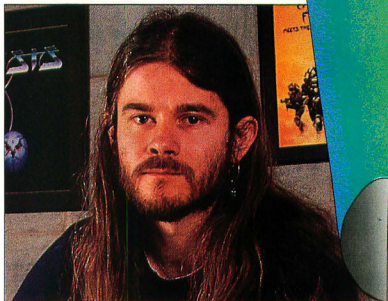
The most significant attribute of Wayne Gretzky Hockey is the realism. Penalties are called and fights break out. The puck skitters over the ice, which changes as it becomes skate-worn. Digitized sound effects report the pucks caromming off the boards and the players ramming each other.

You have an aerial view of the rink. A little more than two-thirds of it is showing at all times on a horizontally scrolling screen. While you see the action from a distance, however, the animation is so smooth that you quickly get caught up in the game.

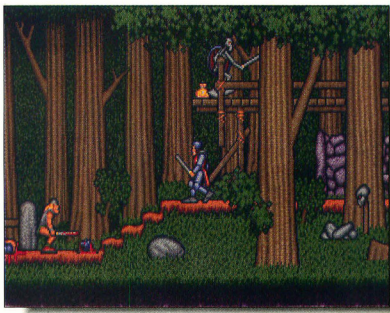
In fact, Wayne Gretzky Hockey ranks in my library as one of the most engrossing sports simulations ever made. With its astounding realism, depth of play and attention to detail, the game is as big a winner as Gretzky himself. ■

Behind the Scenes

AN INTERVIEW WITH
BY
RICHARD
MONTEIRO
PSYGNOSIS ARTISTS



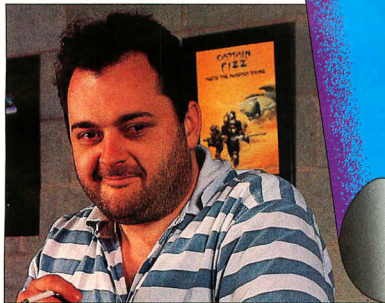
Garvan Corbett designed everything in this forest scene from *Barbarian II*.



From the eerie surrealism of Menace to the demonic imagery of Baal, Psygnosis' graphics stand out in the game world for their consistent high quality. START correspondent Richard Monteiro traveled to Psygnosis' Liverpool office to talk to the artists behind the scenes.

Whatever your gaming preference — adventure, arcade action, shoot'em up or strategy — you can doubtless point to any Psygnosis title as an example of "how it's done." But it's probably not the range of game genres for which you best remember Psygnosis, nor even the addictive quality of the games. Most likely, it's the graphics that stick in your mind.

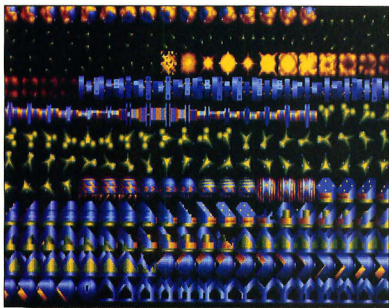
At Psygnosis, graphics are all important. As John White, product development manager, puts it, "Unlike sound, you can't switch off a game's graphics; they are present from



Because *Stryx* was running late, Jeff Bramfitt helped out by producing the hive section of the game.



Jim Bower's work on *Infestation's* death sequence ended up in the pixel dustbin due to space limitations.



beginning to end of a game. First impressions count. Half the battle is won if the visuals are interesting."

Interesting visuals in games such as *Arena*, *Cronus Quest* and *Barbarian* first brought Psygnosis attention. Their *Barbarian* was arguably the first game to show the difference between 8- and 16-bit machines. While the sound and gameplay caused excitement, it was the graphics that really stood out, and still stand out today. The detailed backdrops, the animation, the comical sprites — it was the beginning of something special.

The Sprite Brigade

Today that something special comes

from their stable of artists: Garvan Corbett, Jeff Bramfitt, Jim Bowers and Neil Thompson. (Editor's note:

Thompson declined an interview since he joined Psygnosis very recently.) So strong is Psygnosis' commitment to graphics that it employs these four men full-time in-house, while using freelancers for coding and game development. The art team cleans up sprites and animations created by outside programmers, draws title screens and loading sequences, and designs the graphics for many games from scratch.

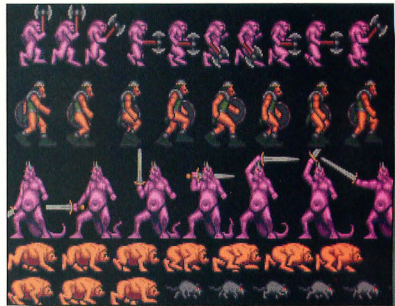
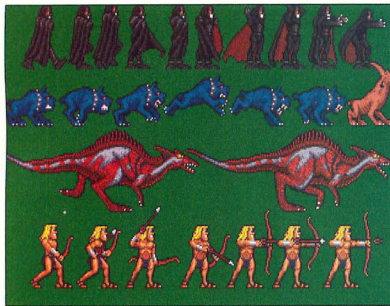
The artists use Commodore Amigas running *Deluxe Paint III* to do all the design work. Psygnosis chose

the Amiga because it can emulate the ST's low resolution (320 x 200) 16-color mode, while the ST is incapable of emulating the Amiga's 32-color low-resolution mode. Once the artists have tweaked 16-color graphics designated for the ST, they give programmers Amiga disks containing images in IFF format for conversion and subsequent manipulation.

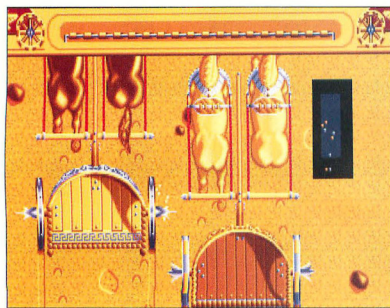
What, Me Hurry?

Compared to most software houses, Psygnosis' working practices are odd. There is no rush to get the job done. A game is finished when everyone agrees they've done their best.

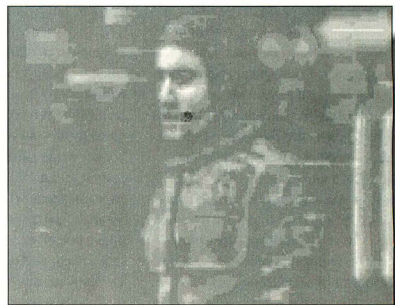
"There is no time limit when ▶



The animations in *Barbarian* (left) display Corbett's trademarks: big feet and outline graphics. He promises that the forthcoming *Barbarian II* (right) will be a lot bloodier.



Bramfitt is responsible for *Carthage's* graphics and a good deal of its design. The game's horses, chariots and Romans fit right in with Bramfitt's preference for realism.



Although these images for the soon-to-be-released *Matrix Marauders* look digitized, they're not. Bowers spent hours shading and blending the graphics to give them a metallic look.

designing the graphics for a game," Corbett says. "I like to get the job done in six months, but it doesn't matter if it takes longer. It's getting the game to look good that's important."

The four artists have free reign over a game's graphics. They're given a rough story outline by the programmer or game designer, then the artists are on their own. They decide upon the look of every sprite, every animation, every background, the startup screen — everything.

But that liberty is a two-edged sword.

"It's great having that sort of freedom," Corbett

says. "What's not so great is coming up with the ideas."

Bowers agrees. "It's very easy to spend three weeks out of a month scratching your head looking for inspiration and the final week sitting down to draw."

Meticulous detail often clashes with space constraints; a lot of graphics end up shelved. "Designing computer graphics is much like writing," Bramfitt explains. "You can't get too attached to your work. Just as editors will chop text, so programmers and game designers will remove sequences of animations and sprites."

After seeing his work end up in the pixel dustbin, Corbett doesn't produce as much now. Bowers, on the other hand, takes a philosophical approach. "Yeah, well, it's the way of the world," he says.

Who's Who

Each of the Psygnosis artists generally works on a different project, although each has his own specialty that might be called upon from time to time.

Garvan Corbett joined Psygnosis five years ago on the recommendation of a friend who worked there. At the

time he was enrolled in a government-sponsored workfare program, since the job market for artists was tight. All three illustrators, in fact, spent time on that workfare program; Bramfitt was Corbett's and Bowers' boss.

Corbett never used a computer for design work until he joined the software company. "The ST was the first machine I came in contact with and DEGAS Elite the first drawing package." So far he's been responsible for the graphics in Bratacus,

Graphics are all important in Psygnosis games.

Deep Space, Barbarian and Stryx.

Corbett's forte is designing cartoon characters. "I just love Disney cartoons, and especially Tom and Jerry," says the largely self-taught 28 year old. "I learnt so much simply by studying the animations."

It's easy to spot Corbett's work since, he claims, "big feet and outline graphics are my hallmark." According to one of the Psygnosis game testers, Corbett also enjoys producing pencil drawings of large, intimidating

Psygnosis employs four full-time artists.

women with forked tongues. Unfortunately, Corbett wasn't willing to show off these.

Barbarian II is Corbett's latest project. He'll produce the animations for the characters and design the backgrounds. Since he illustrated the original Barbarian, however, he has a head start.

"Just as programmers build up libraries of source code," he explains, "so we accumulate disks full of characters and other graphics. It's possible to get away with the same ideas — and often the same charac-

ters — over and over again. Barbarian II is a great example. I was responsible for the first version and consequently have all the frames from the early game. Naturally there will be vast improvements to the sequel and the character you control will probably have 100 frames of animation."

After his stint on workfare, Jim Bowers applied his art foundation coursework to sketching kitchen layouts for an interior design firm.

Two and a half years ago, about the time he got bored with refrigerators and sinks, his friends from workfare offered him a job at Psygnosis.

He, too, had never used a computer for design before, but quickly grasped the overall scheme of things.

Bowers is a loading-sequence and 3D-design man. His work includes the loading sequences for Obliterator, Matrix Marauders (not released yet) and Infestation. He also crafted the 3D graphics in Infestation.

You'd be forgiven for thinking Bowers produced most of his work with help from a video digitizer. It's his technique. "I go for impression rather than detail," he says. "Shades and subtlety are what give my graphics their digitized look."

The results speak for themselves. Unless you saw Bowers in action at the keyboard, you'd be convinced he hid a video digitizer and camera in his pocket.

Friendly rivalry exists between the artists. Jeff Bramfitt loathes video digitized graphics and cartoon characters with big feet. He prefers realism to surrealism. For the past year Bramfitt has been designing Carthage, a strategy game set in the Roman era complete with Ben Hur-style chariot racing.

Like Corbett, Bramfitt has a con- ▶

ventional design training behind him. "Computers and art did not mix at the polytechnic I attended in Liverpool," Bramfitt remembers. "Indeed, computer art was and still is frowned on by illustrators and fine artists.

"Joining Psygnosis was a bit of a shock. I came to the interview, they sat me down in front of a computer and told me to draw a picture. I

was there all day drawing this image pixel by pixel."

Bramfitt started life at Psygnosis three years ago designing title screens and death sequences. His work appears in *Barbarian*, *Terrapods* and *Aqua Adventure*.

Not By Design

None of the artists at Psygnosis used a computer for drawing before they

joined the software firm. But then, they weren't hired for their technical know-how; they landed their jobs because they knew how to draw.

Their most difficult task is achieving realistic motion. Bowers tends to look

None of the artists used a computer for drawing before joining Psygnosis.

at his reflection in the screen or gets someone to walk across the floor when animating a certain part of the body. Observation is extremely important, they say. Bramfitt studies the work of Eadweard Muybridge, a 19th-century photographer who produced countless books full of animals in motion.

Not all aspects of traditional art training are useful, however. Forget about using paper, unless it's graph

paper. Sketching on paper can be deceptive, they warn; you never achieve the same smooth curves and lines on a computer simply because pixels are so blocky. "I only ever use paper when messing around — for throwing paper darts at Jeff and Jim," Corbett says. What a great idea for a game! Art Wars: three men launching and dodging a

storm of deadly paper darts. The gameplay will be simple, and since Psygnosis will publish it, the graphics will be spectacular. ■

Richard Monteiro is a freelance computer journalist in England. He has previously edited ST Format magazine and now writes for numerous entertainment and home-computer magazines.

CRICIT™



BAR CODE + PLUS!

CRICIT is an *integrated Cash Register & Inventory Control* package. For the price of a cash register, you can own the complete Bar Code Ready CRICIT BAR CODE + PLUS! System!

- * Complete cash register functions
- * Flexible inventory control for 65,500 products
- * Daily, period and yearly reporting
- * Price/product labels with optional bar code
- * Reads bar code directly from packaging
- * Coupon issue and redemption (fixed or % of sale)
- * Customized receipts, inventory and reporting
- * Purchase orders with auto-re-order calculation
- * Commission calculation for 15 sales clerks
- * Mailing lists in list and label formats
- * Lay-aways, auto-discounts, stock searches
- * Categories, departments, non-stock items
- * Between-store reporting via modem
- * User-friendly error correction and training manual
- * Second register networked via midi

Canada * Micro D * Toronto * 416 741-9825 USA * Pacific Software * San Louis Obispo * 805 543-1583 Sweden * Desktop Center * Stockholm * 8-320500
Australia * Grass Valley * Perth * 9 221 4142. New Zealand * ComputerWorks * Christchurch * 3 890 899 England * Software Express * Birmingham * 021 643 9100

"INVENTORY CONTROL . . . at CASH REGISTER PRICES!"

PRINT BY >>>>		F1	F5	F6	F7	F3	F5	F10
STOCK		REC	REC	EXPRES	R/C	VIEW	CHECK	CASH
LIN	STY	STK N	STOCK DESCRIPTION		UNIT	QTY	PRICE	TOTAL
1	2		KROPHANTON ADJUSTABLE MAT			475.95	475.95	1427.85
2	1		COKE CLASSIC - 1 200ML CAN			0.60	0.60	0.60
2	8		>>>>>>> BELLET COCCOCCO			0.80	0.80	0.80
4	6		MET SAN BUNSE			21.25	16.00	60.00
5	1	101	FRIENDS OF MR. CARO			25.99	25.99	25.99
6	14		MISCELLANEOUS FISH			.25	.25	4.90
7	4		FISH DEPARTMENT			1.22	1.22	5.20
8	999		MICE AND SHIRT SWEATER			85.95	75.00	74525.00
PRIC BY CASH		CASH POST OFF		0000000	0000000	5000000	74445.82	
84/22790		5047:01				TOTAL	82365.20	
EWRN:1		TRNS:0				00000000	0.00	

NEW TERMINAL 2 SOFTWARE

Terminal 2 software allows you to tie a second ST/MEGA to your master BAR CODE + PLUS! system by simply connecting a MIDI cable. This second register allows sales types of transactions to take place while sales, adding stock, editing, reporting, etc. is taking place on the master system. Up to 6 registers can be connected using the LANTECH 10 MEGABIT LAN.

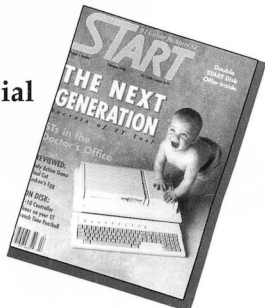
Bar Code + Plus! \$249 U.S. *Nice & Software*
Terminal 2 \$249 U.S. 103 Queen Street S.
Demo Disk \$7 U.S. Kitchener, Ontario
Bar Code Reader \$399 U.S. Canada N2G 1W1
Cash Drawer \$345 U.S. (519) 744-7380

Dealer, Distributor & User Inquiries Welcome

START SUMMER SPECIAL



START is offering you a special summer subscription rate of only \$69.95 for twelve issues with disk! You save over \$100 off the newsstand price.



Get 12 fun-filled months of ST...

NEWS

The most up-to-date information for the Atari Community

REVIEWS

In-depth looks at the latest ST products

PROGRAMS

The top ST experts share their secrets

#1 Guide To Atari ST
START

DON'T MISS OUT!

Sign me up for the *SUMMER SPECIAL*
Twelve issues of *Start with Disk* for \$69.95

- Bill me I'm enclosing payment Check enclosed
 Visa MasterCard

Credit Card # _____ Exp. Date _____

Signature _____

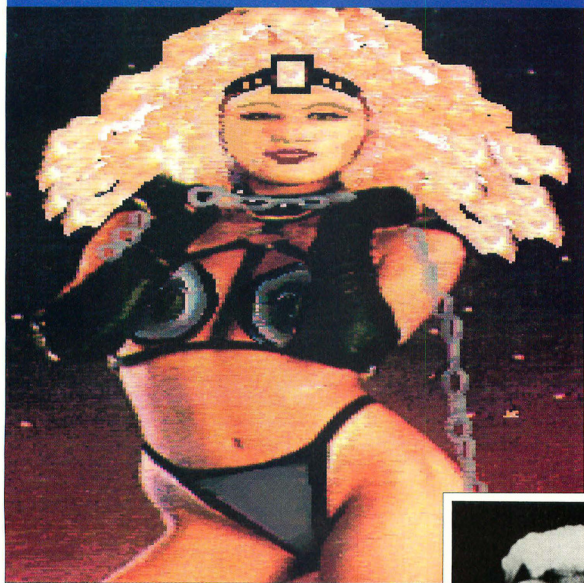
Name _____

Street _____

City _____ State _____ Zip _____ **A60**

Please allow 6-8 weeks for delivery of first issue. California-\$74.70. Canada \$87.95. Foreign Surface-\$94.95. Foreign airmail \$148.35. Foreign subscribers (not including Canada) must send full payment. Payment in U.S. funds only.

Start Subscriptions
P.O. Box 535, Mt. Morris IL 61054



WHO'S BUYING NOW?

BY AMY H. JOHNSON, START PROGRAMS EDITOR

"We are not amused," Queen Victoria said upon seeing an impression of herself performed by her groom-in-waiting, the Honourable Alexander Grantham Yorke. Millions of women echo that same sentiment when seeing themselves depicted in computer entertainment software. And without the royal recourse of banishment from court, these women are making their

Women Won't Spend Bucks Until Game Makers End Sexism

displeasure known by spending their money elsewhere.

While no one has any hard and fast demographic information about game players, it's generally accepted within the industry that the vast majority are men. But is this a case of the consumer defining the market or the market defining the consumer? Consider these examples from START's software library.

Brad Stallion, star of Planet of Lust, Bride of the Robot and Sex Vixens from Space, pilots the Big Thruster, a spaceship whose coincidental resemblance to male genitalia stretches the laws of probability. The women Brad meets during his adventures bear names like Princess

clothes. Granted, Artworx sells supplemental game disks of male strippers, but that only proves that gender is no barrier to exploitation.

In Technocop, women sprawl across chairs, bodices ripped, legs splayed. They add nothing to gameplay or storyline; they serve the same purpose as the rest of the graphics — wallpaper.

Faced with these sexist characterizations, is it any wonder women avoid games aimed directly at the male market?

Some games — TV Sports: Football, Rambo III, Hostage Rescue Mission — do not include women for even visual titillation. The hero in Pirates is automatically male, even though Anne Bonny terrorized the West Indies in the 1710s.

Sometimes the main character's gender doesn't matter, like in *Weird Dreams* (a sleeper) and *Zak McKracken and the Alien Mindbenders* (a reporter), but game designers opt for men. When they do create female characters, they are likely to use a "Save me!" scenario, like those in *Twilight's Ransom*, *Transylvania*, and *Sinbad and the Throne of the Falcon*, in which the woman exists as the excuse for the hero's quest. Women do not play these games because they lack appealing role models — women who are active, intelligent and effective.

You find those role models in Sierra On-Line games like *King's Quest IV: The Perils of Rosella* and *The Colonel's Bequest*. Sierra co-founder Roberta Williams (yes, a woman) wrote the stories.

With a little forethought, it's not hard to overcome the male-hero stereotype. Infocom forces players to designate their sex before beginning the game. In *Leather Goddesses of*

Phobos you walk through a bathroom door; in *Bureaucracy* you, what else, fill out a form. START's previous programs editor, Heidi Brumbaugh, once required an author to provide a gender choice before she would publish his game. Many role-playing games include both male and female adventurers.

But simply changing Rambo to *Rambette* won't attract women to entertainment software. Manufacturers also need to design games that appeal to women. In a story in the June 1989 issue of *Marketing Computers*, Patricia Cignarella writes,

"According to a survey conducted at Northwestern University under the supervision of (Professor Ron) Kaatz, just under half the women surveyed had not played a video or computer game in the last two years. However, the vast majority said they would play if a game existed that interested them. When asked to comment on what kind of games would appeal to them, the most popular response was games involving simulations of social situations.

"The second most popular suggestion was sports games, such as volleyball and scuba diving, crew, bike racing and tennis. Third were games about fashion design and shopping. A close fourth was mystery/adventure games. The big losers: fighter pilot simulations, space battles and exercise games."

In 1989, total sales of Atari ST entertainment software plunged by 12.6 percent, according to the Software Publishers Association. Sierra On-Line's John Williams reports that 1989 revenues from Atari products rose 6 percent. Williams also says 17 percent of Sierra's customers are female, 22 percent in the case of *Rosella*. Think about that. ■



Amy H. Johnson

Orgasma, *Miss Galaxy* and the *High Priestess of Desire*, names which do not suggest that their most outstanding feature lies between their ears.

Strip Poker makes no bones about what features you should be paying attention to; the only purpose of the game is to uncover those features by getting Melissa or Suzi to shed their

Too many Titles To List-
Call Call Call !!!

MICROTYME

Don't See What You Need?
Call Call Call !!!

Midwest Studio (Std.)	66
Midwest Studio (Adv.)	99
Music Studio 98	39
T.I.G.E.R.	99
Take Note	52
Time Smith	69
X-Cr	199

Misc.

Flash	18
Fontz	22
Generation Gap (5/12k)	32
Generation Gap Plus	32
HyperFont	22
Intellidisk	24
Shadow	18

Programming

AssomPro	39
Docpac ST	66
GFA-Basic 3.0 + Compiler	99
HiSoft Basic Professional	99
HiSoft C Interpreter	64
Laser C	119
Laser DB (Debugger)	53
Lattico C	109
Mark Williams C	114
W.C. Source Debugger	39
Personal Pascal	66
Prospero C	129
Prospero Fortran	129
Prospero Pascal	98

Publishing

Calamus	174
Calamus Fort Editor	99
Fleet Street 2.0	139
PageStream	115
Font Disk 1	25
Font Disk 2	25
Font Disk 3	25
Font Disk 4	25
Font Disk 5	25
Font Disk 6	25
Font Disk A	25
Font Disk B	25
Font Disk C	25
Font Disk D	25
Publisher ST	79
Design Ideas	24
Education Graphics	24
PEOPLE, Places, Things	24
Symbols & Slogans	24
UltraScript ST	159
UltraScript ST-I (Dot Matrix)	139
Font Pack (PS39)	129

Miscell.

Code/Head Utilities	19
D.A.S.H.	25
DC Utilities	25
Diamond Back	26
G + Plus	21
Go Go	25
Head Disk Accelerator	20
Head Disk Backup	23
Head Drive Tube Kit	34
Juggler (New version)	28
Mico Mouse	25
Mirror Image	19
Multi Desk	21
MouseDesk 2	29
OmniFile	25
ProCopy	24
Revolver	31
Turbo Jet	26
Tube ST	25
Universal Item Selector 2	13
Utilities Plus	39
Virus Killer	26

Word Processing

First Word Plus	64
MicroWrite	79
Tempus 2	49
Word Perfect 4.1	139
Word ST	49
Word Writer	49

Close-outs & Specials!

ALT	15
Ballyhoop	22
Calendar	17
Comeman	27
Crazy Cars	21
CZ Patch	84

Dolla Patrol	14
Drum	25
Easy Record	25
Farenheit 451	27
Fast	27
Fast Basic	29
Fish	11
Font Factory Disk #1	17
Font Factory Disk #2	17
Font Factory Disk #3	17
Font Factory Disk #4	17
Font Factory Disk #5	17
Font Factory Disk #6	17
Font Pack (Easy Draw)	27
Font Writer	22
FreeStyle	44
GFA-Artist	44
GFA-Company	44
GFA-Client	27
GFA-Vector	33
H & B Base	56
Hippo Backgroundman	22
Hippo Concept	49
Hippo Fonts 1	30
Hippo Fonts 2	30
Hippo Casino Poker	16
Jewels of Darkness	16
Joker Polo (Austrie)	26
K-Royal	27
K-Switch	17
Knighr Orc	25
Liberator	27
Manix	6
Mooncrazy	9
2nd City Data Disk	2
M-Term	27
Munehel	25
Music Mouse	42
N-Vison	21
Navigator	28
Norona Quest 1 & 2	15
Norona Quest 3 & 4	15
Paladin	21
Quest 1	14
Power	25
PC Intecom	66
Power Edit	44
Power Plan	44
Power Show	15
Q-Ball	16
Rebel Word 2	38
Reborn 2000	23
Seconds Out	12
Shanghai	23
Shuttle 2	22
Spell Breaker	27
ST Key	37
ST Music Book	27
ST One Write	49
Star Orakle	18
Transfer	23
Time Blast	10
Time Link	27
Trail Blazer	27
Transputer	18
TypeSetter	22
Wanderer (3D Game?)	13
Your Financial Future	16
Zoro Gravelly	16

Special Low Prices

First come first served

Winter Challenge

- Dwon Airc
- Shanghai
- Oktoberfest
- Joe Blade
- Deep Space
- Barbarian
- Age of Rage
- Blood Money
- Combat Course
- Tuphone Thompson
- The Games-Winter Edition

Temponets
Techna Cap
Call for these LOW LOW Prices!!!

Now Back your Hard Drive with:

Diamond Back
D.A.S.H
Hard Drive Turbo Kit

We carry a full line of Desktop Publishing supplies, call for info!

(513) 294-6236

Printers

ATARI	
SLM 804 Laser	CALL
SLM 804 PostScript	CALL
PANASONIC	
KX-P1180	CALL
KX-P1191	CALL
KX-P1124	CALL
KX-P1624	CALL
KX-P450	CALL
STAR	
NX-1000 Multifont 2	CALL
NX-1000 Rainbow	CALL

Printer Accessories

ATARI	
SLM 804-Toner	57
SLM 804-Drum	54
OLYMPIA	
NP-30.80 Black	5
NP-30.80 Color	6
NP-136 Black	8
PANASONIC	
108091-118091 Black	10
108091-118091 Color	10
1124 Black	12
1124 Color	CALL
4450-Drum	49
4450-Toner	42
STAR	
NX-1000 Black	6
NX-1000 Rainbow	8

Hard Drives

ATARI	
MEGAFILE 30	Low Low
ICD	
Fa-ST 30	699
Fa-ST 50	799
Fa-ST Tape Backup	799
Tape Cartridges	
35	35
Micro	
Mico-50	529
Mico-65	599
Mico-85	659
Mico-44 Removable (NEW IT)	879
SUPRA	
30 Mag	599
44 Mag (Removable)	659
45 Mag	699
80 Mag	759
FD-10	879

Modems

Supra 2400	CALL
Supra 2400 Plus	CALL
AT&T Error correction provides blazing speed	124
Zoom 2400	124

Floppy Drives

ATARI SF314	189
IB Drive (5.25")	209
INDUS GT15-100	179
INDUS GT15-100+	169
Master Drive-35	145

Scanners

CANON Flat Bed	1650
CANON Hand-Fed	1059
IMG Scan	59
MIGHAPH Hand Scanner (with Touch-Up)	429

Joysticks

Competition Pro 5000	19
EPiX 500JZ	17
Gravis MouseStick	95
Powerplayers	19
Star-Cursor	39
WICO Bat Handle	18
WICO Eggstick	18

MICROTYME

Your Full Service ATARI Dealer

Atari Hardware

COMPUTERS	
5205T	CALL
1040ST	CALL
1040S1	CALL
Mega 2	CALL
Mega 4	CALL
STACY 1	CALL
STACY 4	CALL
TT 0302	CALL
32k RAM Card	CALL
64k RAM Card	CALL
128k RAM Card	CALL
AC Adapter	CALL
PC Card Drive	CALL
Parallel Interface	CALL
Serial Interface	CALL
MONITORS	
SC1224	CALL
SM124	CALL

Disks

(No Games/ROM)	
3.5"	
BASF 5D-50	10
BASF 5D-100	12
BASF HD	29
CENTECH DS-D50 (Color)	14
MAXELL DS-D50 (Color)	14
SONY DS-D50 Bulk 10 Pack	10
SONY DS-D50 Bulk 5.25"	10
5.25"	
BASF DS-D50	9
FUJIFILM	15
GOLDSTAR DS-D50	4
MAGMEDIA DS-D50 (Color)	15
MAXELL DS-D50	9
POLAROID DS-D50	9
SONY HD	16
VERBATIM HD	16

From the Desk of the Owner:

All of us at MicroTyme are dedicated to quality customer relations and service. We want your complete satisfaction. We will cheerfully help you in any way you wish. Consider us your first source for ATARI hardware or software. Compare our prices against the competition. We know you'll find our prices are almost always lower, and are always drastically below the suggested retail. Please take a few minutes and check our new low prices on software and hardware. We will make every effort to beat the competition. If you have questions on Atari ST hardware or software please call our Tech / Info number (513) 294-6236. Thank you for 5 great years!

John

We also carry a full line of IBM compatibles including XT's, 286, 386's, and 386! Call for price quote!
We at MicroTyme feel there is more to one good computer, so we carry software from the ST, Amiga, and IBM Compatibles!

For a software list send a S.A.S.E., or call your operator to include one with your order
ST Public Domain list also available!
(Yes Warren finally got the list done!)

HOURS: M-F 9 a.m.-9 p.m. EST
SAT 9 a.m.-5 p.m.

ALL 50 STATES CALL TOLL FREE
1-800-255-5835

For Order Status or
Tech. Info, Call (513) 294-6236

NOW! RUN MORE IBM PROGRAMS ON YOUR ATARI ST FASTER AND FOR LESS!

"New Hardware Product Provides More Performance Than a 10MHz Turbo XT!"

The IBM compatible is the most popular microcomputer in the world, but the Atari ST is MORE powerful! Why?

There's not a computer made that can do more. With pc-ditto II, now you have access to over 15,000 IBM software products.

No more waiting.

You bought your ST because you are discriminating.

No other product gives you more power!

Using pc-ditto II is so easy, you will not even know its there. Just click and go.

And, now it is faster. With a Norton SI of 4.0, you won't find another product which gives more power for less.

Nothing satisfies like hardware; pure hardware. High speed video performance demands it! Communications crawl without it! And, there's no substitute for it!

Go to the limit.

When it comes to speed, almost is not good enough!

Only pc-ditto II has the exclusive hardware assists for video, EMS, MIDI, and serial comm which means no compromise in high performance.

Most other emulators use software for video, serial comm, etc; their performance is slower and more limiting.

When you buy high performance, don't choke it through bottlenecks of DMA and lack of hardware-assists. Get the most power for the price. If you wanted to spend more, you'd buy a clone.

By using hardware in place of software, pc-ditto II gives the highest performance.

You'll notice the difference!

No detail overlooked.

When you buy an emulator, speed is only one part. We give you outstanding compatibility, freedom from errors, more useful utilities, and the highest quality, American-made product for the money.

Use IBM software right out of the box, even copy-protected!

Share IBM software on Atari hardisks automatically. Even autoboot IBM PC-DOS!

Simple clip in installation...Saves space by mounting inside your ST.

Leaves cartridge port and DMA port free.

pc-ditto II uses all the horsepower of the ST. Nothing wasted.

Supports Atari color and mono monitors.

Emulates all IBM CGA and Mono modes.

Supports all IBM disk formats.

Microsoft(tm) Serial mouse emulation using the Atari mouse.

Does not change the ST -- continue to use GEM, Spectre, upgrades.Compatible with T16 accellorator board from Fast Technologies.

Fits all Atari ST models except old 520s (no internal drive) with internal hardware upgrades.

No extra boards to buy. No extra boxes to clutter your desk.

Other deluxe features: 8087-1 numeric coprocessor support; high-speed disk cache.

But, the feature you'll appreciate most is the price. Only pc-ditto II gives you such high performance at such a low price.

Nothing else to buy.

Sometimes high-power comes with one side effect -- high price.

pc-ditto II has the features of XT compatibles costing several times more.

Don't buy into technology that keeps costing. When you buy pc-ditto II, you pay only once -- you're not charged for some upgrade every turn.

Our policy of no charge for updates continues with pc-ditto II. The hardware for future enhancements is already on the board. It just takes a software update to turn it on and unleash its power!

Future enhancements include EGA video, EMS memory, and MIDI. There is no better product on the market.

pc-ditto II designed by Avant-Garde, the emulator experts who brought you pc-ditto.

With pc-ditto II, you'll have the best of both worlds...two-computers-in-one.

Perfect for home and small businesses.

All parts are selected for highest quality and performance.

Every product is tested to insure exceptional reliability and freedom from defects.

We use what we build...Our leadership comes from hands-on experience.

This results in the highest degree of compatibility possible.

Why pay more?

\$299.95

suggested list price

Yes. Please send me a FREE fact sheet and list of tested software !

Avant-Garde Systems
381 Pablo Point Drive
Jacksonville, Florida 32225

Name _____
Address _____
City _____
State _____ Zip _____

pc-ditto II

by
Avant-Garde Systems
381 Pablo Point Drive
Jacksonville, Florida
32225

(904) 221-2904

LET THE GAMES BEGIN...

In Which Our Opinionated Reviewers
Boot and Root

Sure, we could say that June is fun month here at START,

but without



a compatible cornucopia of game

reviews would you believe us?



Of course

not! So here to prove our claim is a romp through 11

of the



hottest games available for the ST.

We include role-playing games, strategy adventures,

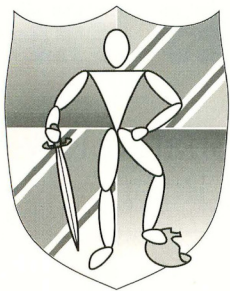
arcade action and sports



simulations — all

for you, it's a veritable fun-fest of floppies!

ROLE-PLAYING



No, this is not your analyst's idea of a good time. It's your chance to transform your identity and temporarily escape the mundane world (with your analyst in it).

CHAOS STRIKES BACK

Reviewed by Heidi Brumbaugh

AT A GLANCE

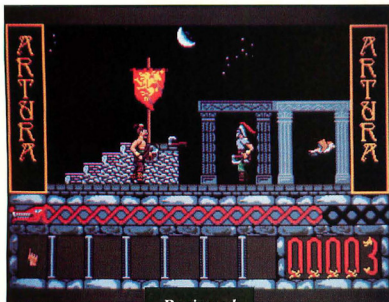
Game: Chaos Strikes Back
Company: FTL Games
6160 Lusk Blvd., Ste. C206
San Diego, CA 92121
619/453-5711
Price: \$39.95
Summary: A sequel that surpasses expectation.

You can often tell how successful software will be by how loud people clamor for it while it's under development. In the case of Chaos Strikes Back, FTL's sequel to its best-selling Dungeon Master, the game has been due out "in two weeks" for over a year and a half. Rumors of release dates, plot scenarios and playability have fanned bulletin boards for months. And Dungeon Master diehards have been far from patient.

When the product was finally released last December, word spread like wildfire. Within days scores of Dungeon Master champions had resurrected and returned to the dungeon in search of treasure, adventure and glory. Battles were

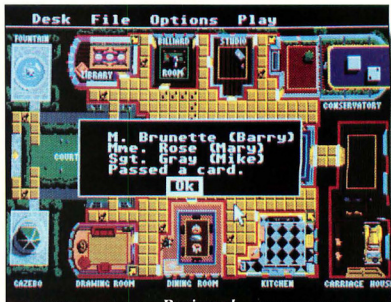
Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games

ARTURA



Reviewed on page 45

CLUE MASTER DETECTIVE



Reviewed on page 46

fought, riddles were solved and maps were uploaded. The consensus? Practice your spells, sharpen your swords and prepare your characters for their greatest challenge ever. Chaos Strikes Back is not for the weak of heart.

The program's packaging claims that Dungeon Master is required to run the program. This is not strictly true; you do not need your original Dungeon Master disk to play the game. However, Chaos Strikes Back is impossible to play if you don't know how to play Dungeon Master. Not only is there nothing in the manual telling you how to control your characters and move around, but to survive in Chaos Strikes Back you have to have gotten far enough in Dungeon Master to learn how to cast important spells and have enough experience fighting monsters to know what tactics to use.

The premise of Chaos Strikes Back is that the evil Lord Chaos anticipated his demise and prepared a secret dungeon for his return. He hid four pieces of the dangerous ore Corbum deep in this new dungeon, and to preserve order and restore harmony to the world your champions must find the Corbum and destroy it in the

CHAOS

Just when you thought you were safe, Lord Chaos is back and madder than ever in FTL's thrilling sequel to Dungeon Master, Chaos Strikes Back.



Forge of Fulya. There are four mazes to conquer in Chaos Strikes Back with four ways to conquer each of them. The way you choose to conquer a maze depends on your choice of character type. Those choices are warrior, ninja, wizard and priest.

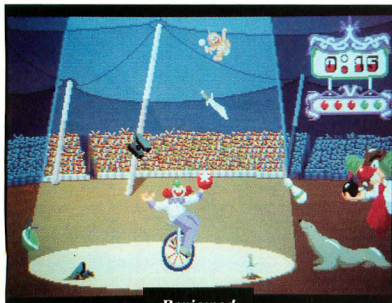
Despite the new story line, Chaos Strikes Back plays much the same as Dungeon Master. You must negotiate passages, fight monsters, solve riddles and collect weapons, food and armor to survive. The program uses the same interface as its predecessor. In fact, the main difference between the two programs is one of

degree. Simply put, the easiest levels in Chaos Strikes Back are at least as difficult as the hardest levels in Dungeon Master.

Chaos Strikes Back comes with a utility disk that lets you load the characters from a saved Dungeon Master game and use them to create a new Chaos game. If you do this, your characters must be fairly far advanced; the manual recommends that they should have been far enough inside the dungeon to have seen Lord Chaos. If it's been a while since you last played, you might want to spend some time playing Dungeon Master to get back into the

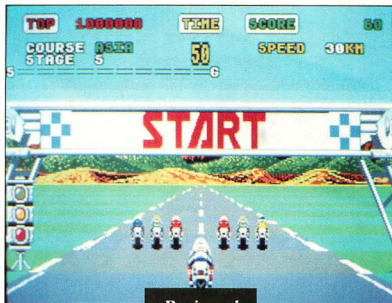
es • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games

FIENDISH FREDDY



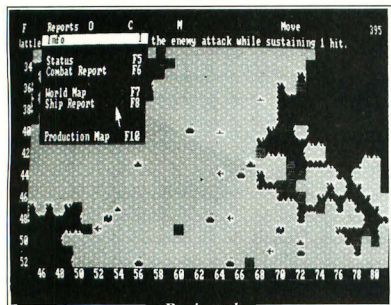
*Reviewed
on page 70*

HANG ON



*Reviewed
on page 71*

EMPIRE



Reviewed
on page 48

swing of the game. Oh, and have your spell list out and ready when you start up Chaos Strikes Back.

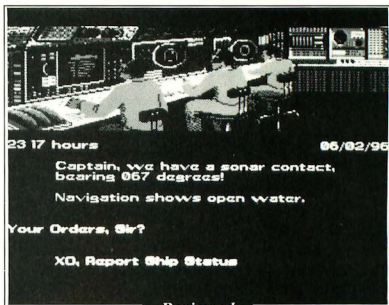
If you don't have a saved Dungeon Master game, you can create a new company of champions from the Chaos Strikes Back prison. Many of these champions are of new species and they all have fairly highly advanced skill levels.

Regardless of how you get your characters, they will begin in the new dungeon without any equipment or supplies.

The utility disk that comes with the package is used primarily to initialize new games using old characters. Additionally, there is a feature to let you edit a champion's portrait and name. You can save and load portraits independently, and people are already uploading new portraits to bulletin boards. (I've seen Bloom County characters on CompuServe.)

The Utility Disk also lets you visit the new Hint Oracle. This intelligent creature loads a saved game, ana-

RED STORM RISING



Reviewed
on page 49

lyzes your position in the dungeon and then offers a menu of clues for you to examine. The Hint Oracle rarely tells the solution to a puzzle outright; more often it gives a few clues to help you figure the puzzle out for yourself. This is a welcome addition to gameplay.

START's editors have intermittently discussed using a rating system for game reviews. (*Editor's Note: Resolved. See the catchy "At a Glance" summary before reviews.*) Such a system could use Siskell &

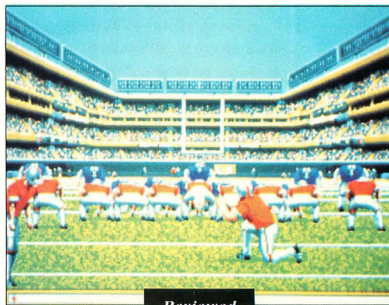
Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games

ROBOCOP



Reviewed
on page 72

TV SPORTS FOOTBALL



Reviewed
on page 73

Ebert-style "thumbs up" or "thumbs down"; a small graphic logo some movie reviews use which picture a little man in a chair sleeping, applauding or cheering; or a standard one- to four-star rating. So to give you an idea of what to expect from FTL's long-awaited sequel to Dungeon Master, I offer this objective assessment of Chaos Strikes Back: two thumbs — being bitten off. A little man — fleeing for his life. Four stars — all shooting fireballs at you from different directions. Heidi says, check it out.

ARTURA

Reviewed by Greg Perez

AT A GLANCE

Game:	Artura
Company:	Arcadia 18001 Cowan St., Ste. A & B Irvine, CA 92714 714/833-8710
Price:	\$14.99
Summary:	Hack-(yawn)-and-slash.

Artura from Arcadia Software loosely follows the original legend of King Arthur of Camelot. In an age when only the strongest survived and the strong usually carried big weapons, you take on the role of Artura, son of the Pendragon. You battle your way through a huge underground maze that leads (hopefully) to the beautiful Nimue, daughter of Merdyn the Mage.

Basically, Artura is a hack-and-slash game. You control your left and right movements with a joystick and sling your axe with the fire button. Most of your confrontations are either with barbarians who do nothing else but stand in your way to deplete your energy, or with rats and spiders that drain you as well by nibbling on you. Once in a while, you come up against a wizard, who throws lightning or fireballs to hold you off.

There isn't much to this game, but you do have more challenges than chopping up barbarians and giant rats. Hidden somewhere along the way are the pieces to the sacred Runestones. When they're used separately or in combinations, they give you the power to use the wheel of Cerriddwen, which helps you on your quest to rescue Nimue.

Included in the package is a poster-size map that's supposed to help you through the mazes, but it ends up being more confusing than it's worth. Artura is a horizontal

platform game; the map provides you with an aerial view of the maze. But it's simply filled with weird symbols and a gaggle of unknown arrows pointing in all different directions. And there was no legend.

Artura could be better in many ways. It's not too exciting in the way of play and it resembles at least a dozen other platform-style games on the market. But, the challenge of finding the Runestone did add some depth and gave me incentive to dig deeper. ▶

STRATEGY



This is for the chess masters, mystery buffs and the generally intuitive amongst us. It requires a highly developed intelligence, an acute attention to detail and a little paranoia. (Aspirin is optional but recommended.)

AT A GLANCE

Game:	Clue Master Detective
Company:	Mastertronic 18001 Cowan St., Stes. A & B Irvine, CA 92714 714/833-8710
Price:	\$39.99
Summary:	Clue is fun but more challenging as a board game.

CLUE MASTER DETECTIVE

Reviewed by Dr. John Watson
START Programs Editor

In glancing over the notes I have been honored to gather during the course of my long relationship with Sherlock Holmes, I am struck by those pertaining to the murderous affair at Boddy Manor. Not exactly a case, in that the corpse was fictional, this adventure was a test of the deductive powers of my intimate friend and associate.

Holmes had been contacted the previous week by a gentleman with the unusual name of Virgin Mastertronic, who claimed to have made significant improvements to Charles Babbage's calculating machine, which he called a computer. In order to publicize his efforts, he proposed to test his invention's logical skills against those of the world's only consulting detective, whose superior deductive powers are universally acknowledged as unequaled.

All this was quite unknown to me when I knocked up Holmes late one morning. Much to my surprise, as I know from my time spent lodging with him that he is by habit a late riser, he answered the door at 221B Baker Street himself, clad not in his purple dressing gown, but in an overcoat, as it was his intention to go out.

"Watson, if you can spare the afternoon, you will find a most

intriguing story to add to your collection," he said, shutting the door behind him. With such a promise I could do nothing but accompany my friend.

"I shall no doubt win this contest," Holmes said, "having spent years honing my faculties of observation and reasoning."

At Boddy Manor, we met several other detectives who had been invited to participate. Mr. Mastertronic was obviously eager to promote his Babbage machine, or computer. He introduced us to the Parker brothers, who actually devised the test Holmes was about to undertake. It was a test involving a crime.

"Mr. Boddy has been murdered," they said, referring to the absent owner of the grand house in which we stood. "You are to find his killer, the instrument of death and the room in which he died.

TOAD COMPUTERS!



Have Reviews!
High Tech!

TOADfile 44!

REMOVABLE CARTRIDGE HARD DISK DRIVE!
"I *LOVE* the drive! All Spectre development is now being done on my Toadfile 44!" - David Small

- 25ms Access Time • Ready To Use
 - 500-600 K/Sec. Throughput • Fun!
 - Totally Compatible With Everything
 - 2 Yr. Warranty! • LOW \$849/Price
- Formatting, Utilities, and Backup Software Included!
Ask about our new option to buy hard disks and cartridges filled with the Current Notes PD Library!
ASK ABOUT \$99 3.5" & 5.25" FLOPPIES!

TOADFILE 44

TOADfile 44 (Standard).....	\$849
TOADfile 44D (Mechanism Only).....	\$649
TOADfile 88X (2 Drives).....	\$1499
TOADfile 74 (44MB Cart+30).....	\$1149
TOADfile 94 (44MB Cart+50).....	\$1229
TOADfile 129X (44MB Cart+85).....	\$1349
TOADfile 129X (44MB Cart+85).....	\$1299
EXTRA CARTRIDGES.....	\$99

TOAD Hard Disks

TOAD 20 (40ms Access Time).....	\$469
TOAD 20 (28ms Access Time).....	\$489
TOAD 30 (40ms Access Time).....	\$509
TOAD 30 (28ms Access Time).....	\$529
TOAD 50 (40ms Access Time).....	\$569
TOAD 50 (28ms Access Time).....	\$589
TOAD 85 (28ms Access Time).....	\$679
TOAD 85 (24ms Access Time).....	\$709
TOAD 100 (40ms Access Time).....	\$879
TOAD 130 (24ms Access Time).....	\$1159
TOAD 170 (28ms Access Time).....	\$1199

ICD FA•ST Drives

FAST 85MB 24ms (3.5").....	\$739
FAST 85MB 28ms (5.25").....	\$689
FAST 65MB 24ms (3.5").....	\$679
FAST 50MB 28ms (3.5").....	\$619
FAST 50MB 40ms (3.5").....	\$589
FAST 30MB 28ms (3.5").....	\$579
FAST 30MB 40ms (3.5").....	\$549
FAST 20MB 28ms (3.5").....	\$529
FAST 20MB 40ms (3.5").....	\$499
FAST 170MB 24ms (2.3.5").....	\$1249
FAST TAPE BACKUP.....	\$769

Tadpole Mega Internal Drives

Tadpole 20 (40ms).....	\$359
Tadpole 20 (28ms).....	\$379
Tadpole 30 (40ms).....	\$399
Tadpole 30 (28ms).....	\$419
Tadpole 50 (40ms).....	\$419
Tadpole 50 (28ms).....	\$449
Tadpole 65 (28ms).....	\$499
Tadpole 85 (24ms).....	\$559

ORDERS ONLY: (800) 448-TOAD QUESTIONS / CHAT: (301) 544-6943
BBS: (301) 544-6999 ORDER / INFO FAX: (301) 544-1329

TOAD COMPUTERS • 556 Baltimore Annapolis Blvd. • Severna Park MD 21146

FREE SHIPPING in 48 states on all orders! Prices reflect 4% discount for cash/check. We accept VISA, MC, & Discover. MD residents add 5% tax.
CELEBRATE THE WORLDWIDE FAILURE OF COMMUNISM! BUY A TOAD DRIVE! GET REAL - GET HIGH ON LIFE! STAY OFF DRUGS!

"There are 10 suspects and eight deadly weapons. Boddy Manor has 12 rooms. These are represented by cards. One card from each category has been removed. Your task is to discover which cards they are.

"In the interest of fairness, at least three participants must be involved in this test, and we will run several, with different combinations of players."

"This should be elementary, my dear Watson," Holmes said to me. "There are only 960 possible solutions."

"How do you know that," I gasped, stunned by Holmes' razor intelligence.

"Multiplication, my friend. Elementary multiplication."

Once Holmes had pointed it out to me, it was easy to see.

The Parker brothers continued. "Each participant will assume the role of one of the 10 suspects. He,

she or it will receive a portion of the cards. By determining which cards your opponents have, you can, by process of elimination, deduce the murderer, room and weapon.

"You play by walking through

you feel you have a solution, you may make an accusation. If you are incorrect, you are eliminated from the game. Any questions?"

There were none, as we were all most eager to begin the contest. Mr.

Mr. Boddy has been murdered. You are to find his killer, the instrument of death and the room in which he died.

Boddy Manor. Each time you enter a room, you may suggest a possible murder scenario. If another player holds a card which disproves your suggestion, he or she will show it to you.

"Additionally, at certain marked places within Boddy Manor you may peek at an opponent's hand. When

Mastertronic switched on his computer. In the window at the front of his machine, we saw a picture of a possible murder scenario, which Holmes watched in fascination as it was a noisy and colorful display involving the unfortunate Mr. Boddy, a wingback chair and a blazing fire. Then the pictures of the suspects ▶

A HARD DRIVE IS A TERRIBLE THING TO WASTE.

For only **\$9.95**, you can spend an hour downloading onto your hard disk from a library of over **10,145 programs**. Additional downloads are as little as **\$4.80 per hour**. There are no surcharges for high speed access, no premiums for using *Tymnet* or *Telenet*, and no mandatory monthly minimums.

For more information, with your computer and modem dial 1-800-365-4636. Press Return twice. At *Username*: type JOINDELPHI and at *Password*: type START.

DELPHI™

Populating Hard Drives Since 1982

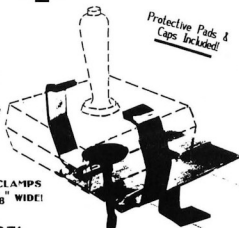
800-544-4005 • 617-491-3393

INTRODUCING the first **SOLID STEEL** holding clamp for your Joystick, and it's called...

NEW!

STIK-GRIPPER™

- **ALLOWS ONE HANDED JOYSTICK OPERATION!**
- **AVOIDS FUMBLING FOR THE KEYBOARD CONTROLS!**
- **EXCELLENT FOR FLIGHT SIMULATORS!**
- **GIVES ANY GAME THE TRUE ARCADE FEEL!**
- **TOTALLY ADJUSTABLE! CLAMPS ANY JOYSTICK UP TO 4 3/8" WIDE!**
- **RETAIL PRICE ONLY: \$18.95!**



NOW you can use BOTH your Keyboard AND your Joystick **AT THE SAME TIME!**

CALL your local computer store or send a check or money order for \$18.95 +\$1.50 shipping to:

Duggan DeZign Inc.
300 Quaker lane
Suite #7
Warwick RI 02886

"It Clamps you into the Action!"

RI residents add 6% tax

appeared. Holmes dutifully chose one since the first test was to pit the computer against the great detective.

After announcing that the crime was committed by Monsieur Brunette in the Billiard Room with the Poison, Holmes said, "I find it more enjoyable to sit in the conservatory and listen to the birds while the machine takes its turn. Then I simply examine the record of its guesses and incorporate the information into what I have gathered through my own keen observations."

"Perhaps a test that includes your fellow detectives will present more of a challenge," the Parker brothers suggested.

"Perhaps," Holmes said, "but I have yet to take the measure of the machine. This time I will let the computer win."

Alas, Mr. Mastertronic's invention was no match for Holmes' remarkable mental qualities. My friend had whispered the solution to me a full two turns before the machine deduced the murderer.

The test with several other humans was more to Holmes' liking. As he has proven in his bouts with the redoubtable Inspector Lestrade of Scotland Yard, matching wits with other members of the detective profession is an activity whose pleasure is eclipsed only by matching wits with perpetrators of evil.

The human detectives did encounter one problem, however. Since the computer was responsible for the revelation of clues, the detectives waiting their turn were forced to avoid the machine's window lest they learn information which they ought not. Impatient with this awkward method, Holmes paced the floor, coattails flapping against his long legs as he toured the room in swift strides.

"So, Mr. Holmes, what do you think of our experiment?" the Parker brothers asked him as we begged our leave.

"An absorbing enough amusement for amateurs," he said, "but finely honed intellects like mine prefer a real chase that pits one human mind against another.

"Come, Watson, come," Holmes cried. "The game is afoot."

But I regret to say that for once, Holmes was wrong. The game is Clue Master Detective.

EMPIRE

Reviewed by Heidi Brumbaugh

AT A GLANCE

Game:	Empire
Company:	Interstel Corp., Dist. by Electronic Arts 1820 Gateway Dr. San Mateo, CA 94404 415/571-7171
Price:	\$49.95
Summary:	An excellent battle of the minds.

Empire, by Interstel Software, is an elaborate strategy game in which you try to spread your superior military forces over the world and thereby conquer it. As many as three players — in any combination of human and computer opponents — can participate in this quest for imperial power. The program runs in medium or high resolution and has a keyword

productivity of their cities. After you ignite production in your own city, you can begin building transports to move troops to neighboring land masses. Destroyers and submarines map out nearby waters and guard ports from other players. When you've captured cities on neighboring continents, you're ready to erect a stronger force including cruisers, battleships and aircraft carriers.

Each element in your force has different strengths and weaknesses. For example, only armies can capture cities, so they are necessary to winning the game. However, they move slowly, only one square at a time, and are limited to land exploration (unless you move them in troop transports). Fighters, on the other hand, are ideal for reconnaissance because they move quickly — five squares at a time — and can cover land or sea. However, they must remain close to one of your cities as they have limited fuel and can crash if they stay out too long. Similarly, battleships are much harder to sink than destroyers, but destroyers take less time to produce and move faster. Empire forces you to strategically combine your resources in the most effective way possible for the current game's map and your opponents.

The Empire map is a grid made up of squares; each square is land, sea

**Empire forces you to strategically combine
your resources in the most effective
way possible.**

copy protection scheme.

An Empire world is comprised of continents, islands and seas. You begin with a continent of your own and one city. Basically, you want to strengthen your forces, invade foreign continents and interrupt the

or shore. The map of the board is revealed as you play; you only learn the layout of adjoining squares by moving pieces across them. Each player can likewise see only his or her section of the board. The layout of opponents' territories and posi-

tioning are secret until they are encountered. For this reason, if more than one person plays on the same computer other players must look away from the screen when it's not their turn. The program handles this pretty well; at the end of each turn the screen goes blank except for a message instructing the next player to "report to the command post." Alternately, players can use the "play by mail" option to save the game on disk after each turn and mail it (electronically or otherwise) to the next player. Empire does not support interactive play via modem.

Since the size of the board is tremendous, a game can last several days, with fleets growing to contain hundreds of armies, fighters and ships. Fortunately, the program's excellent interface makes managing your forces practical. The main screen only lets you see a small portion of the world at a time, but there's an option to view the entire map so you can get a better perspective on your forces. You can also call up status reports showing the size and production status of your fleet. A production map shows at a glance the production distribution of your territories. Empire also offers a

variety of commands to control your forces. You can set flight paths for fighters, command forces to move to a specific location or in a specific direction, set ships to automatically

this game, everyone begins with the same resources. Winning depends upon tactical skills, clear thinking and organization — not to mention knowing thy enemy.

For even more variety, Empire includes a map editor so you can create your own worlds.

patrol waters and put armies on sentry watches.

At the beginning of each game, all players are randomly assigned positions on the map so each game is different, even if you've used the same map before. For even more variety, Empire includes a map editor so you can create your own worlds. Finally, you can increase or decrease any player's production or combat efficiency for more challenging gameplay. This is particularly useful because the computer is not very smart about employing strategy; increasing its efficiency usually makes up for it.

I recommend Empire to anyone who prefers strategy games to arcade shoot-em-ups or games of chance. In

RED STORM RISING

Reviewed by Wolf Griffey

AT A GLANCE

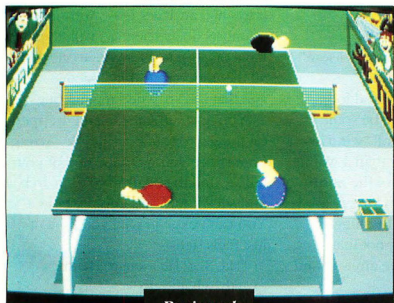
Game:	Red Storm Rising
Company:	MicroProse Simulation Software 180 Lakefront Drive Hunt Valley, MD 21030 301/771-1151
Price:	\$54.95
Summary:	The thrill of the hunt has never been better.

While Tom Clancy (author of the novel, *Red Storm Rising*) and MicroProse were conspiring the final touches on the combat simulation of the same title, the "bad guys,"

continued on page 69

Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games • Games

TABLE TENNIS



*Reviewed
on page 75*

RICK DAVIS SOCCER



*Reviewed
on page 76*

BUGS

BY GREG "MADDOG" KNAUSS

Our hero has been captured by mad scientists for use in their evil experiments. Will he survive their terrible tests? Is this the end the dynamic reptile? Holy bugs, Bat — uh — Snakeman!

AT A GLANCE

Program:	BUGS!
Type:	Maze game
Requirements:	512K, low rez, joystick
Arfile:	BUGSBUGS.PRG
Files:	BUGS.LST BUGS_SET.5 BUGS.PRG BUGS_SET.6 BUGS_SET.1 BUGS_SET.7 BUGS_SET.2 BUGS_SET.8 BUGS_SET.3 BUGS_SET.9 BUGS_SET.4
Language:	GFA BASIC 3.0

"You have the test subject, Wilson?"

"Yes. His name's Edwin."

You hear your name and look around. There seems to be something that you would call "wind" — if you had a brain bigger than a walnut — blowing gently out of the northwest, and the big warm sphere above is making you pleasantly sluggish. You decide that you're not that interested in your name anyway and stop looking around.

"We're not going through this again, are we, Wilson? It's an animal.

An experiment. An *it*."

Suddenly, you're lifted into air. Your first impulse is to stick out your tongue and this is exactly what you do. But since experience has taught you this almost never helps the situation, you pull it back in.

All those "scientific" experiments you've endured have mutated your DNA. You're still Edwin the snake, but now you're just more, well, flexible. Your body stretches and contracts like an accordion. And since scientists do as scientists will, they have one last test for you, to clean up all the underground radioactive leakage that has spawned mutant bugs.

You're taken outside and dropped on the grass near a small hole. Acting on instinct, you wrap the end of your tail around the nearby wooden arch and stick your head into the hole. You can't explain why you do it; it just feels right.

"Ha. See? He's smart. He knew exactly what to do."

"Any bioengineer worth his salt can program innate responses into a



snake. Let's just see what happens."

Another idea tickles your cerebellum. You plunge into the hole. When your eyes adjust to the darkness, you head for the small gleam ahead of you. You think it might be a good idea to eat it. You do, and notice another one farther along. Instinctively you elongate your body and head toward it.

Suddenly, the gleaming thing in front of you starts to growl. Even if your brain is smaller than a walnut, you know this is not a friendly sign. You back up and try another passage.

Poised and Ready

To play Bugs!, double-click on the archive file BUGSBUGS.PRG and choose Extract when the dialog box appears. Select a destination disk and the files will be un-ARCD directly onto that disk. To start the program, double-click on BUGS.PRG. The game runs in low resolution and requires a joystick.

At the title screen, press the joystick's fire button to start the game using the first maze. If there aren't any mazes to run, you'll go directly into the Editor. Bugs! comes with nine mazes, which are named BUGS_SET.1 through BUGS_SET.9.

If you want to choose the starting maze, press [Spacebar]. A box appears in the center of the screen. Use the right and left arrow keys to cycle through the available mazes, then press [Return] when the one you want is shown in the box. [Escape] exits Bugs!. [Return] takes you to the Bugs! Editor.

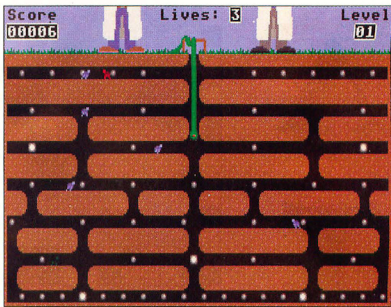


Down the Hatch

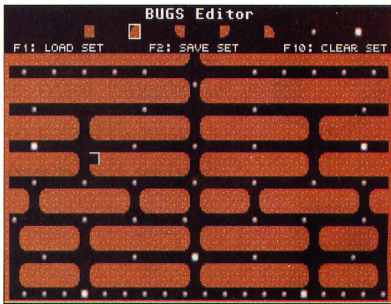
Underground, there is a maze of tunnels littered with large and small radioactive pellets, and blue and red bugs. Your job is to eat all the pellets and avoid being killed by the bugs.

You eat something by running over it with your head. Your score points if you eat a blue bug, but a red bug is so radioactive that it's lethal. (Why else do you think it's glowing?)

Clean up the radioactive tunnels, avoid the deadly bugs and live to run another maze.



When editing a maze, use the mouse to select and lay down tiles.



Conversely, nothing happens if a red bug runs over your body, but a blue bug, with its toxic skin, will kill you if it runs into you.

Lucky for you, eating a large pellet causes a radioactive explosion which temporarily stuns the blue bugs but does not affect you.

For every pellet you eat (big or small) you get points equal to the

continued on page 78

C R O S S R E A T O R



Cheryl Robin

If you've ever marveled at those mental whizzes who actually finish the New York Times crossword puzzle — in PEN — then pause for a moment and consider how tough it must be to design them. But help is here. Using Crossword Creator, you'll whip up those brain teasers with ease.

WORD

Now Making a Crossword Puzzle is Easier than Solving One

BY JOHN L. HUTCHINSON

AT A GLANCE

Program:	Crossword Creator
Type:	Crossword-puzzle generator
Requirements:	512K, high or medium rez
Archive:	CROSSWRD.PRG
Files:	CWC_COLR.PRG CWC_MONO.PRG
Language:	GFA BASIC 3.0

When Arthur Wynne published the first modern crossword puzzle in the *New York World* on

December 13, 1913, little did he know that it would quickly become a fad in the United States and soon spread to other countries as well. By the early 1920s, newly formed crossword clubs were sponsoring contests and holding championships, which increased the crossword puzzle's popularity.

Solving crosswords has long since been described as an "enjoyable exercise in frustration" for millions of puzzle addicts worldwide. Creating a puzzle, however, tends to redefine the term on a nightmarish scale, calling for a tedious pencil-and-paper drill with dubious results, at best. This is why I developed Crossword Creator, a full-featured crossword generator that helps you easily create and print your own crossword puzzles. The program includes clue editing and an optional puzzle solution.

Getting Started

To run Crossword Creator, double-click on the archive file CROSSWRD.PRG and choose Extract when the dialog box appears. Select a destination disk and the files will be un-ARced directly onto that disk. To start the program, double-click on either CWC_MONO.PRG or CWC_COLR.PRG, depending on the type of monitor you have. After a few moments, the title screen will appear and Crossword Creator is ready to use.

Most of the Crossword Creator screen is taken up by the grid where the interlocking words that make up your puzzle will be displayed. Upon loading, the program defaults to the maximum allowable size grid for your particular monitor (24 across x 17 down for color; 30 across x 20 down for monochrome).

Along the left-hand side and bottom of the screen are several option buttons, some of which appear faded to indicate that they are not yet usable. For example, when there is no puzzle in memory, the only options available are CREATE, LOAD and QUIT. All options may be selected by pointing and clicking with the left mouse button or by pressing the key corresponding to the highlighted letter of the desired option.

The functions of the main screen's option buttons are described in the sidebar.

How to Create a Puzzle from a Word List

You'll find the Word List method to be the fastest and easiest way to create a puzzle in Crossword Creator. Word lists may be created via the CREATE PUZZLE function, or you may use any word processor capable of saving a file in ASCII. If you use a word processor, put only one word on a line and end each line with a carriage return. Crossword Creator accepts a maximum of 99 words of length 15 letters or less, alphabet characters only. Save the list to disk as an ASCII text file using a filename extension .WRD.

For maximum speed, Crossword Creator will not display the puzzle on screen until it has exhausted the word list. Very large word lists may take a few minutes, so be patient and wait for the bell that sounds when the puzzle has been completed. You may halt the process at any time by pressing [Undo]. Once the puzzle has been completed, you will be advised of what percentage of words from the original word list were successfully added to the puzzle. If you wish, you then may ask Crossword Creator to try the same list again. The program will randomize the words in an attempt to fit a greater proportion.

Hints and Tips

The MAKE TEMPLATE option lets you create specific crossword puzzle patterns. You may add or delete blacked-out squares at any time, but ►

remember that templates usually restrict the number of words that can be successfully added. Also, when the PRINT PUZZLE option is selected, all unused rows and columns in your puzzle will be erased to make it more compact. You can defeat this complication by forming a border of blacked-out squares around the perimeter of your puzzle.

Many crossword puzzles are designed so that the upper left-hand corner contains an across word and a down word. While Crossword Creator optimizes its search pattern to fit an entered word as quickly as possible, this may not result in the specific word placement that you want. To remedy this, use the MANUAL mode of the ADD WORD function to place an across word and down word at the corner(s) as desired. Then return to AUTO mode to continue entering words the easy way.

If you don't care for the positioning of a word done in the AUTO mode, use the DELETE WORD function to remove it, then add it back in at the preferred

location using the MANUAL mode.

You will be alerted if a manually positioned word causes a conflict with an existing word. Such conflicts usually arise from the accidental formation of nonsense words when you place a new word adjacent to an existing one. You may KEEP or DELETE the word just added but if you keep it, be sure to correct any nonsense words by manually adding new words over them.

Although you won't have to worry about conflicts in the AUTO mode, judicious use of the MANUAL mode will certainly make your puzzles more challenging and professional in their appearance. ■

John L. Hutchinson is a major in the U.S. Army and is currently assigned to the Australian Army War Game Centre in Sydney. He is the author of Naval Battle (START Special Issue Number Four) and a number of GFA BASIC tutorials that appeared in previous issues of START.

KEYBOARD EQUIVALENTS

Button	Key
ADD WORD	A
CREATE PUZZLE	C
DELETE WORD	D
EDIT CLUES	E
LOAD PUZZLE	L
MAKE TEMPLATE	M
PRINT PUZZLE	P
QUIT	Q or Undo
SAVE PUZZLE	S
UNUSED	N
USED	U
?	? or Help

CREATE PUZZLE

Creates a new puzzle or word list. A dialog box appears giving you three choices: **PUZZLE**, **WRD LIST** and **CANCEL**.

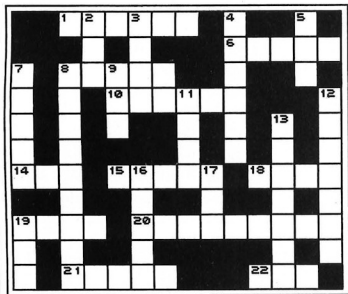
Click on **WRD LIST** to create a word list. Words must be entered one at a time. Each word may contain up to 15 characters and must consist of letters only — no numerals or punctuation. Press [Return] when you've finished your list, then save it by selecting a filename with the extension .WRD.

When you choose **PUZZLE**, a dialog box asks you to enter your puzzle's parameters. These parameters include the number of letters across and down, and the total number of words (up to 99). Click on the arrows beside the numbers to increase or decrease them.

The puzzle-parameters dialog box also asks you to choose your **WORD ENTRY METHOD**. Choose **KEYBOARD** to enter words from the keyboard, one at a time. Choose **WORD LIST** to load a previously prepared list of words.

Below that, you're asked to choose your preferred **WORD POSITIONING METHOD**. Choose **AUTOMATIC** to let the program decide where to place each word.

Crossword Creator Sample Puzzle



ACROSS

- Nickname of Bugs! author
- June's theme
- Uncompress; pre-playing preparation
- The contents of Dialog Box
- #1 Guide to Atari ST
- See 20 across
- Pazhitnov's big hit
- Atari's new president
- Programs Editor
- Mutant snake's name
- Crossword Creator's creator

DOWN

- What Psynosis illustrators studied
- Wordle's _____ cube
- Pazhitnov's home
- Editor's initials
- Junior Editor
- Location of Atari headquarters
- What Edwin did to the pellets
- Review category; _____ playing games
- Psynosis' native land
- Sam or Jack
- Computer manufacturer
- Machines used by START staff
- Computer which the ST can emulate

Solution on page 56

CROSSWORD CREATOR, BUTTON BY BUTTON

Click on **MANUAL** to position each word yourself.

Finally, you must decide whether or not you want Crossword Creator to automatically attempt to fit words from the unused list.

SAVE PUZZLE

Saves your masterpiece to disk. All puzzle data files must have the filename extension .PUZ. Existing puzzles with the same filename will be renamed *.BAK. In addition, a word-list file of the same filename but with a .WRD extension will automatically be saved.

LOAD PUZZLE

Lets you load a previously saved puzzle file. Be sure to save any puzzle currently in memory, as loading another puzzle will replace it.

ADD WORD

A dialog box will appear asking you to choose either **AUTO** or **MANUAL**. **AUTO** is the default; the program fits each word in the puzzle automatically. The first word will be positioned as close to the center of the puzzle as possible. Subsequent words will be interconnected with existing words or placed on the unused words list for later use.

To enter words manually, click on **MANUAL**. At the **ENTER NEW WORD** prompt, enter any word of up to 15 characters and press [Return]. The word will appear in boldface the upper left hand corner of the puzzle. Click on the right mouse button to switch it from across to down, then drag your word to the desired location in the puzzle. Press the left mouse button to paste the word. You may then continue to enter new words to the maximum puzzle limit of 99. Note that you cannot connect to an existing word unless the letters of both words match up exactly. Crossword Creator will also alert you if you try to place the word in a position where it creates a conflict with existing words.

To exit to the main menu, press [Return] at the **ENTER NEW WORD** prompt.

DELETE WORD

This option will change the mouse cursor to a skull and crossbones and display a list of any unused words over the option buttons. Position this "deadly" cursor over the first letter of any word in the puzzle or the unused-words list and click the left mouse button to delete that word.

To cancel the delete operation, click the right mouse button or press any key. Use this option with care

because once a word has been deleted, it's gone for good!

MAKE TEMPLATE

The mouse cursor changes to a crosshair with which you can "paint" a pattern of black squares on the puzzle grid. No words will be positioned on black squares. Click the left mouse button to paint or erase each square, and the right button to exit this function.

MAKE TEMPLATE gives you a choice of symmetry: **NONE**, **2-WAY** and **4-WAY**. **NONE** paints squares one at a time. **2-WAY** paints a square and its diagonal counterpart. **4-WAY** paints a square and its counterparts in the other three corners.

EDIT CLUES

Lets you to enter or edit text clues for each word currently used in the puzzle. The "across" words are presented first, followed by the "down" words. Each clue is limited to a single line of up to 35 characters. When editing previously entered clues, simply press [Return] to accept a clue, or press [Delete] to erase a clue prior to typing in a new one.

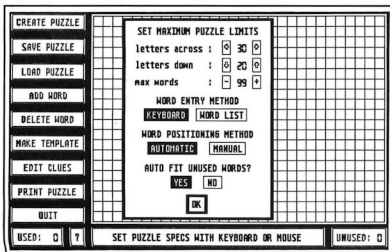
PRINT PUZZLE

Select this option to call up a sub-menu of print options.

Click on **PUZZLE ONLY** or press [P] to print an unsolved puzzle. Click on **CLUES ONLY** or press [C] to print its clues. Select **SOLUTION ONLY** or press [S] to print its solution. **WORD LIST** or [W] prints a list of used and unused puzzle words. Click on **PRINT ALL** or press [A] to print the puzzle, clues, solution and word list in that order. Select **CANCEL** or press [Undo] to return to the main menu.

Prior to printing, Crossword

At the main menu, click on **CREATE PUZZLE** to call up this dialog box. Here you may set your desired puzzle parameters.



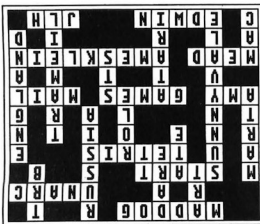
CROSSWORD CREATOR

Creator will ask you to enter an optional puzzle title in the message box. If you choose to enter one, it will be used as a heading above your printed puzzle and/or puzzle solution. Use [Delete] to edit the puzzle title as desired.

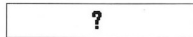
If printing a puzzle or solution, you'll also have the opportunity to save a DEGAS format picture file of the screen image. Use a filename extension of .PI2 for color puzzles and .PI3 for monochrome. (Editors

who wish to incorporate crossword puzzles in their publications should find this particularly useful.)

You also have a choice of **FINAL** or **DRAFT** quality printouts. Click on FINAL to produce a finely detailed puzzle; DRAFT produces a rough version. Note that final-quality puzzle printing yields individual puzzle grids of 1/4-inch square. Also, while Crossword Creator has been designed for Epson-compatible 9-pin, dot-matrix printers, its draft mode will work with most other popular makes as well.



currently used words. When you create a puzzle, USED also tells you how many words have been successfully entered.



Crossword Creator provides plenty of online help. Click on the question mark to call up the help menu. Press any key or mouse button to return to the program.

The message box at the bottom center of the screen contains messages and questions to help you create your puzzle.



Returns you to the Desktop. Be sure to save your puzzle file before exiting the program.



Displays an alphabetized list of



Similar to USED, UNUSED displays an alphabetized list of unused words. It also keeps you advised of how many words have been entered that do not successfully fit in the puzzle ■

MEMORY UPGRADES

FOR ATARI ST & MEGA II

	4 MEG	2.5 MEG	2 MEG	1 MEG
MEGA II	270.00	*	*	*
1040 ST	480.00	270.00	*	*
520 ST TM	480.00	270.00	*	95.00
520 ST	480.00	*	270.00	95.00

Prices include RAM chips, installation, 6 month warranty! 24 Hrs turn around for mail orders, or 'while you wait' for carry in.

Don't take chances with solderless RAM upgrades. We use soldering on all connections of our upgrades to insure long lasting quality of contacts.

Memory Upgrade Prices are subject to change due to market fluctuations. For more information and latest prices please call!

COMPUTROL INDUSTRIES

35-28 33rd STREET
ASTORIA, OR 97106
(800) 477-2131
(718) 392-5852
FAX: (718) 392-4136

Boost productivity and processing power of your ST with Turbo 16 Accelerator.....299.95

Automatically set system time and date with internal real time Clock/Calendar.....59.95

For maximum storage capacity and flexibility get internal or external Single to Double Sided Drive upgrade.....115.00

Master Card

Visa

EXCITE YOUR COMPUTER

Rent it some software

Call toll-free outside Texas: 1-800-433-2938
Inside Texas call: 817-292-7396



WEDGWOOD RENTAL
5316 Woodway Drive
Fort Worth, Texas 76133



Tell our advertisers you saw it in START!

ANTIC SOFTWARE PRESENTS...

START MAGAZINE'S

THE GRAB-BAG

FOR THE ATARI ST

**BUY ONE AT REGULAR PRICE
or Choose any 5
for \$49.95**

SHOOT THE MOON - A colorful, high-speed shoot-em up in the arcade tradition. (ST0252) **\$39.95**

LCS WANDERER - Transports you through galactic space sectors, black holes, and enemy aircraft. (Stereotek required) (ST0238) **\$39.95**

QUICKTRAN - Your 1200-baud modem can now transfer files at over 2000 baud at 4000 baud. (ST0247) **\$34.95**

P.I.E. - Customize your icons - for programmers as well as desktop artists, with graphics improvements. (ST0248) **\$29.95**

G.I.S.T. - A fast, easy sound tool for adding sophisticated sound to your programs. (ST02330) **\$34.95**

A-RAM - Power, speed, flexibility, and the best print spooler makes this the ram disk for you. (ST0215) **\$19.95**

A-SEKA - Assembler, editor, and monitor/debugger combo, for programmers looking for ultra fast response time. (ST0216) **\$19.95**

C.O.L.R. OBJECT EDITOR - Create sprites and bit-mapped game objects using your art or any ST paint program. (BB9016) **\$19.95**

RED ALERT - Pick your own ground zero with the game that's the perfect blend of strategy and arcade action. (BB9015) **\$15.95**

ORDER NOW!

Phone Orders - Toll free number:

(800) 234-7001

Mail Order

To order by mail, complete order form and return with payment to:

The Grab Bag
544 Second Street
San Francisco, CA 94107.

Payment by check, money order, MasterCard, VISA, or American Express
Payment must accompany all mail orders. Include shipping and handling charges of \$4.50 per order of 1 to 5 disks.

ALSO AVAILABLE FOR THE ST GRAB BAG:

(PD9093) SPELL WRITER'S TOOL
(PD9095) TOM HUDSON'S PD3 CTL
(PD9097) SPACE DOCK
(PD9098) TOM HUDSON'S STEELY SNK
(PD9099) STEREO STARS AND SLIDE
(PD9102) MISFIRE
(PD9094) ARCHIVE COLLECTION
(PD9089) PROFF
(PD9058) ST DOODLE (520 ST)
(PD9109) HOLO CONTEST I
(PD9120) HOLO CONTEST II
(PD9121) HOLO CONTEST III

Antic offers you a FREE Atari solar calculator with each order. You must act fast, because supplies are limited!!

Watch this space each month for more selections from Antics GRAB-BAG

ORDER FORM

NAME _____				
ADDRESS _____				
CITY _____			STATE/COUNTRY _____	
ZIP CODE _____			PHONE NO _____	
QUANTITY	ITEM NO.	DESCRIPTION	PRICE EA.	TOTAL
Price and availability subject to change without notice, as supplies allow.			Subtotal of all items ordered (Minimum order: \$19.95)	
Method of payment:			California residents add 6 3/4% sales tax	
<input type="checkbox"/> Check/Money order	Credit Card No. _____		Shipping and handling charges (\$4.50 per order)	
<input type="checkbox"/> MasterCard				
<input type="checkbox"/> VISA				
<input type="checkbox"/> AmEx	Expiration Date _____		Total _____	
Name _____				
Signature _____				

COMPLETE YOUR START LIBRARY

Get Your Back Issues Now

You'll want to have every issue handy for quick reference. The START library... it's there when you need it!



WINTER 86

Features: Jack Tramiel Interview, Buyer's Guide.
On Disk: Noise Doodling; Address Book; Auto Dialer; Label PrinterSt; Writer Secrets.
Reviewed: Mark Williams C.; Menu+.

SUMMER 87

On Disk: The aSTronomer; Text Compression and Huffman Coding with Personal Pascal; Flicker Animation Program; MIDISAVE.
Reviewed: Word Writer ST; Data Manager ST; Swiftcalc ST; Five BASICs compared

SPECIAL ISSUE #2

Features: Drawing and Painting Programs Overview; Desktop Video; How to Set Up Your own MIDI Studio; Rock'n'Roll with Atari; Shopping List of Music Hardware.
On Disk: The Cartoonist; MIDI View; Ear Trainer.
Reviewed: Synth-Droid; Xsyn Patch Editors; Music Studio and Music Construction Set.



WINTER 87

Features: The Atari Mega 4; Zoomracks; The ST in Hollywood; How Not to Shop at a Computer Store.

On Disk: STARTKey; ST Writer Meets the Mouse.

Reviewed: Macintosh and PC Emulators; Dac-Easy and STAccounts; 1st Word Plus; Superbase Personal.

SPECIAL ISSUE #2

Features: Drawing and Painting Programs Overview; Desktop Video; How to Set Up Your own MIDI Studio; Rock'n'Roll with Atari; Shopping List of Music Hardware.

On Disk: The Cartoonist; MIDI View; Ear Trainer.

Reviewed: Synth-Droid and Xsyn Patch Editors; Music Studio and Music Construction Set.

SPRING 88

Features: Earthquake; Upgrading Your ST; Dave Mason Interview.

On Disk: Home Budgeting; Exploring Prolog; 1987 Tax Template; Battle for the Throne.

Reviewed: Personal Finance Programs; Desk Accessories Compared.



SPECIAL ISSUE #3

Features: The ABCs of Desktop Publishing; The ST in Business; Business Graphics; Database Overview.

On Disk: CardStack Database; START Selector; Play the Market.

Reviewed: WordPerfect; F-15 Strike Eagle.

SUMMER 88

Features: Three Years with the ST; Mick Fleetwood Interview.

On Disk: Planning Traveler; Writing Your Own Help Files; Fractal Landscape Generator; Klondike Solitaire.

Reviewed: Microsoft Write.

SPECIAL ISSUE #4

Features: Games & Entertainment

On Disk: Naval Battle; World Discovery; Guitar Simulator; Byte Mechanic; ReSTART.

Reviewed: Dungeon Master; Chessbase; Four SonicFlight Patch Editors; Quantum Paint 1.2.

FOR ORDERS ONLY CALL TOLL-FREE

1-800-234-7001 7 am-5 pm PST

MasterCard & Visa Only

Or send your check to: START BACK ISSUES, 544 Second Street
San Francisco, CA 94107; California residents add 6½% sales tax.



JANUARY 89

Features: Editor's Choice.
On Disk: GFA BASIC 2.0; Spanish Mastery, STARTKey Revisited; Slither.
Reviewed: GFA BASIC 3.0; Creator and Notator.

FEBRUARY 89

Features: Thanks for all the Fish; ST: 1999.
On Disk: Dah-Ditter; Moon Calendar; Kamikaze Chess, Killer Chess; VCR Organizer.
Reviewed: Atari's Planetarium; Robtek's Skyplot; Mirage Sample Editor's.

MARCH 89

Features: Three Artists Who Use the ST; Software Rental.
On Disk: Seurat Draw and Paint Program; Assembled Sauces; ST Coloring Book.
Reviewed: Graphics and Animation Programs Compared; Digiagram's Big Band; Overview of Six CAD Programs.

APRIL 89

Features: Jimmy Hotz's MIDI Magic; Dr. T Interview; The New TOS ROM Error Codes.
On Disk: ST Writer Elite 3.0; Poker Solitaire; RAM Baby.
Reviewed: Utilities; R/C Aerochopper; MIDI Draw.

MAY 89

Features: CompuServe's Sports Forum; Atari Goes to College.
On Disk: Space Wars 2400; GFA Object; 1988 Tax Template; SIFT (START's Instant File Translator)
Reviewed: Buyer's Guide to Telecommunications Programs; Calamus.

JUNE 89

Features: Do Anything Business Computer; Arcade Addiction.
On Disk: GFA Vector, Match Quiz St; Screen-writing with WordPerfect; ST Pinochle; Exploring Spreadsheets; Traveling Mathes.
Reviewed: Juggler II; Switch/Back; Revolver; Graphics Tool from Migraph; MIDI Drummer.

JULY 89

Features: MIDI in the Future T ense; Making MIDI Affordable
On Disk: Babel; GFA Object; The ST Therenim; START Arcade
Reviewed: Sound Digitizers; EZ-Score Plus; Pagestream; Turbo ST1.4; Hi Soft BASIC and Hi Soft BASIC Professional.

AUGUST 89

Features: Secrets of a Good User Interface; Tools of the Trade
On Disk: POGO; File Search; Splines on Splines; Stumbling Blocks
Reviewed: Ultrascrip; DevpacST; dBMAN V; After-Market Floppy Disk Drives; MIDI Magic

SEPTEMBER 89

Features: Sam Tramiel Interview; Computer Game Violence
On Disk: Avecta I: Ebor; The Seven Skulls; Newspeed; Slither Screen Editor; Cinko
Reviewed: Eight Games; Fleet Street Publisher 3.0; STAC, STOS and TaleSpin; NewScore

OCTOBER 89

Features: STACY and Portfolio Preview
On Disk: CAD-3D-to-DynaCADD Converter; Schedule Maker; ST Softguide; WordPerfect Macros; Boingo
Reviewed: DynaCADD 1.56; Hotwire, NeoDesk 2.0 and VDOS ProQueue; Entry-Level Sequencers; Computer Guide to the Solar System

NOVEMBER 89

Features: The Transputer Connection: Atari and Perihelion; Donny Osmond Interview; The START Disk's New Look
On Disk: RezRender; JULIA; Final Approach Controller

START LIBRARY ORDER FORM

ISSUE	MAG. W/DISK	MAG. ONLY	DISK ONLY
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
QTY: _____	<input checked="" type="checkbox"/> \$14.95	<input checked="" type="checkbox"/> \$4.00	<input checked="" type="checkbox"/> \$10.95
	\$ _____	\$ _____	\$ _____

Quantities are limited and we cannot guarantee that all back issues are available. Shipping/handling charge is 50¢ per item whether you order the magazine with disk, the magazine only or the disk only. There is a flat fee of \$5.00 for orders of ten or more. Send to:

START BACK ISSUES,
544 Second Street,
San Francisco, CA 94107

dollar amt. ordered \$ _____
shipping/handling _____
Foreign (add \$1 per item) _____
Calif. res. add 6.5% sales tax _____
Total amount (U.S. funds) \$ _____

Payment Enclosed Check Visa Mastercard

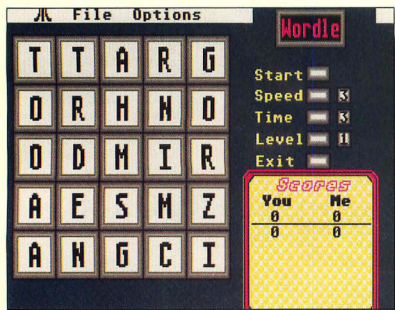
Name _____
Address _____
City _____
State _____ Zip _____



WORDLE

A Tough and Jumbled Game

BY ERIC SLICK



Scrambled gegs become unscrambled eggs when you play this absorbing search-and-sort word game. Twist your brain left, right, up, down and sideways trying to spot the words hidden within the letters in the Wordle block.

AT A GLANCE

Program:	Wordle
Type:	Word game
Requirements:	512K, low rez
Archive:	WORDWORD.PRG
Files:	READ_ME.2 WORDLEAZ.PIC WORDLE.LST WRDLPIC.DAT WORDLE.PRG
Language:	GFA BASIC 3.0

Wordle is a word-search game similar to the popular board game Boggle. Race against the computer as you try to find as many words as you can within a grid of randomly placed letters. To win, you must find more words than the computer finds within the time limit. The computer learns more words each time it plays, making it a more formidable opponent. Will your skills improve, too?

Getting Started

To play Wordle, double-click on the archive file WORDWORD.PRG and choose Extract when the dialog box appears. Select a destination disk and the files will be un-ARced directly onto that disk. To start the program, double-click on WORDLE.PRG. The game runs in low resolution only.

At the main screen, click on the Start button. The letters are shuffled, the display box reads "Get Ready" and after three seconds, "Go!" The clock starts ticking.

At the Block

To spell a legal word each letter must touch the one before it. They can be connected either horizontally, vertically or diagonally. You cannot use the same letter twice in any one word.

Type the words that you find, using [Backspace] to correct mistakes; press [Return] when you've finished a word. Your words will appear in the white box on the right.

If the mouse is on, you can build words by left-clicking on the letters or holding down the left button and dragging the pointer over them. As you do this, the letters are highlighted. To un-highlight a letter, simply click on it. The right mouse button, or [Spacebar] enters the word.

If you need a breather, the [Escape] key pauses the game. If the mouse is active, you can click on the pause button. You then have three choices: **Start** the game over, **Skip** to choose and **Continue** playing. Start quits the current game and gives you a new screen. Skip lets you move to the scoring stage without waiting for time to run out. Continue returns you to the game with no time lost. You'll notice, however, that during pause the letters disappear. Sorry, no cheating. The computer can't peek during Pause, so neither can you.

When time runs out, Wordle automatically strips out repeated words, short words (less than three letters), words that are not actually on the board and words found by both you and the computer. Only those words unique to your list and over two letters long will be left. If Wordle does not have your word in its dictionary, it will ask you whether to add it or not. Your words, and the computer's, are then scrolled in a window that appears on the right side of the screen, followed by your scores. You are awarded one point for a three letter word, two points for a four letter word, three for a five letter word and so on.

As you play the game, you will naturally develop a search strategy of your own, but here are some tips to start you off. Begin in a corner of the board and systematically search through all possible word combina-

tions that begin with that letter. When you run out of possibilities, go on to the next letter and do it again. (Of course, if you suddenly see a word across the crowded board, don't wait to enter it.) Watch for words that can be pluralized (i.e. toy and toys), and for words within words (i.e. enjoy and joy). Proper nouns, contractions, abbreviations, foreign and hyphenated words are illegal. Otherwise, any word found in the dictionary is fair game.

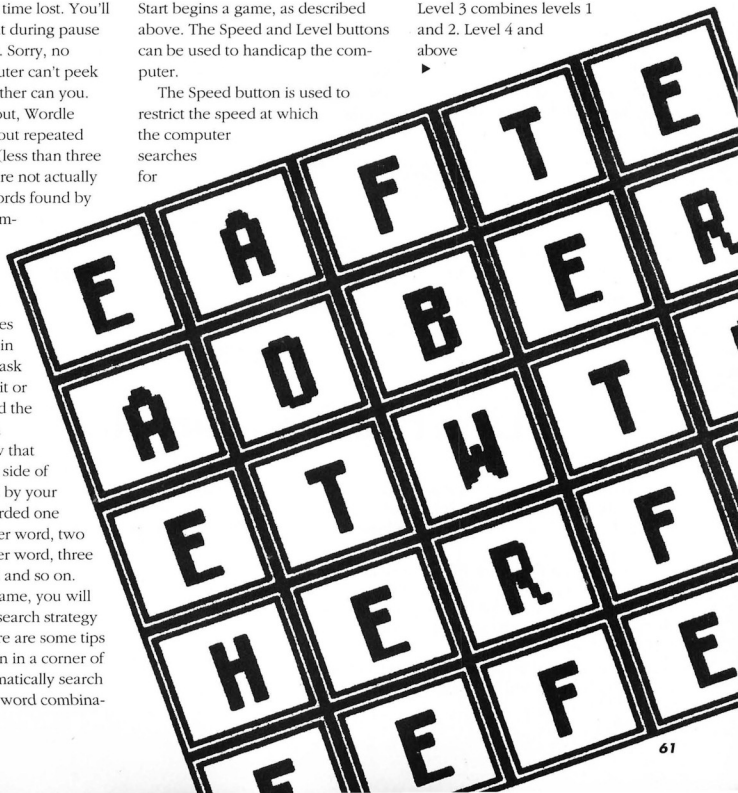
Unscrambling the Big Picture

Along with the board of letters on the left side, there are several buttons on the right (**Start**, **Speed**, **Time**, **Level** and **Exit**) which control your game. Start begins a game, as described above. The Speed and Level buttons can be used to handicap the computer.

The Speed button is used to restrict the speed at which the computer searches for

words. The higher the number, the longer it takes the computer to complete a full search of the board. Speed 0 frees the computer to work at full tilt, while speed 9 restricts the computer so much it would be lucky to finish a full search in under nine minutes. This option is most useful when your own time is limited.

The Level button controls the computer's search pattern. Level 1 keeps the computer from thoroughly searching its own dictionary so that it misses some words. Level 2 makes the computer search randomly through the board. This setting may force the computer to give up searching early or conduct a rather thorough search; it's unpredictable. Level 3 combines levels 1 and 2. Level 4 and above



WORDLE

restricts the computer's search to words of four letters or more. Level 5 combines levels 4 and 1. Level 6 combines levels 4 and 2 and Level seven 7 combines levels 1, 2 and 4.

Confusing? Not really. Just remember, levels 0 through 3 are the same as levels 4 through 7 except the former finds words of three or more letters, while the latter finds words of four or more letters. Basically, the higher the level, the harder it is for the computer.

The Time button indicates the number of minutes you have to search. Zero gives you unlimited time and you'll have to use [Escape] or click on Pause to stop playing.

The Exit button returns you to the Desktop. At this time you're given the option of saving the dictionary. If you do not save it, all the words you taught the computer are deleted.

The **Scores** window is below the buttons, displaying the scores from the previous five games. Five games equal one round, and the highest scoring rounds are saved on the **Top Scores** sheet. To view the Top Scores sheet, click the mouse anywhere in the Scores window. The first five lines show the highest scoring rounds. The sixth line is reserved for the last round's score. The top scores are saved to disk when exiting Wordle, in WDLYOU.HSC and WDLCMPTR.HSC. Click once again to return to the regular Scores window.

The Menu Bar

Across the top of the screen is a menu bar with two drop down menus, File and Options.

The File menu has four options: **Load Board/Wds**, **Save Board/Wds**, **Kill Board/Wds**, **Save Custom** and **Delete Words**. Save

Board/Wds lets you save any particular board you like. Load Board/Wds lets you play it again. Kill Board/Wds deletes the file containing a saved board. Save Custom saves all your current settings — board size, name, mouse on or off, etc. — and stores them as default settings. Delete Words lets you edit the dictionary. It is displayed in the right margin and begins, of course, with "A" words. Click on the double arrow boxes to scroll through the alphabet. Use the slider bar to move through each letter's list. To delete, simply click on the word. An alert box asks if you really want to delete it. To exit, click on the close box.

(About the Wordle dictionary: if it becomes so large that beating the computer is nearly impossible, simply delete or rename the dictionary file, WORDLEAZ.DIC. Another, much shorter file will supersede it.)

The Options menu offers several



Don't Be A Solitary Atari.

The largest and longest standing group of Atari® users in the world shares its problems and solutions online every day in CompuServe's Atari Forums. And you can join them.

Find the latest software, like the new desktop publishing program for the ST. Learn how to run Macintosh® and MS-DOS® programs on your Atari. And pick up helpful game tips from experienced players.

Need technical help? Atari personnel and most third-party software and hardware vendors are online

every day. You can even provide recommendations as they develop new programs and products. There's no better way to get more out of your Atari.

If you're already a member, type GO ATARI at any ! prompt. To join CompuServe, see your computer dealer. To order direct or for more information, call 800 848-8199.

CompuServe®

choices. Clicking on **Dare Cube**, **5x5 Grid**, **4x4 Grid** or **Mouse** activates or deactivates them. The Dare Cube contains a letter with which it is extremely difficult to make words. It's the glowing red letter on the board. The grid choices change the size of the board.

When Mouse is checkmarked, you can use the mouse during a game. Pressing both the right and left mouse buttons simultaneously also toggles this option.

Enter name, obviously, lets you enter your name; the default is "You." When you change your name, the current name in the Scores window is erased and you enter a new one. The computer saves the old name and score, and loads a fresh file using the new name. Wordle also asks if you wish to erase the top scores. When you exit the program, the top scores are saved under the new name, not the old.

View Words lets you see the last (or loaded) game's words. The Printout option dumps the board and its words into an Epson compatible printer. **Help** briefly explains the game and its options.

Organizing Your References

Wordle can develop a rather large group of data files (any file without a .PRG extender) and clutter your disk directory. The data files can, however, be separated from the program. Create a new folder and place your data files in it. Put the WORDLE.PRG file with your other game files. Double click on WORDLE.PRG. When the program can't find its data files, a dialog box appears asking if you want to set a path to their location. Click on yes. In the file selector box, open the folder that holds your data files (WRDLPIC.DAT, dictionary, etc.). The program looks for the data files and, if successful,

creates a file called PATH.WDL in the drive's/partition's root directory. A box appears, asking you to confirm the path. If the path displayed in the edit box is the one you specified, hit [Return]. If it's not, correct it and hit [Return].

A Final Word

I hope you enjoy Wordle. It's a great way to learn new words and hone your spelling skills. I'd appreciate any comments you might have. Just send them to me either in care of START or on CompuServe (71510,1134) or GEnie (XTX17789). Have fun and, by all means, don't forget your dictionary. ■

Eric Slick wrote Wordle to demystify the world of computing for his wife, Susie, who is (or was) an aficionado of Boggle. This is his first appearance in START.

BETA-CAD...

Why has it become the most popular Computer Aided Design package?

"BETA-CAD is easy to use, loaded with features, and probably the least expensive real CAD program that you can buy!"

- Lawrence Kilmer, Atari Explorer, Sept-Oct 1989-

"BETA-CAD is a great program for quick and easy CAD design and is highly recommended, especially for engineers."

- Dave Edwards, CAD Consultant, Start, Jan. 1990-

New - CNC version now available.

New- Ver. 1.1 - Features over 120 commands including - Templates / Symbols - Fillets - Auto Dimensioning - Rotate - Duplicate- etc.

NOW FOR THE 520, 1040, AND MEGA ST Interactive tutorial included at no charge.
User support on GENIE
ORDER NOW ONLY \$99⁰⁰ VISA MASTER

CALL 1-800-326-9124

Info. 508-695-9175

May be purchased only from BETA-CAD.

BETA-CAD 31 MILLARD RD NATTLEBORO, MA 02760
Requires High Res. Monitor

Let's discuss the Issues!

Your Subscription expiration date is clearly printed on your mailing label. The issue indicated at the top of your mailing label will be the last issue of your subscription.

MAR 90

94107RDR544SCOU	SART	055
J. READER		STA
544 SECOND STREET		BBF
SAN FRANCISCO	CA	94107

If your records disagree with ours, please call START customer service (619) 485-7754 to correct the mistake. Remember, often our correspondence crosses in the mail, so please allow 6-8 weeks for renewals and changes.

Welcome, Warriors. You are about to embark on a deadly test of courage and strength. Stay alert and shoot straight, champions, for only one of you will make it out alive!

AT A GLANCE

Program:	Warrior ST	
Type:	Two-player shoot'em up	
Requirements:	512K, low rez, two joysticks	
Arctype:	WARRIOR.PRG	
Files:	SET01.WAR	SET07.WAR
	SET02.WAR	SET08.WAR
	SET03.WAR	SET09.WAR
	SET04.WAR	WARRIORST.LST
	SET05.WAR	WARRIORST.PRG
	SET06.WAR	
Language:	GFA BASIC 3.0	

Warrior is a fast-paced, two-player game patterned after Warrior 3000, the 8-bit classic written by Ken Greiner in the February 1986 issue of Antic magazine. Along with its stunning graphics, the ST version of Warrior includes a built-in screen editor with over 30 different objects from which to choose.

Getting Started

To play Warrior, double-click on the archive file WARRIOR.PRG and

choose Extract when the dialog box appears. Select a destination disk and the files will be un-ARCD directly onto that disk. To start the game, first check that WARRIORST.PC1 is in the same folder as WARRIORST.PRG, then double-click on WARRIORST.PRG.

Warrior runs on all STs; however, 520ST owners may have to remove some desk accessories in order to free up memory. The game runs in low resolution and requires two joysticks.

The Warrior title screen presents you with three options: **Game**, **Quit** and **Editor**. To select an option, either left-click in its box or press the first letter of the option.

Warrior Gameplay

At the Warrior title screen, click on Game or press [G]. Make sure two joysticks are plugged into your ST (1040ST and 520STfm owners will find this easier to do with the Mouse Master from Practical Solutions, or with some joystick extension cables.)

Warrior will first prompt you to load screens. Here you'll see a list of all of the .WAR files in the current directory. Each file contains a set of nine game screens, which are played in random order. To select a set, press the keyboard equivalent of the letter next to the desired file; the file

will load and the program will then automatically begin the game. If you press the [Spacebar], a random file will be selected from the existing files. At the game screen, press [Escape] to return to the title page.

Warrior presents you and your opponent with two champions — one red, one blue. The object of the game is to eliminate your enemy with your bow and arrow. Move your warrior by pushing the joystick in the appropriate direction. To fire an arrow, point your bow in the right direction and press the joystick's fire button. Be sure to keep an eye on the number next to the arrow at the top of the screen. This shows how many arrows you have left.

Your remaining lives are shown at the top of the screen as a row of red or blue figures. When a warrior dies, the round is over and a dialog box appears showing who won the battle. Both players must press their fire buttons to proceed to the next round. When one player runs out of



WARRIOR ST

A Dual-Player Duel

warriors, the other player wins the game. Press any key to return to the title screen.

Creating Screens

To create new screens or edit existing ones, select Editor from the title screen. The mouse must be plugged into port 0; a joystick in port 1 can be used for testing screens. The **Load Screens** display will then appear. It is identical to the one that appears for playing the game except that the mouse may be used to select files and [Spacebar] brings up a set of blank screens.

The editor screen will appear after you make your selection. Along the top of the screen is a menu for selecting objects with which to draw. It also lists editing options. The rest of the screen contains the playfield where the warriors' battle takes place.

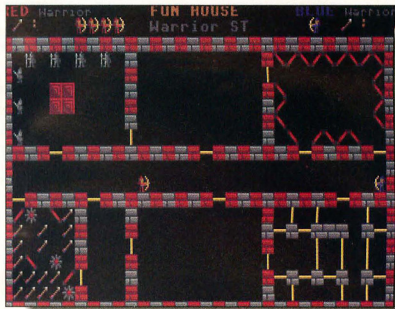
To draw something on the playfield, select one of the objects from the menu. A copy of it will

appear in the **Current Object** window. You can choose from objects such as bricks, guards, invisible walls, transporters, arrows

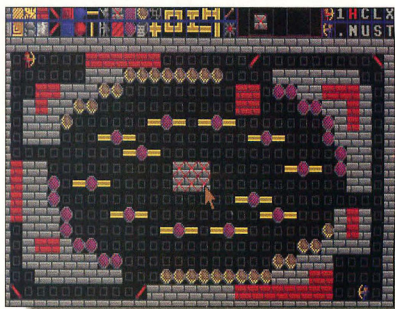
and mirrors. There's also a **Help** mode. When the "H" in the menu is highlighted, help is available. Simply

continued on page 68

One of the screens found in Warrior ST.



Use existing game screens or create your own.



Disk Contents

Programs on Your START Disk

THE GREAT GAMESCAPE

So, what exactly gets put on a disk that accompanies a summer games issue? Games, what else! A broad variety of games, a veritable landscape of games, games to help you escape for hours and hours.

Crossword Creator, written by John L. Hutchinson, isn't a game per se. It's a game designer. Crossword Creator helps you make your own crossword puzzles — clues, solution, blank puzzle and all.

The next program, however, is ready to play. Dive headfirst into a hole as Edwin, the mutant snake, in **Bugs!** Edwin springs from the fertile imagination of Greg "Maddog" Knauss. Gobble the radioactive pellets and get out before you're bitten by a deadly bug.

If you prefer your heroes human instead of reptilian, you'll enjoy playing

Warrior ST. In this game, your opponent is human also. Warrior pits you and another person against each other, maneuvering for the best firing position while dodging invisible obstacles and threading a maze. Evan Black is responsible for the code; his brother, Jason Black, drew the graphics.

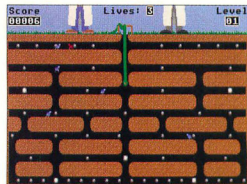
For our less bloodthirsty readers we present Eric Slick's

Wordle. A square of letters appears before you. While the clock ticks, hunt for words within the scrambled letters. You play against the computer; the more you play, the smarter the computer gets.

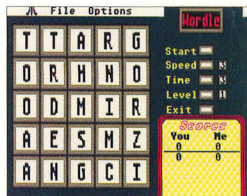
Last, but not least, we've included something for the kids. A Baggetta wrote **Fun Pages** so that he'd have a quick way to generate a little distraction for his children. Anytime the kids get restless, plopp a Fun Page and a pencil in front of them, and they, and you, will be happy.

From the outset, let us apologize to any readers who own only a monochrome monitor. You won't be able to use any of the programs on this disk except the monochrome Crossword Creator. That's the nature of games; they want color.

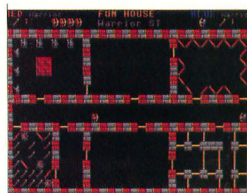
NOTE: We've changed the disk once again. Now it's easier than ever to access START programs. The archive files on this disk are self extracting. Simply double-click on the .PRG file to uncompress the files. For a more thorough explanation, read the Disk Instructions.



BUGS! PAGE 50



WORDLE PAGE 60



WARRIOR ST PAGE 64



	Archive	File Size	Un-ARc'd Size			Memory	Resolution	Notes
			STX	HIGH	LOW			
Bugs!	BUGS.BUGS.PRG	77K	█	█	█			
Crossword Creator	CROSSWRD.PRG	154K	█	█	█			
Mountain Solitaire Fix	MTN_FIX.PRG	39K	█	█	█		needs datafiles from March 1990 to run.	
Fun Pages	PAGES.PRG	67K	█	█	█			
Warrior ST	WARRIOR.PRG	183K	█	█	█			
Wordle	WORDWORD.PRG	159K	█	█	█			

Disk Instructions

HOW TO GET START PROGRAMS UP AND RUNNING

- 1) Write protect your disk.
- 2) Make a backup copy. We format the disk using TWISTER.PRG (written by Dave Small and Dan Moore, Summer 1988 issue of START) to increase the size of a single-sided disk to 400K. You can back up onto one Twisted, single-sided disk; one double-sided disk; or two GEM-formatted, single-sided disks.
NOTE: TWISTER DOES NOT WORK WITH GEM'S DISKCOPY. To make a backup, open a window for your START disk, then drag the files from the window to the backup disk.
- 3) Store the original and use the backup hereafter.
- 4) Un-ARC the files. We use Double Click Software's DC SEA utility to create self-extracting archive files. To un-ARC a program, simply double click on the filename.
- 5) When the dialog box appears, choose Extract.
- 6) When the file selector appears, choose a destination disk (hard disk, RAM disk or floppy disk) for the uncompressed files. Make sure the destination disk has enough space for the uncompressed files, whose sizes are given in the chart on the Disk Contents page.
The screen goes blank, then the files are listed as they are extracted, and marked "OK" if the uncompression is successful.

Coming Next Issue...

JULY IS MUSIC MONTH

MIDI Master Drummer

Pound out great sounds with this professional-level drum sequencer.

AlterTune

Alternate tuning for your favorite MIDI instrument.

Gilbert's Challenge

A puzzle game for the strong of mind.

PLUS

Multitasking TOS

MIDI Programmings Tips

Computer Hazards

Sampsyn, a MIDI hardware project

Reviews of Cubase, Super Score, pc ditto II

Moving?



Fill in coupon and mail to:

START

Subscriptions:

P. O. Box 535

Mt. Morris, IL 61054

NEW ADDRESS

Name _____

Address _____

City _____

State/Zip _____

OLD ADDRESS

Name _____

Address _____

City _____

State/Zip _____

Tell our advertisers you saw it in START!

continued from page 65

move the mouse over an object and a brief explanation of it appears in the center of the playfield. Turn off Help mode by left-clicking on the "H," or pressing [Help] on the keyboard.

Will It Survive?

Objects are either indestructible or destructible. Indestructible objects, of course, cannot be destroyed; destructible items, on the other hand, can be destroyed with an arrow.

Mirrors function three ways. If they're hit at an angle, they reflect the arrow 90 degrees. If they're hit straight on, they'll explode. Arrows can pass through them if they're fired upon lengthwise.

Teleporters transport your warrior to a different part of the screen.

There are three different teleporters: the square indestructible teleporter, the round destructible teleporter and the invisible teleporter. There are two more invisible objects: the destructible wall, represented by a hollow cube, and an indestructible wall, represented by a cube with bricks on it. Invisible objects only appear in the editor, except for the indestructible wall which magically appears as a brick wall when hit with an arrow.

There are three special objects in the menu: extra arrows, the arrow bouncer and destructible bricks. The arrow will give the warrior who touches it an extra arrow or two. These arrows will also appear if both warriors run out of arrows during the game. The bouncer will reflect an arrow in one of eight directions or explode when hit. The destructible bricks look just like the regular bricks except they can be destroyed.

In addition to the **Current Object** window, the menu also contains the **Mirror Mode** window, which shows the current mirror in effect. To change the Mirror Mode, click on the window with the left mouse button and a menu will appear. Selecting this window with the right button

turns the mirror effect off.

Click on one of the two warriors in the menu to set the starting position of that player. Click on the player whose starting position you wish to set, then select the square on the playfield where the warrior should stand.

There are two indicators in the menu: the **Current Screen** indicator and the **Overwrite Flag** indicator. The Current Screen indicator tells

mode on and off.

Name, [N]: Lets each screen have a small title which is shown at the top of the screen when playing the game.

Clear, [C]: Clears the current screen.

Undo, [Undo]: Erases the last object drawn.

Load, [L]: Loads a new set of screens. Warning: this will erase current screens in memory.

Each game consists of nine different screens played in a random order.

you which of the nine screen in a set you are editing. To change the current screen either press the number on the keyboard of the screen you wish to edit, or click on the number with the mouse. If you use the mouse, you'll see a display showing all nine screens in miniature. Simply click on the screen you wish to edit.

The Overwrite Flag determines if an object will be written over with another object. If this indicator shows a . (period), you must first erase whatever is in the square by right-clicking on it, then adding another object. If the indicator shows an * (asterisk) then the underlying object will be replaced with a new one without having to erase. This mode must be used when replacing the bricks on the top and bottom of the screen with another indestructible object. Just click on the indicator with the left mouse button to toggle the overwrite flag on and off.

Other Options

The rest of the menu items can be selected by clicking on their appropriate squares or pressing their keyboard equivalents.

Help, [Help]: Toggles the Help

Save, [S]: Saves the current screens to disk with the extension .WAR. The last filename accessed is shown at the top of the screen.

Exit, [X]: Returns you to the title screen. Be sure to save your work first!

Test, [T]: Lets you test the current screen with the joystick. Has only one player and an unlimited amount of arrows. Press the left mouse button or [Escape] to return to the editor.

Some Things to Remember

Only indestructible objects can be placed on the top and bottom rows of the screen. Be sure not to trap the players in a room surrounded by indestructible walls. If you come to a situation where the warriors are trapped, press [Escape] to abort and return to the title screen.

We hope you enjoy playing Warrior ST. We had a lot of fun creating it. ■

Evan and Jason Black are brothers who live in Arizona. Jason is an art student and Evan programs for fun. This is their first appearance in START.

continued from page 49

(namely the Russians) went out and made some downright peaceful gestures. This may be good news for the world at large, but what does it mean for us simulation fans? Where will combat simulations be without the Cold War? Lucky for us, however, MicroProse was not daunted;

the grouping.

Your rank depends on the difficulty of the scenario. Essentially, the harder the task the higher you rate and rank. Several variables let you manipulate the difficulty of each simulation: Year, Boat, Challenge and Scenarios. The year you choose for your confrontation is important.

In 1992, the Russians have Nuclear aircraft carriers.

Red Storm Rising is one of the best combat simulations I've ever seen.

The package contains a manual, disks and map of the Norwegian Sea Theater. You are in command of a Nuclear Fast Attack sub and, as in the novel, your task is to stop enemy shipping, defend your patrol area and occasionally launch offensives at land targets. This naturally requires training and as usual, the manual is the place to begin.

The manual is a veritable arsenal of information; it is, in fact, your best weapon. It consists of Operations, Captain's and Reference Manuals. The Operations section summarizes Red Storm Rising and its options. The Captain's section details offensive and defensive tactics and provides many useful words of wisdom. The Reference section reviews the six different classes of U.S. boats and introduces you to the Bear.

The Bear is the Red Banner Northern Fleet, your main opposition. It consists of 11 classes of nuclear boats, bombers and cruise missiles. Combined with six classes of the silent diesel boats, you have around 180-plus undersea targets at which to aim. The surface component is comprised of Cruisers, Destroyers, Frigates, Amphibious Warfare ships and three types of aircraft carriers, around 90 targets in

For example, in 1992, the Russians have nuclear aircraft carriers; in 1996, the SeaWolf is operational.

The NMPC (Naval Military Personnel Command) assigns you a strategic position based on the type of Boat you select. Not all of the five submarine classes are available all the time. The SSN Permit, SSN Sturgeon, SSN Los Angeles and SSN Improved Los Angeles are, but the SeaWolf can be used in 1996 only.

There are four Challenge levels. Introductory is recommended for the first few games. Normal is best for the casual players. Serious sees the enemy as up-to-speed, so you better be as well. The screen says it all for the Ultimate level: "Life can be brutal and short."

Your choice of Scenarios includes Training Actions, a one-on-one with either a November sub or Kashin destroyer, Battle Simulations, Duel and Chance Engagement among others. The eighth scenario is the primary campaign, Red Storm Rising. This scenario incorporates all others, and believe me, you'd better be experienced, because in this scenario, you don't know what's out here until it bites you.

The true test of your capabilities in this game is discovered in the year 1996, on an NMPC assigned boat, at the Ultimate level in the Red Storm Rising scenario. Good luck!

On any level, however, Red Storm Rising is great strategic fun. Even if it becomes one of the last, it will still rate as one of the best simulations ever. ▶

Ten Top Selling Games of 1989

Compiled by *Marta Deike, Junior Editor*

Battle Chess, \$49.95
Activision (415) 329-0500

Blood Witch, \$49.95
Mirror Soft, London (01) 928-1454

Chaos Strikes Back, \$39.95
FTL, (619) 453-5711

Dungeon Master, \$39.95
FTL, (619) 453-5711

Falcon, \$49.95
Spectrum Holobyte, (415) 522-3584

King's Quest IV, \$59.95
Sierra On-Line, (209) 683-4468

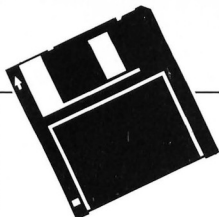
Leisure Suit Larry II, \$59.95
Sierra On-Line, (209) 683-4468

Populous, \$49.95
Electronic Arts, (415) 571-7171

TV Sports: Football, \$49.95
Cinemaware, (805) 495-6515

War in Middle Earth, \$49.95
Mastertronic, (714) 833-8710

Games are not in order of popularity. The list was compiled through independent ST distribution sources. At press time, the front runners for 1990 were Ultima V (Origin) and Fighter Bomber (Activision). Any of these should be found at your local Atari dealer.



EXCLUSIVE PROGRAMS ON DISKS!

If you bought this issue of *START* without the disk, you're missing out!

Order the companion disk full of great, enjoyable programs from top ST experts. Order your disk by mail using the order card in this issue. For even faster service, call:

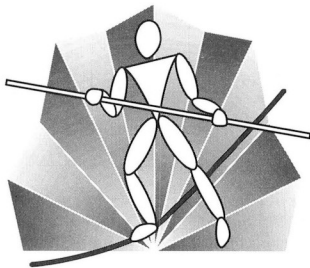
Toll-Free:

1-800-234-7001

7 am-6pm PST
Visa, MC, Amex orders only

Each disk is \$10.95 plus \$2.00 handling & mailing.

ARCADE



Sometimes also known as "shoot 'em ups" and "back-and-slash," these games are popular for untangling mental knots, and work particularly well with your B52's-Mozart-Kingston Trio albums. (Caveat emptor: they are infamous for being highly addictive.)

AT A GLANCE

Game:	Fiendish Freddy
Company:	Mindscape, Inc. 3444 Dundee Road Northbrook, IL 60062 708/480-7667
Price:	\$49.95
Summary:	A big top o' graphics well worth stepping into.

FIENDISH FREDDY'S BIG TOP O' FUN

Reviewed by Greg Perez

Hurry, hurry! Step right up and into Fiendish Freddy's Big Top O' Fun from Mindscape. It's up to you and your friends to work up 10,000 smackeroos and save the beloved Big Top from the clutches of the Big Greedy Bank. To get the cash, you've

THE TIMES THEY ARE A-CHANGIN'

When the Berlin Wall crumbled, John LeCarre wasn't the only author left out in the cold. Game companies also found their East vs. West scenarios abruptly obsolete.

Our nomination for the It Was A Good Idea At The Time award goes to Accolade, which just released *The Third Courier*. You are Moondancer, a CIA agent assigned to recover stolen NATO defense plans hidden somewhere in divided(?) Berlin, "the legendary city known for intrigue, espionage and one heck of a wall", according to the box copy. These days it's easier to complete your mission in reality than in software.

got to master six events, while a devious little clown named Freddy tries to stop you. Freddy doesn't sport a handful of Ginsu cutlery, but he has got quite an arsenal of terrifying toys that can send you and your circus crew vaulting to that Big Top in the sky.

The events range from Phenomenal Feats of Diving Daring to the pulse-pounding Tense Travel Techniques on Tightrope. Each event calls for different joystick skills and to every one, Freddy brings his own sick brand of fun. For instance, one of his more humorous appearances occurs during the center-ring act of Jeffy-Joe, Genuine Juggling Genius. As Jeffy-Joe juggles such miscellaneous objects as iron anvils and chainsaws, Freddy arrives with a bomb and helps Jeffy go off with a "bang".

I've seen so many multiplayer competition games that I didn't think I'd ever want to see another. But Fiendish Freddy is a sight for sore eyes. The cartoon graphics are great; they're dazzling and hilarious. I actually found myself snickering at the unfortunate end of high-flying Finola as she plummeted ever so gracefully from the heights of the trapeze, thanks to Freddy "cutting" her act short.

Because of the stunning animations, the game is packed onto five disks. (Hard disk users rejoice!) But the great fun and comical animation of Fiendish Freddy make the con-

stant disk-swapping well worth the trouble.

SUPER HANG-ON

Reviewed by Dave Gregg

AT A GLANCE

Game:	Super Hang-On
Company:	Data East 1850 Little Orchard St. San Jose, CA 95125 408/286-7074
Price:	\$39.95
Summary:	A stripped-down motocross simulation that's more than an average race.

I've never been much for car and motorcycle simulations — they all seem to do the same thing and once you've tried one, you've tried them all. This was my thinking going into Super Hang-On from Data East. Well, opinions can and do change.

Super Hang-On is a stripped-down motocross simulation that spans four continents. These continental races are essentially the levels of difficulty and each has a certain number of stages you must complete. Africa is the easiest with a mere six stages. Europe is the most difficult with 18. You may choose any level you want. Your perspective is first person and control is through the mouse.

Super Hang-On's appeal is that it offers something for everyone. Not ▶

Chicagoland's Largest Atari ST Dealer!

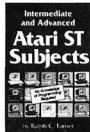
**Biggest Software
Selection, Including
Import Titles &
Magazines**

**Computers
Software
Service**

ATARI
Portfolio[™]
& All Accessories

Software Plus

Wheeling (708) 520-1717.
Hanover Park (708) 837-6900
Chicago (312) 338-6100



Ralph Turner's new book, *Intermediate & Advanced Atari ST Subjects*, covers hard drive management & optimization, IBM emulators, disk structure and file recovery, connecting a 5 1/4" floppy drive, assembling a hard drive system from inexpensive components, SCSI ID numbers and LUN IDs, sector and file editing, binary, hexadecimal and decimal codes, ASCII file problems, escape codes, miscellaneous tips, and much more. His *Atari ST Book* covers RAM disks, the AUTO folder, Desktop tricks, installing an Application, adjusting the Control Panel's Palette Settings, Public Domain Software, Copying, Printers, Desk Accessories, Telecommunications, the Item Selector, and much more. Neither book requires a knowledge of programming. \$16.95 each, plus \$2.00 shipping each (\$2.50 each to Canada). Check, Money Order, VISA or MasterCard. Index Legals, Post Office Box 1822-49, Fairfield, IA 52556. Phone: (515) 472-2293

Better oil your joysticks! Robocop requires a fast wrist.

all of us can be hot-shot arcade-gamers who consistently make the highest score. Super Hang-on seems to take this into account. So what if you can't handle Europe? There's always Africa.

Graphically, Super Hang-On is a treat — when you speed up, you really feel like you're speeding up. And the scenery even changes as you travel across the various continents. For instance, as you zip through North America, you see the hulking skyline of New York city change to the greenery of the northeast coast and midwest and soon find yourself in the deserts of the southwest.

Of course, there isn't a lot of time to enjoy the scenery — you've got a race to win. Check out Super Hang-On — and please drive gently.

ROBOCOP

Reviewed by Dave Gregg

AT A GLANCE

Game:	Robocop
Company:	Data East 1850 Little Orchard Street San Jose, CA 95126 408/286-7074
Price:	\$39.95
Summary:	A traditional shoot 'em up with modern graphics.

It doesn't take long to figure out what Data East's Robocop is all about — just plug in a joystick, boot the game and start blasting away. That's all there is to it: no reading people their rights, no following "due course of the law." The game appears to rest

on the premise that everyone's a suspect, so it's best to shoot first and ask questions later. At least in the movie, the criminals were given the benefit of the doubt.

Which is not to say that Robocop is a bad game. It certainly *looks* good although the animated figures could be a little larger, and gameplay is very intuitive — you just shoot the bad guys. There are nine levels and each one presents you with a different way to obliterate the opposition. Make sure you have a good joystick on hand — movement can be a little haphazard, especially when jumping.

Robocop offers nothing new in the way of shoot-em-ups, but it is fun in a maniacal sort of way and if you're into that sort of game (and I am), then check this one out.

TRACKER/ST

The Ultimate Mailing List/Mail Merge/Person-Tracking Software

Tracker/ST is an exciting new application which combines traditional mail list capabilities with a full built-in mail merge system, database-style reporting, and much, much more. Some of Tracker/ST's powerful features include:

- Full mail merge built in, including word processing functions like cut & paste, bold, italic and underline. Merge letters to everyone or set up specific criteria for a merge.
- Computer aided entry saves you thousands of keystrokes (and lots of time) — up to 10,000 keystrokes saved per 250 names.
- Ten preset label formats for single, 2 or 3 across labels, and laser printed labels. Edit these and add your own for custom label formats.
- One-step "membership aging" automatically tracks remaining time in a membership or subscription. Great for groups with memberships that need to be adjusted on a weekly, monthly or annual basis.
- Full GEM interface with drop down menus, click-on buttons and keyboard commands for ultimate ease-of-use.
- Unique "Quick Letter" option when you need to send a single "almost form letter."
- Unlimited notes for each person in your Tracker/ST files. Notes are not limited to a single line.
- Category, date, rank, source and I.D. fields to help you identify each entry in your list.
- Full reports to screen and printer, including easy-to-use grouping, counting, and summarizing.
- Sort reports on any field and set up specific filters for fine-tuned reports.
- Print labels for all names or set up your own specific criteria.
- Import and export names in ASCII and Tracker/ST formats.
- Easy transfer of names from all popular ST data management packages into Tracker/ST.
- Number of names limited only by disk space. 1800 names per floppy disk, 45,000+ on hard drive.
- Comprehensive manual with tutorial and complete cross-referenced index.
- Installs easily on your hard drive. No copy protected.

Perfect for businesses of all types, religious/school organizations, theater/music groups, photographers, freelance writers and artists, clubs, newsletter publishers, galleries, managers, salesmen, etc.

Send check or money order for \$79.95 to:
Step Ahead Software, Inc.

496A Hudson Street, Suite F39
New York City, New York 10014
Call 212-627-5830 for phone orders or more information.
Dealer inquiries welcome.



See us in Tokyo!

The great world of ATARI hardware & software is even available in Japan! See us in Tokyo for your ATARI needs.

日本の東京にもあります。こんなお店…
ATARI グッズ在庫豊富です。

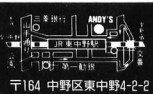
Cyber Control	.....	Antic Software
Cyber Patrol	.....	Antic Software
Cyber Range	.....	Antic Software
Cyber Shuttle	.....	Antic Software
Cyber Texture	.....	Antic Software
Cyber War	.....	Antic Software
Spectrum 512	.....	Antic Software
Po Galto	.....	Avant-Garde Systems
Magic Sac	.....	Data Pacific, Inc.
Spectre 12B	.....	Stargates by Small, Inc.
Mark Williams G.	.....	Mark Williams Company
LASER C	.....	Medanix, Inc.
ST Scan Image Scanner	.....	Navarone Industries
ST Sound Digitizer	.....	Navarone Industries
ST Video Digitizer	.....	Navarone Industries
Video Key	.....	Practical Solutions
Monitor Master	.....	Practical Solutions
Mouse Master	.....	Practical Solutions
Supra Drive	.....	Suora Corporation
EZ RAM II	.....	Terrific Corp.

OPEN 10:00~20:00年中無休

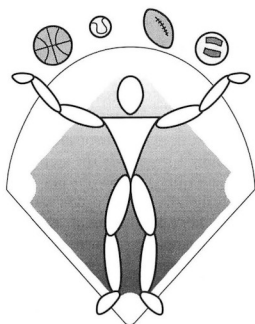
ANDY'S MUSIC

シンセサイザーショップ エレクトロニクス専門店

電話 360-0251 電話 360-0252



SPORTS



Sports simulations offer more than a distraction on rainy days. They are excellent for practicing eye-hand coordination and strategic planning, not to mention cursing. They are also — thank goodness — still a viable alternative for actual exercise.

TV SPORTS: FOOTBALL

Reviewed by Scott Wasser

AT A GLANCE

Game:	TV Sports: Football
Company:	Cinemaware Corp. P.O. Box 5083 Westlake Village, CA 91359 805/495-6515
Price:	\$49.95
Summary:	A winner by yards.

You wait weeks for the latest sports simulation to arrive and when it finally does, you breathlessly boot up. Invariably, however, your spirit plummets. You turn to the documentation, which generally reads something like this:

"To make a player shoot-pass-dribble-run, move the joystick-mouse in the corresponding direction or press the cursor arrow key that most closely corresponds to the direction you want the player on the field- ▶

FREE DISK!

That's right! With your paid trial subscription to **START**,

6 issues for only \$39.95

or 12 issues for \$69.95

We'll send you this month's disk absolutely **FREE**

(a \$12.95 value)

Call 1-800-234-7001
for your free disk today!

ON DISK THIS MONTH !

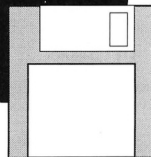
Crossword Creator

Warrior ST

Wordle

Fun Pages

Bugs!



court-diamond to move. The player must be flashing-blinking at the time.

"Do not move the joystick-mouse or press the cursor key until you have selected a play from the on-screen

worthless if the user interface is harder to figure out than a Fernando Valenzuela screwball.

Cinemaware's TV Sports: Football (TVSF) is the glowing exception. The

guide a ball carrier on a 55-yard scamper or help a receiver make a diving touchdown catch.

About the only thing TVSF's interface does not let you do is throw a block. The computer handles the blocking assignments for you, but every other aspect of individual offensive and defensive play is controllable. You can run, pass, and kick on offense or fight off blocks, leap for an interception and make lunging tackles on defense.

The graphics in TVSF are fair. The players move quickly and change direction with every twitch of your joystick. Balls can be kicked or thrown as precisely as you can control the stick. It can, however, be difficult to see whether a ball is caught or dropped, and occasionally, a runner's progress is impeded by a blocker or stopped by a tackler even though there appears to be daylight between the two players.

The players move quickly and change direction with every twitch of your joystick.

menu-player command card. Do not release the fire button-mouse button-cursor key until your player-athlete-competitor moves in the appropriate direction or unless his path is blocked by an opponent-foe. Do not breath at any time while playing this game."

Sound familiar? User interfaces such as these are the bane of sports-simulation buffs. Incredibly realistic graphics, fluid animation and amazingly accurate statistical algorithms are

user interface is extraordinarily elegant; not only is it accurate and responsive, it is remarkably intuitive.

You have the option to either call plays and manipulate all key competitors or sit back and let the computer run the game. The interface even lets you take control away from the computer at virtually any time during a game. For example, you can let the computer select a play and begin running it, then take over yourself to

SOME LIKE IT...

The CodeHeads announce:



- When the START editorial staff first saw HotWire, our collective reaction was "Wow!"
- By far the **fastest, easiest way to run programs** on the Atari ST... from a floppy disk or from a hard drive.
- Build menus for all your most commonly-used programs. Load new menus with a single keypress or mouse click!
- New **Ledger** function records time spent in programs of your choice.
- **Passwords** may be used to restrict unauthorized access to certain programs.
- New **on-screen clock**, appears in the programs that you choose.
- Unlike other shells, HotWire works correctly with all programs, just like the GEM desktop.
- A **seamless interface** offers direct access to MultiDesk and MaxiFile.

- Full-featured file-handling utility lets you **move/copy/delete/rename/touch/lock/hide** any combination of files and/or folders.
- Runs as a **desk accessory** or as a program in any resolution.
- Incorporates **every** file/disk feature of the GEM desktop plus much more.
- **Intelligent disk copying** routines.
- **Rename folders** - First directory listings.
- **Store comments** about any file/folder.
- Unique and intuitive user interface designed for easy, speedy operation.
- **Customizable** for your style of use.
- **Keyboard equivalents** for all operations.
- **Quickly select** from up to 20 of your most-used paths.
- **Even runs programs** and loads documents.

Here's what our users are saying about HotWire and MaxiFile:

- "The HotWire/MaxiFile combo has changed the way I use my ST."
- "I haven't used the standard GEM desktop in weeks."
- "Without HotWire and MaxiFile I'd be totally lost on the ST."
- "...a tribute to **assembly excellence**." - "MaxiFile is a wonder!"
- "HotWire and MaxiFile really 'beat up on the competition!' ...you'll need to package it in asbestos because it is 'too hot.'"
- "**AWESOME!**" - "Super!" - "A veritable software gem!"

HotWire Plus (includes MaxiFile).....	\$59.95
MaxiFile.....	\$34.95
HotWire.....	\$39.95
G+Plus - a replacement for Atari GDOS.....	\$34.95
MultiDesk - load unlimited desk accessories.....	\$29.95
CodeHead Utilities - a collection of useful programs.....	\$34.95
MIDIMax - a powerful MIDI tool for performers.....	\$49.95

Phone: (213) 396-5735.
Visa, Mastercard, AmEx accepted. Shipping charge: US \$2, Canada \$5, Europe \$5. CA residents add 6.5% sales tax.

CodeHead Software
P.O. Box 74090
Los Angeles, CA 90004



At START magazine we appreciate every subscriber we have. Please let us know how we're doing and how we can improve our service.

If a problem arises with your START subscription, gather together the following things: a recent mailing label, a copy of your invoice or renewal notice, and any correspondence you have received from us. Call or write us and we'll take care of the problem.

Write:

START Customer Service
P.O. Box 535
Mt. Morris

Or Call:

(619) 485-7754
between 6:30 AM and
5:00 PM Pacific Time

Easy Way To Replace a Damaged START Disk

SUBSCRIBERS: Just phone START Subscription Customer Service at (619) 485-7754, Monday-Friday, 6:30 AM - 5:00 PM Pacific Time. An operator will confirm your subscription and arrange for your new disk to be mailed within 24 hours.

NEWSSTAND BUYERS: Send your damaged disk to: START Disk Exchange, 544 Second Street, San Francisco, CA 94107. A replacement disk will be mailed to you within 24 hours of receipt.

The aerial perspective of the field also bothered me at first. Except during place kicking sequences, when the view is from ground level behind the kicker, the screen is filled with about 20 yards of field from sideline to sideline. The screen scrolls vertically to follow the ball carrier or ball. The drawback to this is that wide receivers move out of the picture when running deep routes, which can

each one owned by either human or computer. Every team has 18 players ranked in four different skill categories. Although the total number of skill points is the same for every team, owners can juggle lineups and player characteristics to gain favorable matchups. As in the real world of football, a bad matchup can mean a loss no matter how good your play-calling (or joystick jockeying).

TABLE TENNIS

Reviewed by Scott Wasser

AT A GLANCE

Game:	Table Tennis
Company:	Star Games 708 W. Buffalo Ave., Ste 200 Tampa, FL 33603 813/722-0006
Price:	\$34.95
Summary:	An excellent simulation of an antiquarian sport.

Table Tennis is an excellent simulation of a serious, often misunderstood, sport.

play havoc with your long passing game. But the perspective grew on me and it wasn't long before I found it satisfactory.

TVSF gives you the opportunity to start your own league of 28 teams,

including TV Sports: Football has its drawbacks, it ranks far above most other sports simulations. Thanks to the responsive graphics and excellent user interface, it is a great deal of fun to play.

My first thought about a table tennis simulation was "Why bother? Haven't we evolved beyond Pong?" But Table Tennis from Star Games is as far from Pong as the ST is from the old Atari 400. It's an excellent simulation of a very serious, often misunderstood, sport.

Actually, the United States is one of the few major countries in which table tennis is largely unappreciated. Other ▶

* Computer Garden *

Wilkes-Barre & Scranton's Favorite Computer Store

Abacus	ST Interface	\$299	Cat Font Ed	\$65	Prac.Solution	Drive Master	\$40
Furth/MT	\$33	Cinemaware	Vin/CADD	\$95	Monitor Master	\$40	
ST AssonPro	\$33	Del of Crown	\$3	SI accounts?	\$89	Mouse Master	\$33
Alpha	\$19	King, Chicago	\$18	VIP Profess.	\$89	Video Key	\$70
Digisound Pro	\$129	Rockel Rang	\$33	LDW	\$18	I Weekly Load	\$45
Powerbit S1	\$29	SDI	\$18	LDW Power	\$19	Precision	\$29
Switchback	\$53	Sinbat	\$18	Megamax	\$57	Suprbase Pro	\$219
Antic	\$59	TV Sport Fball	\$33	Laser C	\$95	Proco	\$30
Cyber Slado	\$59	Codehead	\$23	1 user DH	\$50	Procyon	\$30
Cyber Control	\$39	G+Plus	\$23	Nichtron	\$39	Pygnosis	\$20
Cyber Sculp	\$60	Holtare	\$26	Devpac ST	\$65	Menace	\$20
Cyber Part	\$50	MEDMax	\$33	SI Hplay 4	\$49	Cartoon/1/z	\$20
Cyber texture	\$33	Multidisk	\$20	Torusus	\$49	Baal	\$20
Cyber VCR	\$46	Utilities	\$20	Migraph	\$33	Balisticz	\$23
GFA Basic 3.0	\$65	Digital Vision	\$19	Easy Draw	\$65	Chorus Quest	\$30
Spectrum 512	\$44	Compilers/yes	\$179	Fasty Tools	\$30	Ierrotaxis	\$25
Atari	\$10	Epzyx	\$25	Font Pack 1	\$25	Orbitator	\$25
1040ST	\$Call	Art & Film Dir	\$65	Labelmaster	\$30	Sierra	\$33
Mega-2 S1	\$Call	Lower Toppler	\$33	Pro Draw Art	\$39	1 Insure Suit II	\$33
Mega-4 S1	\$Call	FTL	\$33	Scan Art	\$33	Cartoon Hunter	\$33
Megale 30	\$Call	Dungonmaster	\$25	Font Pack 2	\$25	Police Quest?	\$33
Sissy Laptop	\$Call	Ords	\$23	Lasydraw	\$95	Soft Logik	\$19
Laser Printer	\$Call	Sundog	\$25	Touch-up	\$19	PageStream	\$19
Avant-Garde	\$Call	Gribbit	\$35	Mindcape	\$33	Supra	\$119
PC-Ditto II	\$Call	CompLink	\$35	Gauntlet	\$33	Macden 2400	\$119
Avalex	\$Call	Happy Cam	\$69	Indiana Jones	\$33	Timeworks	\$15
1200e mod	\$69	Option 2	\$99	Eagle's Nest	\$25	Desktop Pub	\$79
240e mod	\$79	HP	\$59	Bad Hunter	\$33	Partner	\$33
Modem cable	\$15	Deskjet	\$57.9	Shadrowgate	\$33	Swiffcalc	\$49
Beckmeyer	\$Call	Deskjet Plus	\$69.9	Space Farmer	\$33	Wordwriter	\$49
Hard Disk loads	\$33	ICD Hard Drive	\$199	Superstix Ice	\$33	Tri Eng.	\$35
Accelerator	\$53	1A S1 30 M	\$549	Hockey	\$33	Unspcc	\$45
MT C-Shell	\$95	1A S1 50 M	\$799	Unwired	\$33	ST Control	\$55
Canon	\$Call	Interact	\$25	Panasonic	\$189	Versasoft	\$35
IX12 Scanner	\$299	Resolver	\$33	181 printer	\$239	Dt Man 5.0	\$150
IX12F Scann	\$1099	ISD/Ditek	\$33	124 printer	\$339		
		Catburn	\$179	Printer cable	\$35		

Order toll-free: **1-800-456-5689**
For information call 1-717-823-4025. Mail orders: send check or money order to COMPUTER GARDEN, 106 W. CAREY ST. PLAINS, PA 18705. Be sure to include sufficient postage. (Overpayments are promptly refunded). PA customers add 6% tax. Cash COD's OK. 3% charge for VISA-MC-AMEX.

Quick Tools vol. 1

Utility Pack For the Atari ST -- for only \$19.95

Quick Tools is a package of many powerful and memory efficient utilities for the Atari ST, Mega ST, and Atari STe computers. It includes a command line interpreter, smart file viewer, fast file finder, desktop editor, hard disk partition protector, custom control panel, speed benchmarker, real time status display, VT52 emulator, label maker with mail merge, program compressor, text screen dumper, and more!

Each Quick Tool can be installed to run as either a desk accessory or as a normal desktop application, for maximum versatility. Quick Tools even has its own unique way of getting around the 6 desk accessory limit. Quick Manager is a window that sits on the ST's desktop and has its own built-in desk accessory menu for installing the other Quick Tools. Quick Manager uses only 15K of memory, and only loads the accessories into memory when they are selected. Quick Manager with all of the Quick Tools installed uses less than 60K of memory!

Quick Manager also displays time, date, free RAM, and TOS version, allows for instant access to the file selector, has 16 desk accessory slots, and can be called from the desktop or any GEM program. Quick CLI makes complex file manipulations easy. Copy, rename, and delete files whenever you're in a bind. Quick Env edits environment variables. Quick View II is the ultimate replacement for the desktop's Show Print Cancel function. Just double click on any desktop file and Quick View II displays it in its native format. Text files display as text. Graphics files display as graphics. Even ARCAD files display their contents. Quick Find II searches for any file on the hard disk, fast! Quick Inf II edits hard to change desktop parameters. Quick Label II prints mailing labels and disk labels, with text effects. And much more!

Quick Tools costs only \$19.95. We accept checks, money orders, and VISA card orders. Add \$3 for shipping. Phone orders: 519-570-4340. Write for more information. Demo available on CompuServe and GEM. Also available: Quick ST II Software Screen Accelerator. \$19.95 + \$3.

Branch Always Software

Box 2624, Station B, Kitchener, Ontario, Canada N2H 6N2

START BOOKSHELF

Compiled by Marta Deike, Junior Editor

Hint and Tip Books for ST Games

FTL Games

6160 Lusk Blvd. Ste. C206 San Diego, CA 92121 619/453-5711
Dungeon Master, \$11.95 *Chaos Strikes Back*, \$11.95

LucasFilm

P.O. Box 10307 San Rafael, CA 94912 1-800 STAR WARS
Maniac Mansion, \$12.95 *Indiana Jones and the Last Crusade*, \$12.95 *Zak McKracken and the Alien Mindbenders*, \$12.95

Mindscape, Inc.

3444 Dundee Rd. Northbrook, IL 60062 708/480-7667
Shadowgate, \$5.00 *Deja Vu*, \$5.00 *Uninvited*, \$5.00

Osborne/McGraw Hill

2600 Tenth St. Berkeley, CA 94710 1-800 227-0900
Falcon Air Combat (by Pete Bonanni), \$14.95 *King's Quest Companion* (by Peter Spear), \$14.95

Sierra On-Line

P.O. Box 485 Coarsegold, CA 93614 209/683-8989
King's Quest Series (I - IV), \$7.95 each *Colonel's Bequest*, \$7.95 *Hero's Quest*, \$7.95 *Conquests of Camelot*, \$7.95 *Space Quest (I - III)*, \$7.95 each *Police Quest (I, II)*, \$7.95 each *Code Name: Iceman*, \$7.95 *The Black Cauldron*, \$7.95 *Leisure Suit Larry (I - III)*, \$7.95 *Gold Rush!*, \$7.95 *Manhunter (N.Y. & S.F.)*, \$7.95 each

countries recognize the endurance, agility and power required to master the sport. Perhaps that's why it originally took a German company to bring it to the ST.

mouse and joystick (or two joysticks). You have more control with the mouse than the joystick. With the mouse, you position your own racket; with the joystick, racket is positioned

Table Tennis is as far from Ping Pong as the ST is from the old Atari 400.

Game perspective is similar to what you see when you're actually playing table tennis (nobody who is serious about the game calls it ping pong); you look straight at your opponent across the table. Your opponent can be a friend or the computer. There are 20 fictitious computer foes to choose from, each possessing a different style and ability level.

Table Tennis supports both a

for you. There are six different racket types and grips and four different strokes to play with. The strokes and rackets affect the speed and spin of the ball.

About the only serious shortcoming in Table Tennis is you cannot practice serving. It takes a while to develop an effective serve, just as in real life. But then, that's why this is a real simulation.

RICK DAVIS' WORLD TROPHY SOCCER

Reviewed by Scott Wasser

AT A GLANCE

Game:	Rick Davis' World Trophy Soccer
Company:	Melbourne House 18001 Cowan St., Stes. A & B Irvine, CA 92714 714/833-8710
Price:	
Summary:	Somewhat of a kick, but no great ball of fire.

Based on the name alone, I had great expectations of Rick Davis' World Class Soccer from Melbourne House. But unfortunately, it turns out to be more B class than World Class. As a pared down — almost arcade style — game, it's fine, but as a true sports simulation, it's too limited.

After being treated to an eye-catching introduction, the scene changes to a partial overhead view of the soccer field. The screen scrolls both vertically and horizontally as you kick around the ball.

The 13-page manual is primarily a short biography of Rick Davis (the former American soccer champ) and history of the game. Actual instructions on gameplay are sparse. The manual does not tell you how to aim for a pass, shot, corner kick or throw-in. It does not tell you how to make the goalie dive or leap to block a shot, how to punt or pass. There are no hints or tips on general game strategy. These omissions are not particularly frustrating as much as they are telling — the game simply isn't complex enough to need elaborate instructions.

Rick Davis' World Class Soccer is somewhat redeemed, however, by its simplicity. It's pleasant enough as an afternoon diversion. You can play it without the manual. But you don't need docs for pinball either. If you're looking for some serious sport, better get your ball and head outside. ■

RIO
DATTEL
COMPUTERS

800-782-9110

*ORDERS ONLY

MON-SAT 8AM-6PM (PACIFIC TIME)

AUTHORIZED ATARI SERVICE CENTER

COMPLETE LINE OF HARDWARE & SOFTWARE IN STOCK

CUST SERVICE
TECH SUPPORT

702-454-7700
TU-SA 10AM-6PM

FAX: 702-454-7700



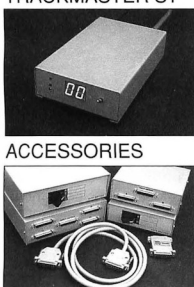
GENISCAN ST

*Easy to handle Scanner featuring 4 1/8" scanning width & 400dpi resolution enables you to reproduce graphics & text on your computer screen *Optical Character Recognition Mode will capture text images from the page & save them in format ready for conversion to text file suitable for word processor *Package includes GS-4000 scanner, interface & Scan Edit software *Powerful partner to Desk Top Publishing *Printout for Epson compatibles *Unmatched range of edit/capture facilities simply not offered by other scanners at this unbeatable price *Adjustable switches for brightness & contrast *Cut & paste editing of images *Save images as IMG, Degas, Neo, etc - **ONLY \$299.95**

OCR SOFTWARE - Teach your Atari to read !

*Optical character recognition software converts scanned text to ascii/Use converted text in your word processor*No more manual transcribing of text*Uses special scanning mode of the Geniscan ST*Learn mode lets you teach your computer any font - **ONLY \$89.95**

TRACKMASTER ST



*Trackmaster track display unit is a must for the disk hacker*Simply plugs into disk drive port of the ST*Displays track number, disk side and read/write status as the head moves along the disk*Two-digit LED display*Displays up to track 85*Works on both internal and external drives (switchable)*Complete hardware solution - no software required - **ONLY \$59.95**

ACCESSORIES



AB Switchbox	24.95
ABCD Switchbox	39.95
Printer Cables, 6 ft.	14.95
Modem Cables, 6 ft.	14.95
Serial Cables, 6 ft.	9.95
Parallel Cables, 6 ft.	9.95
Gender Changer MM,F,F ..	4.95
Nul Modem Adaptor	4.95
RS232 Surge Protector	9.95
RS232 Wiring Box	14.95
Diskette Holder, 3.5" 50 disk capacity.	6.95
6 Outlet Surge Protector, Wall Mount ..	9.95
Bulk 3.5" Disks, 50 Pack	39.50
Printer Ribbons, (Star/Panasonic)	4.95
3.5" Hard Cleaning Kit	4.95

EPROM BOARD

*Complete Eprom Board & case *Accepts up to 4 X 27256 Eproms *Mapped into the cartridge area - **ONLY \$24.95**

SAMPLER STUDIO

*A complete sound sampling package *100% machine code for real-time functions *Saved files are compatible with other sampling systems *Sequencer for playback via keyboard or MIDI input - **ONLY \$99.95**

ADVANCED ART STUDIO

*All the facilities needed for computer artwork, sprite & game design in one powerful but simple to use system *Graphic tools for home & professional use *Animated sprite designer & world map creator *Icon driven toolbox with on-screen help *16 color to real time operation - **ONLY \$29.95**

SKYPLLOT

*Most advanced features of any astronomy prog. *Covers 17,000 stars, planets & nebular objects *On line help *Zoom display thru 12 orders of magnitude *Several star chart formats supported *3D views *Search command *Compute Eclipse, transits, & conjunctions *supports med & hi res display *requires 1 meg mem - **ONLY \$49.95**

ST COPY DEEP SCAN BURST NIBBLER

Copy even highly protected programs in under 60 seconds!!
Copy MS DOS protected programs with equal ease !!
*Works with one drive or two*Copy between 5.25" and 3.5" drives*Multiple copy option allows many backups from one original *Copy 1 or 2 sides up to 85 tracks *Special format parameters for non standard formats *Unique "INFO ANALYSER" displays vital disc parameters including sector distribution, dispersion, interleave, etc *Easy to use Icon driven program takes the mystery out of Disc backup - **ONLY \$39.95** **Upgrades ONLY \$12.00**

3.5" & 5.25" EXTERNAL DRIVES



3.5" - *Slimline extra low profile unit *Top quality drive mechanism*Fully compatible - 1 meg unformatted capacity*Can be formatted to 85 tracks and 11 sectors - **ONLY \$159.95**

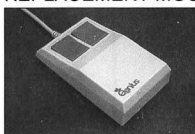
5.25" - *Operate in 40 or 80 track mode*Rear panel switches to configure ALL combinations of computer model and track modes*Perfect for use with PC Dito- **ONLY \$179.95**

1 MEG INTERNAL DRIVE UPGRADE



*Replace internal 500K drive with a full 1 Meg unit*Top quality drive unit - Easily fitted - Full instructions*Direct plug in replacement*No special skills or tools required*Minor modification to enclosure is required*When considering a drive replacement remember that quality is most important - **ONLY \$119.95**

REPLACEMENT MOUSE



*Twice the tracking speed of the Atari mouse !

*No more mouse doublers required*Softer more positive button clicking*More consistent double click*Extra long 6 foot connecting cord*highest quality mechanical parts for longer life and consistent positioning - **ONLY \$44.95**

ST SUPERTOOKKIT

*Whole disk Track & Sector Edit *Read up to 85 tracks and 255 sectors * Super HiRes display works with Mono monitor only *3 different editor modes-Drive, Disk or File *Direct select function for Bootsector, Directory sector *Fully Menu/Icon driven *HEX / ASCII edit modes directly on the disk *Perfect for the disk hacker - **ONLY \$24.95**

ST TIMEKEEPER

*Simple plug-in battery-backed calendar clock cartridge*Fits into cartridge port*On-board clock chip*Lithium battery backed to last up to 5 years*Automatically adjusts for leap year etc*Complete with install disk and corner clock display*Exact time data etc available on power up - **ONLY \$49.95**

PC DITTO II - \$249.95

PC DITTO II + 5.25" DRIVE - \$419.95

PC DITTO II + 5.25" DRIVE + DRIVE SWITCH - \$451.95

HARD DRIVES - MODEMS - SOFTWARE --- \$CALL

ALL THE LATEST EUROPEAN SOFTWARE

CALL FOR PRICE AND AVAILABILITY

AERCO MEMORY BOARD UPGRADES

ABSOLUTELY THE EASIEST INSTALLATION - UNPOPULATED BOARD - \$139.95
* 1/2 MEG RAM - \$80.00 * 2MEG RAM - \$240.00 * 4MEG RAM - \$480.00

COMPLETE LINE OF MIDI PRODUCTS

AUTHORIZED ATARI SERVICE CENTER

LET US REPAIR YOUR EQUIPMENT - 5 DAY REPAIR OR THE SHIPPING IS FREE - \$CALL

MANY OTHER ITEMS IN STOCK - IF YOU DON'T SEE WHAT YOU WANT CALL FOR LOW, LOW PRICES

RIO / DATTEL

3430 E. TROPICANA AVE. #67
LAS VEGAS, NV 89121

*Add \$4.00 shipping/handling in the continental U.S.; \$7.00 - PR, AK, HI, FPO, APO; \$10.00-Canada/Mex; C.O.D. orders add \$3.00 to above charges. SPECIFY COMPUTER MODEL WITH ORDER. VISA/MC/Checks/Money Orders/C.O.D. Accepted; Please call for return authorization number - returns subject to a 20% restocking fee; We reserve the right to substitute products of different appearance but equal quality and function for items pictured above; Prices subject to change without notice.

800-782-9110

702-454-7700
IN NEVADA



TIGER cub®

for Atari ST

"TIGER Cub blows away all competition in its class."

*Jim Pierson-Perry
Electronic Musician*

- ✓ Realtime Recording
- ✓ Graphic Editing
- ✓ Quick Scoring
- ✓ Fully Interactive
- ✓ Conductor Track
- ✓ One Step Editing
- ✓ Object Oriented
- ✓ Loop Recording
- ✓ Step Time Recorder
- ✓ Smart Instrument Setups
- ✓ 384 PPQ Resolution
- ✓ Real Time Mute, Solo, and Group
- ✓ Supports Atari Internal Sounds
- ✓ And It's FUN™



Dr. T's

220 Boylston St.
Chestnut Hill, MA
02167
(617) 244-6954

Enter the Editor from the title page by pressing [Return].

You begin with a blank screen, upon which you can create a new maze. To modify an existing maze, press [F1]. Again, a box appears and you use the left and right arrow keys to cycle through the available mazes. Press [Return] when the number of the maze you want shows in the box. The [Escape] key aborts this operation.

Edit a maze with the mouse.

When you enter the Editor, the blank tile is selected. Press the right mouse button to switch to select mode, then move the mouse until the white box highlights one of the tiles at the top of the screen. Press the left mouse button to make it the current selection and return to edit mode.

In edit mode, use the mouse to move the small white box around the screen. Press the left mouse button to place the current tile at the location of the mouse.

When you finish editing, [F2] saves the maze to disk. You can overwrite a current maze, or press the right arrow key until it reaches the end of the list, then press [Return]. The new maze will be added to the end of the sequence on disk.

A Job Well Done

"Look, the radiation's dropping already. He'll have the whole test site cleaned up by afternoon."

"Good job. So far. And stop grinning. Look, the scanners show another bug coming up. Where is he now?"

"He? You called him a he!"

"Well I... uh...OK! OK! He! It's a he! ■"

Greg "Maddog" Knauss has been programming Atari's since he got his first 400 in 1982, despite the fact that several organizations exist to try to make him stop. He promises to visit START when he's next in San Francisco. We're anxious to examine him.

BUGS

continued from page 51

current level times two, plus one. On level one, for instance, you get three points; on level five, you get eleven. When you eat a bug, you get the level times five. When you complete a level, you get a 50-point bonus for each life you have left.

You must clear all the pellets from the maze and return to the surface in

order to proceed to the next level and a new maze. The bugs speed up every three levels and the time they are stunned by the big pellets decreases with each new level.

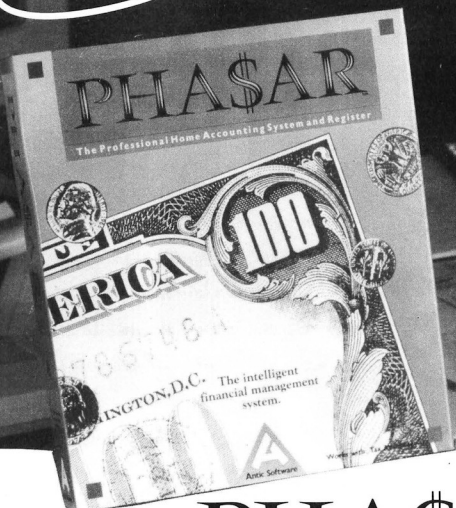
You have three chances to clear each level. If you're successful, you're given three new lives.

Edwin's Editor

The Editor lets you modify the original mazes or create your own.

New!
Version 4.0

YOUR FINANCIAL SOLUTION!



PHASAR

Take Control of Your Financial Future!

Introducing PHASAR 4.0; a completely redesigned and improved version of the home accounting program that reviewers and users have consistently found to be the easiest to use and most powerful money manager available.

NEW FEATURES

- 999 expense/income categories
- 500 accounts (VISA/checking etc.)
- Up to 1500 transactions per month
- Set up and analyze finances quickly with new budgeting system
- Artificial intelligence parser predicts input, minimizes typing.
- Improved interface with multiple scrolling windows
- Print checks the way you want
- Never miss a payment with automatic payment reminder alarm
- Get the job done fast—Completely re-coded for increased transaction and processing speed

PHASAR 4.0 gives you the tools you need to plan and track your finances to ensure that you get the most benefit from your hard-earned income.

PHASAR 4.0 helps with your taxes too: shows your tax liability at any time and takes the hassle out of preparing your tax return at year-end.

PHASAR 4.0 even has a built-in date and time organizer to help you keep track of critical events and dates.

TRANSACTIONS

- PHASAR's new and improved interface gives you complete mouse control of financial operations. Easily step through account and ledger windows to complete your transactions with a click of the mouse. Plus.....**
- Create up to 200 common payees for repetitive entries
 - Automatically transfer funds between accounts
 - Split - category transactions
 - On-line calculator
 - Instant context-sensitive help

Additional features include REPORT, ANALYSIS and TAX modules.

PHASAR 3.0 Owners: Upgrade to 4.0 for only \$39.95
direct through Antic Software

Amiga®, Atari ST® or IBM version \$89⁹⁵

Amiga and Atari ST version requires 1 meg of memory, and double sided drives.

Available at your favorite store or order Toll Free by phone: (800) 234-7001

YES! Rush My Order #. S. R. P. !

NAME

ADDRESS

CITY STATE/COUNTRY

ZIP CODE PHONE NO.

QUANTITY	ITEM NO.	DESCRIPTION	PRICE	TOTAL

Price and availability subject to change without notice.

Method of payment:

Check/Money order

MasterCard

VISA

California residents add 6.75 sales tax

Total



Credit Card No.

Expiration Date

Name

Signature

Send to: Antic Software, 544 Second Street, San Francisco Ca. 94107

Antic Software and Antic are trademarks of Antic Publishing, Inc.
Amiga is a registered trademark of Commodore Amiga, Inc. Atari ST is a registered trademark of Atari Corp. © Copyright 1987 Maksimov Technology, Inc.



BY A. BAGGETTA

Fun Pages

Do your little darlings turn into monsters when bored? Tame the wild beasts with Fun Pages, favorite puzzles that will take their minds off mischief.

Fun Pages was inspired by one of my favorite breakfast restaurants. While waiting for hotcakes one morning, the waitress brought my children placemats that had an assortment of little games printed upon them.

What a great idea! These placemats could keep the kids enter-

AT A GLANCE

Program:	Fun Pages
Type:	Kids' game generator
Requirements:	512K, low rez
Arcfile:	PAGES.PRG
Files:	FUNPAGES.LST FUNPAGES.PRG FUNPAGES.P11
Language:	GFA BASIC 3.0



Instant Amusement For Your Kids

tained when we had to wait at other restaurants, went on long car trips, or were delayed on shopping expeditions.

When I got home, I experimented with my Atari and Gemini printer, trying to produce sheets similar to the ones I had seen. After several hours scribbling on graph paper, I wrote Fun Pages.

Up and Funning

To use Fun Pages, double-click on the archive file PAGES.PRG and choose Extract when the dialog box appears. Select a destination disk and the files will be un-ARcEd directly onto that disk. To start the program, switch to low resolution and make sure that FUNPAGES.PII is in the same folder as FUNPAGES.PRG, then double-click on FUNPAGES.PRG.

Each Fun Page has four games, two of which always are TIC TAC TOE and Secret Word (the secret is its scrambled). The remaining two are chosen from the following list.

1) Faces: Doodle features on preprinted heads. Six are chosen from the program's repertoire of 10.

2) House: Design your own house by drawing the windows and doors.

3) Igloo: Similar to House.

4) TeePee: Similar to House.

5) Guess How Many Circles: Try to figure out the number circles that were printed. The capital letter next to the puzzle gives the answer. A equals one circle, E equals five circles, Z equals 26 circles, and so on.



6) Connect the Dots Game: A symmetric grid of dots is printed. Two people alternately connect the dots by drawing a line between adjacent pairs. When a person completes a square, it is theirs. The one with the most squares wins.

Pick and Choose

After the title screen is displayed for a few seconds, you will see the Fun Pages Construction Menu. Using the mouse, choose the first puzzle you want printed, or click on Computer Random

Choices, which lets the computer pick. If you didn't opt for Random, a second menu appears. Choose your second puzzle.

Your Fun Page will be printed automatically. You may abort printing at any time by pressing [AL-

ternate] and [Help] simultaneously. Otherwise, when the page is done, you will be given the opportunity to construct another.

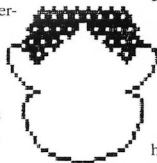
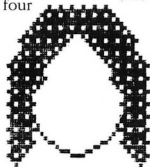
Setting Up the Printer

The programs expects your printer to be set for 960 pixels per line. To set it, or check it, install the Control Panel accessory which came with your ST. (Put the program CONTROL.ACC in the root directory of your boot disk.) At the Desktop, activate the drop-down menu under Desk. Choose Control Panel.

The Control Panel will appear in the middle of your screen. Click on Install Printer in the lower right hand corner. A list of printer options appears. One is labeled Pixels/Line. Make sure 960 is highlighted. Click on OK, then on the close box of the control panel.

If you want the printer automatically set to 960 pixels per line every time you boot, save the Desktop. Otherwise, always check your printer's options before using Fun Pages. ■

A. Baggetta has contributed to both Antic and START magazines. He wrote Santa BBS for the December 1988 issue of START.



ATARIWRITER 80 ATARI XEP 80

• 80 COLUMN EDITING
• EDITABLE PRINTER DRIVER
• 30,000 WORD DICTIONARY
• MAIL MERGE
• ON 5 1/4 DISKETTE

\$49

• CONNECTS TO ANY COMPOSITE MONITOR
• 80 COL. DISPLAY
• PRINTER INTERFACE

\$79

The Bookkeeper w/ Keypad

• Financial Reports
• Profit/Loss Statement
• Accounts Payable
• Accounts Receivable
• And Many other Features!

\$14.95



1020 COLOR PRINTER PLOTTER
\$14.95

COMPLETE WITH:
• 2 PEN SETS
• 1 ROLL PAPER
• POWER SUPPLY & CABLE

EXTRA PEN SETS
COLOR \$3.98 BLACK \$8.99

1025 DOT MATRIX PRINTER
\$69

RECONDITIONED

800 COMPUTER 48K MEMORY
\$49

RECONDITIONED

HARDWARE & ACCESSORIES

JOYSTICK EXT. CABLES 10' \$2.95
MONITOR CABLE (GOLD PLT) \$4.95
BEST JOYSTICK \$4.95
WICO COMMAND JOYSTICK \$19.95
WICO THE BOSS JOYSTICK \$19.95
ATARI TRACKBALLS \$9.95
ATARI SX212 MODEM \$79.95
De Re ATARI BOOK \$7.95
DOS 2.5 W/ MANUAL \$4.95
600XL (NO Transformer) \$19.95
400,800,850,1200XL Transformer \$14.95
XL/XE Transformer \$24.95

DISK DRIVES FOR

Includes FREE Mission Asteroids

800/XL/XE

ATARI 810* SSSD \$129.00
ATARI 1050* SSSD \$179.00
ATARI XF551 DSDD \$199.00
* RECONDITIONED

COMPLETE WITH:
• POWER SUPPLY
• JO CABLE
• DOS W/ MANUAL

THE BEST LIGHT GUN

FOR YOUR 800/XL/XE
\$35 OR THE PACKAGE
LIGHT GUN CRIME BUSTERS CROSSBOW BARNYARD BLASTER

Best Joystick

\$4.95



CARTRIDGES FOR THE 800/XL/XE

BASIC CARTRIDGE \$4.95	DEFENDER \$4.95	DONKEY KONG JR \$19.95	ARCHON \$19.95
BASIC TUTOR (2 BOOKS) \$4.95	FACE MAKER \$4.95	JUNGLE HUNT \$19.95	KARATEKA \$19.95
QIX \$4.95	MATH ENCOUNTER \$4.95	MOON PATROL \$19.95	CHOPLIFTER \$19.95
PAC-MAN (no box) \$4.95	DANCE FANTASY \$8.95	BATTLEZONE \$19.95	CHOPPER \$24.95
DONKEY KONG (no box) \$4.95	LOGIC LEVELS \$8.95	FOOD FIGHT \$19.95	ACE OF ACES \$24.95
ET (no box) \$4.95	MEMORY MANOR \$8.95	HARDBALL \$19.95	LODE RUNNER \$24.95
MISSILE \$4.95	LINKING LOGIC \$8.95	FIGHT NIGHT \$19.95	BARNYARD \$24.95
COMMAND (no box) \$4.95	DELTA DRAWING \$8.95	ONE ON ONE \$19.95	BLASTER (LG) \$24.95
GOLF (400,800) \$4.95	DIG DIG \$14.95	BASKETBALL \$19.95	DARK CHAMBERS \$29.95
CHICKEN \$4.95	MILLIPEDE \$14.95	DESERT FALCON \$19.95	AIRBALL \$29.95
SLIME (400,800) \$4.95	SKY WRITER \$14.95	NECROMANCER \$19.95	SUMMER GAMES \$29.95
CLAIM JUMPER \$4.95	FOOTBALL \$14.95	RESCUE ON FRACTALUS \$19.95	CROSSBOW (LG) \$29.95
DELUXE INVADERS \$4.95	ROBOTRON \$19.95	BALLBLAZER \$19.95	EAGLES NEST \$29.95
JOURNEY TO THE PLANETS \$4.95	TENNIS \$19.95	BLUE MAX \$19.95	CRIME BUSTERS (LG) \$29.95
STAR RAIDERS \$4.95	FINAL LEGACY \$19.95	STAR RAIDERS II \$19.95	MICROFLIER (database) \$39.95
	MARIO BROS (XL/XE) \$19.95	DAVID'S MIDNIGHT MAGIC \$19.95	

DISK SOFTWARE FOR THE 800/XL/XE

DAVID'S MIDNIGHT MAGIC \$4.95	NATO COMMANDER \$4.95	HULK \$4.95	SILICON DREAMS(1050) \$9.95
SPIESMAN \$4.95	CROSSCHECK \$4.95	ALIEN AMBUSH \$4.95	JEWELS OF DARKNESS(1050) \$9.95
CRYSTAL RAIDERS \$4.95	MISSION ASTEROID \$4.95	DROZZONE \$4.95	SILENT SERVICE \$9.95
REPTON \$4.95	PREPPE I \$4.95	JAWBREAKER \$7.95	DISPATCH RIDER \$9.95
BANDITS (48K 400,800) \$4.95	THE COUNT \$4.95	SUMMER GAMES \$7.95	SILICON DREAMS \$9.95
CLAIM JUMPER \$4.95	ADVENTURELAND \$4.95	HEY DIDDLE DIDDLE \$9.95	F-15 STRIKE EAGLE \$9.95
DECISION IN THE DESERT \$4.95	SECRET MISSION \$4.95	SOLAR STAR \$9.95	THE NEWSROOM(1050-64K) \$15.00
CRUSADE IN EUROPE \$4.95	VOODOO CASTLE \$4.95	SPY VS SPY \$9.95	BOOKKEEPER
KENNEDY APPROACH \$4.95	STRANGE ODYSSEY \$4.95	TOP GUNNER COLLECTION (3 GAMES) \$9.95	
CONFLICT IN VIETNAM \$4.95	REPTON \$4.95		

The Atari Portfolio



Built In: Lotus Comp. Spread Sheet, Appointment Calendar w/Alarms, Text Processor, Database w/Dialer, Calculator, IBM Dos Compatible!

The Size of a Video Cassette **Only \$347**

Also Available
Printer/Xfer Interface \$49.95
Serial Interface \$79.95
RAMCard 32K \$79.95
RAMCard 64K \$99.95
RAMCard 128K \$199.95

An Educational Deal

CBS Linear Equations

CBS Fractions: X +

Math Encounter

\$4.95
each

NUMERIC KEYPAD \$9.95
W/Software



The Newsroom

Design, create and print your own newspapers!

\$15

Atari 800XL, XE Software Only
Requires Atari 1050 or Compatible
and Graphic Printer
May be used with most pc/gd
hardware except Atari 800



FLAT RATE \$5.00 SHIPPING

C.O.D.'s are \$10.00

ON ALL GROUND ORDERS IN THE
CONTINENTAL U.S. **



BLANK DISK SPECIAL

3.5 BULK PACKS WITH LABELS

1 - \$99 25 - \$24.75 1000 - \$750.00

MEMORY UPGRADES

Z-Ram 3-D	2/4Meg	\$149.95
NEW WORLD UPGRADE	2/4Meg	\$139.95
ARCO BOARD	1/2/4Meg	\$169.95
JRI SIMM Upgrade	1/2/4Meg	\$139.95

ATARI 1040ST & Software Deal



1040SIFM & Software \$699
Mega 2 ST & Software \$1199
Mega 4 ST & Software \$1699

Included With Every ST Purchase!

Art & Film Director, Sub Battle, Death Sword, Battle Ship, Champ. Wrestling, Dive Bomber, Final Assault, Metrocross, World Games, Impossible Mission, Jinxter, Tower Toppler, Golden Path*, Sentry, Starglider, Tracker*, The Pawn, Advanced Art Studio, Guild of Thieves, Knight Orc

PCBoard Designer \$49

Reg. \$199.95

HARDWARE ITEMS

JRI GENLOCK SYSTEM	\$650
ST/IME MODULE	
Battery Backed up Clock	\$59
Migraph Hand Scanner	\$499
R/C Aerochopper Simulator	\$199
Turbo16 by Fast Technology	\$299
Moniterm Monitor 19" Display	\$2099
Cordless Mouse	\$129

FAX US YOUR ORDER! FOR FASTER SERVICE PLEASE INCLUDE:

- * NAME
 - * BILL TO ADDRESS
 - * SHIP TO ADDRESS
 - * PHONE #
 - * ITEMS YOU WISH TO PURCHASE
- VISA / MASTERCARD
ORDERS ONLY
- CARD ADDRESS MUST MATCH
BILL TO ADDRESS

(408) 224-8574

EPYX Spectacular!

Champion Wrestling	9.95	Space Station	
Final Assault	9.95	Oblivion	19.95
BattleShip	9.95	World Games	19.95
Sub Battle	14.95	Karate	19.95
Tower Toppler	14.95	California Games	19.95
Winter Games	19.95	The Games (Winter)	19.95
Death Sword	19.95	Boulder Dash	19.95
Mission Impossible	19.95	Dive Bomber	19.95
Age of Rage	19.95	Metrocross	19.95
Devon Aire	19.95	Techno-Cop	19.95
		Art Film Director	19.95

Retail Price \$30 to \$100

Buy All 20 Epyx Titles For A Super Deal of \$199.95

THE BEST MOUSE



REPLACEMENT MOUSE FOR THE ST!

\$49

RAINBIRD TITLES ST

Golden Path*	99c
Knight Orc	\$9.95
Tracker*	\$1.95
Advanced Art Studio	\$9.95
Guild of Thieves	\$9.95
The Pawn	\$9.95
Jinxter	\$9.95
Sentry	\$9.95
StarGlider	\$9.95
Universal Military Simulator	\$14.95
Carrier Command	\$19.95
ALL ITEMS REG. \$39.95 - \$49.95	

SPECIAL SOFTWARE SALE ST

HIT DISK (4 games)	Reg. \$59.95	NOW! \$19.95
GOLDENRUNNER II	Reg. \$39.95	NOW! \$19.95
INDUSKEN	Reg. \$29.95	NOW! \$19.95
SOCCER	Reg. \$39.95	NOW! \$14.95
ZERO GRAVITY	Reg. \$29.95	NOW! \$14.95
TETRA QUEST	Reg. \$29.95	NOW! \$14.95
PRINT PRO	Reg. \$49.95	NOW! \$19.95
DADA RETRIEVE	Reg. \$49.95	NOW! \$19.95

EMULATORS FOR YOUR ST

PC DITTO II	\$Call
PC SPEED	\$399
MAGIC SAC PLUS w/Roms	\$79.95
SPECTRE 128	\$169.95
SPECTRE GCR	\$299.95
MAC ROMS 64K	\$19.95
MAC ROMS 128K	\$149.95

SAN JOSE COMPUTER

T H E A T A R I S T O R E

640 BLOSSOM HILL RD. SAN JOSE, CA 95123
STORE (408) 224-8575 • FAX (408) 224-8574

** SHIPPING: ADD \$5.00 FOR PREPAID ORDERS, OR \$10.00 FOR COD ORDERS. AIR AND INTERNATIONAL SHIPPING EXTRA. NO COD FOR INTERNATIONAL ORDERS, THAT'S IT.

PREPAYMENT USE VISA, MASTERCARD, MONEY ORDER, CASHIER'S CHECK OR PERSONAL CHECK. PERSONAL CHECK MUST CLEAR PRIOR TO SHIPMENT. C.O.D.: CASH, CASHIER'S CHECK OR M.O. ONLY. WARRANTY: 90 DAY WARRANTY ON ALL ITEMS. TAX: CALIFORNIA RESIDENTS ADD 7% SALES TAX.

Prices subject to change without notice.

Brand and/or product names are trademarks or registered trademarks of their respective holders.

Ad produced on an ATARI ST using CALAMUS and printed on an ATARI SLMB04 PostScript compatible laser printer.

The ST/MIDI Connection

REFLECTIONS

BY JIM PIERSON-PERRY

I'm writing this column during the February doldrums — just after the winter NAMM show and prior to a major international music trade show in Germany this March. With new software/hardware products and true multitasking environment coming quickly toward us, it seems appropriate for a quick retrospective of last year's hopes and realities, as well as our usual potpourri of new releases and notes.

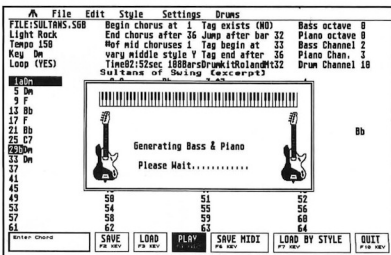
Progress and Promise

This installment marks the twelfth appearance of the "ST/MIDI Connection," an anniversary of sorts. Back in the January 1989 issue, I fantasized about software applications that I would like to see explored. The categories were: scoring music to video (hit list management), sample resynthesis, new forms of algorithmic composing (especially for real-time interaction/improvisation), intelligent scoring, drum machine programming and a standard multitasking environment.

How have we done since then? Not too badly. **Hitman** and **Hitlist** are software solutions for scoring to video, while more advanced users have the **ADAP II** digital sound workstation. The Avalon sample editor includes a fair start at frequency domain sample editing and

resynthesis. **MIDI Drummer II**, as well as numerous sequencers, provides convenient drum-machine programming solutions. Finally, after several developers created their own

across all product applications. While MIDI-to-MIDI communication is paramount, there is no reason why not to be running a sequencer along with a word processor while being



Sample composition screen from Band In A Box, the new algorithmic composition program to create piano, bass and drum accompaniment parts for songs.

versions, Atari has selected the **MIDI-Tasking** multi-application manager from Intelligent Music as their standard. Some new algorithmic composing efforts have come out while new ones lurk in the wings — call this one a draw on prediction. The only clear miss was scoring, where the year saw little activity (particularly relative to exciting new Macintosh software).

OK, bucko, what's next? Here is my condensed wish list for the coming months. First, Atari must work diligently to integrate its newly sanctioned multitasking environment with major software developers

on-line to a BBS. Developers, on the other hand, need to move away from the "Total Workstation" program concept and use smaller, robust modules for individual needs. Massive efforts combining patch editors, scoring, sequencing, etc. into one program are simply too unwieldy. Rather than do a single task well, many are done with numerous compromises. This is where multitasking is vital for interprogram communication. Users benefit from faster learning curves, less resource requirements (only use the parts you need) and easy customization of software systems.

MIDI-controlled mixing applications are a fast growing interest.

General application areas that need a boost are home music education (theory, performance, critical listening, etc.) and sample editing. The latter will require some form of hardware assist, such as in the new Sound Tools package, for speed and audio quality. A potential sleeper is the canned sequence market, should average home owners begin to discover low cost synth modules as the "next" piece of a stereo system. These sequence libraries (already being marketed by Passport Design and others) are also a Godsend to musicians on gigs without the time to craft their own.

My last bet is that MIDI data-

selection menu that determines which algorithms will be applied. These range from polka, through country to hard rock — 14 choices in all. Band In A Box plays the accompanying parts through MIDI while you jam along and saves its parts in MIDI file format 1 to import into a sequencer program for later tweaking. The quality of the accompaniments is quite good. Fifty song files of all styles are included with the program; an additional 250 song files are available on a MIDI Fake Book. Plans for a future upgrade are to add additional voices for horns and strings.

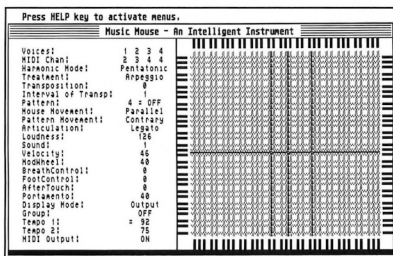
A different beast altogether is Scorpion Systems' **sYbil**, a real-time

(format 0) and accompanies them with expressive graphics displays. Ten styles of graphics are provided including swirling lines, spirals, kaleidoscope, inkspots and more. Not only does it play MIDI files, you can play into it from a MIDI keyboard or even use the ST keyboard (and save your work into a MIDI file). Don't have a MIDI synth? No problem, Music Lights also works fine just by playing the ST internal speaker — particularly good for demoing the ST sound/graphic abilities. Also announced was **Rhythm Time**, the fourth title in MIDImouse's educational software series.

MIDI-controlled mixing applications are a fast growing interest. Two new releases hit the opposite poles of the user audience: home hobbyist or semi-pro and high-end pro studio. At the introductory level (really the price only — its capabilities go well into the pro level) is the **Audio Control Module** from Steinberg/Jones. This eight-channel mixer sports eight ins, eight outs and a stereo mix with full MIDI control of the faders. It is similar to VCA-controlled mixers but uses a different technology and is reported to be very clean and quiet. Each mixer channel is governed by a real-time MIDI controller message on a specific channel. Taken to the limit, you could gang 16 modules together for a total of 128 mixing channels!

At the high end is the VCA-based **MAGI II** (Mixer Automation Gain Interface), giving SMPTE-locked fader mixing and mute automation for up to 64 faders. Two versions are available: the basic MAGI II (remote unit that connects into your existing console board audio path) and MAGI III (a retrofit for existing mixing consoles). Integral to the systems is controlling software (Atari and Mac versions) that provide graphic mix

Playing screen for MIDI Mouse, the software performance instrument by Laurie Spiegel.



processing programs will become far more valuable as musicians learn how to use them. These programs are the offspring of the computer/MIDI union; new software instruments with capabilities that can't be duplicated by unaugmented human musicians.

New Releases

One of the neatest programs I've seen in a long time is **Band In A Box**, released for the Atari and IBM by PG Music. You type in the chords to a song and the program uses algorithmic composing to derive accompanying piano, bass and drum parts. The fun comes in with a style-

MIDI data processor along the lines of MidiMax and Ultra MIDI. You can use it to control multiple synths or other devices from a single controller, with each responding in a different fashion as you play. Keyboard splits, layers and zoning are snaps to set up and change between notes. Even the ST keyboard can be used as a controller — playing MIDI music and effects by touch typing. To get a better idea of sYbil's potential, you can call a demo hot line at (313) 827-1444.

MIDImouse has released **Music Lights**, an interactive computer graphics link to your home MIDI system. It plays standard MIDI files

displays, cue list editing and MIDI event generation.

Of course, what month would be complete without new patch editors? This time it's Big Noise Software with selections for the new Korg M3r and T-123 series. These are the first dedicated patch editors for these synths in the Atari market.

Updates

C-Lab is now shipping version 2.2 of its **Creator/Notator** sequencers through U.S. distributor Digidesign. A major new feature is the incorporation of **Soft Link Level 2**, the C-Lab version of a multi-application manager, allowing up to eight other Atari applications to run simultaneously with Creator/Notator (memory permitting). An additional new feature lets you automatically load/play a song at a preprogrammed time and apply the velocity dynamics of one track to another.

Master Tracks Pro version 3.5 is available from Passport Design. This version fixes a TOS 1.4 incompatibility with certain mouse double-click actions and is — deep breath now — not copy protected. Thank you Passport for your vote of confidence!

On the patch editor side, Dr. T has released version 1.1 of **X-OR**, the first generic patch editor program for the Atari. You can now dump entire patch banks into a patch library, rather than enter them one at a time. Support for multi-timbral synths is greatly improved with automatic tracking of MIDI channel, etc. **E-OR**, the development program to create new instrument profiles now comes with X-OR. Currently, profiles exist for over 50 instruments — most providing full patch/performance editor support.

Staccato Notes

Good news for those of you with the Atari SLM804 laser printer. The **Laser Brain Epsom emulator** (available on both GENie and CompuServe) has

been released into the public domain by Atari. This works well with scoring programs such as EZ-Score Plus from Hybrid Arts to get output from the laser. Resolution is not 300 dpi but is considerably crisper. And, of course, it's faster than going through a dot-matrix ribbon printer.

Anyone with an interest in learning how to program synth patches should make a point to follow Lorenz Rychner's continuing series in *Music Technology* magazine. Synths described in past issues include the DX7, TX81Z, D110, M1, K1 and K4. Another continuing column (on a more sporadic basis) in the same mag is on advanced sampling techniques by guru Chris Meyer. Both are full of information and do-it-yourself exercises.

Dr. T has picked up distribution of Laurie Spiegel's **Music Mouse** program (formerly handled through Aesthetic Engineering). This is an algorithmic composition program, particularly well suited for live performance.

From the Roundtable

There are a few new additions worth mentioning in the MIDI Roundtable library of the GENie BBS. First is

SEQUENCR (library program #1045), a full-fledged 16-track sequencer put into the public domain. This program runs on all ST/Mega models in either medium or high resolution. I found only one problem — it looks for its resource file (SEQUENCR.RSC) only in drive A. If not found, the program bombs. Just be sure to keep a copy of the file on a floppy in Drive A and all will be well.

Confused about generic patch editor claims? Try them for yourself with the demo versions of **X-OR** (#805) and **GenEdit** (#988, #989). Another demo worth evaluating is **BOSSDEMO** (#963, #964), a trial version of the MIDI BOSS system control and real-time mapping program from Johnsware (who also maintains Category 22 in the MIDI Roundtable Message Board, should you have questions).

Finally, those of you with the popular D110 multi-timbral synth may appreciate the **XPATD110 patch file conversion program** (#984). It accepts patch files in Dr. T, MIDI-Mouse, Omnibanker, GenPatch and MIDIEX formats and can translate them into Dr. T, MIDIMouse and MIDIEX formats. ■

PRODUCTS MENTIONED

M3r Patch Editor, \$119.95. **T-123 Patch Editor**, \$119.95. Big Noise Software, Inc., P. O. Box 23740, Jacksonville, FL 32241, 904/730-0754.

MIDI-Max, \$49.95. Codehead Software, P. O. Box 74090, Los Angeles, CA 90004, 213/386-5735.

C-Lab Creator, \$349. **C-Lab Notator**, \$649. **Sound Tools**, \$2,995. Digidesign, 1360 Willow Run, Suite 101, Menlo Park, CA 94025, 415/327-8811.

Hitman, \$99. **Music Mouse**, \$79.95. **X-OR**, \$299. Dr. T's Music Software, 220 Baylston Street, Suite 306, Chestnut Hill, MA 02167, 617/244-6954.

ADAP II, call for price. **EZ-Score Plus**, \$149.95. GenEdit, \$249. Hybrid Arts, Inc., 8522 National Blvd., Culver City, CA 90023, 213/841-0340.

MAGI II, call for price. J. L. Cooper, 1931 Pontius Avenue, West Los Angeles, CA 90025, 213/473-8771.

Music Lights, \$49.95. Rhythm Time \$69.95. Ultra MIDI, \$229.95. Midimouse Music, Box 272-A, Rhoadsdendron, OR 97049, 503/622-4034.

Hirilist, \$199.95. **MIDI Drummer II**, \$90. MusicSoft, 30 North Raymond, Suite 505, Pasadena, CA 91103, 818/449-8838.

Master Tracks Pro, \$395. **Upgrade to version 3.5**, \$10 with old master disk. Passport Designs, Inc., 625 Miramontes Street, Half Moon Bay, CA 94019, 415/726-0280.

Band In A Box, \$59. **MIDI Fake Book**, \$29. PG Music, 266 Elmwood Avenue, Suite 111, Buffalo, NY 14222, 416/528-2368.

sYbil, \$299. Scorpion Systems Group, 836 Page, San Francisco, CA 94117, 415/864-2956.

Audio Control Module, \$479. **Avalon**, \$349. Steinberg/Jones, 17700 Roymer Street, Suite 1001, Northridge, CA 91325, 818/993-4091.

WORDFLAIR

One Package, Five Programs

BY DAN FRUCHEY

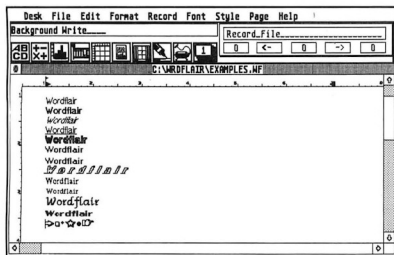
What if I offer you a unique new product that can process text, mathematical formulas and database information all at once? Interested? What if that same program also correlates the data and generates graphs and charts that express the results? Intrigued?

I'll add multiple fonts, graphics importing and options to create lines and boxes in a variety of styles. I'll throw in the most commonly re-

quired database/spreadsheet/graph generator/desktop publishing program from Goldleaf Publishing, Inc. (formerly Blue Chip International). It's one of the products I've been waiting for since the day my computer arrived. And it's almost worth the wait.

Up and Running

Wordflair runs in medium or high resolution on any ST or Mega with 1MB of RAM and a double-sided disk drive. Printing on a 24-pin or laser printer requires a second disk drive



quested desktop publishing functions, processing speeds that equal or exceed other word processors and outstanding print quality. Sounds too good to be true, doesn't it?

Let me introduce you to Wordflair, the unique new word processor/

and the manufacturer recommends a hard disk and monochrome monitor.

The 223-page manual is clearly written and easy to read. Hints, tutorials and helpful ideas abound in a format that won't strain your eyes or comprehension. Sample documents

AT A GLANCE

Program:	Wordflair
Type:	Document processor
Company:	Goldleaf Publishing, Inc. 7700 Larkspur Landing Circle, Suite 199 Larkspur, CA 94939 415/381-7717
Price:	\$99.95
Requirements:	ST with at least 1MB of RAM Double-sided disk drive

and page templates are on disk.

Wordflair uses GDOS fonts and drivers to produce high quality screen and printer output. Since each monitor and printer requires a different configuration, you need to customize a working disk. The one-time installation procedure takes approximately 10-15 minutes.

As a bonus, the disk includes a customized version of Codehead Software's G+Plus, a GDOS substitute that's faster and less error prone.

Word Processing

Wordflair acts primarily as a word processor with desktop publishing capabilities. It has all the standard word-processing options: search and replace, block copy, cut and paste, headers and footers, page number placement, adjustable margins, ▶

format rulers and predefined U.S. and European page sizes. You can type in your documents directly or load imported ASCII files.

The latest version of Wordflair does not include a spell checker or thesaurus, but commercial products that are currently available work well with the program. Goldleaf plans to publish a set of their own and offer them at a substantial discount to registered owners.

Desktop Publishing

Wordflair performs many basic publishing functions. You can create multicolumn page layouts, define automatic paragraph indentation, frame regions with round- or square-cornered boxes of variable thickness and create freely adjustable columns and grids.

Graphics can be imported in metafile (.GEM) and image (.IMG) formats. You can move, stretch, align, group and copy graphics at any time. A snap option and a handy T-bar alignment tool are always available to aid in placement of graphics or regions.

Wordflair's five functions work together.

Database

The database accepts user defined parameters. Data field length is freely adjustable. Mail merge is easy. The data can be printed or used with the graph and calc functions.

Calc

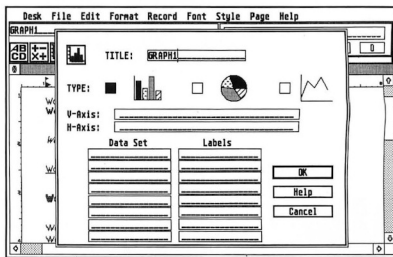
Calc functions retrieve information from the database, perform computations, then send the results to be used in graphs or for further calculations. You can create simple spreadsheets, prepare income reports and more. Many formulas are predefined, including those for averaging, exponentiation, rounding, square root and standard

deviation. All you need to do is select a formula and plug in the numbers.

Graph

Wordflair creates bar, pie and line graphs. It uses data entered through the graph function, or imported from the database and/or calc functions.

Wordflair processes more than words. The integrated package includes a database, calculator and a graphing function (shown here). An upgrade, due out soon, will include a thesaurus and spell checker.



Up to eight different pieces of data are displayed at once. Horizontal and vertical axis titles can be changed at will and explanatory display labels are allowed on each piece of data used.

Wordflair will automatically assign grey scales to differentiate pieces of data, and generate a legend.

room to save your document before the session ends. Some programs simply lock up or bomb when this happens; Wordflair provides a safer alternative.

The Ultimate Program?

Wordflair delivers what it promises,

but it's not the ultimate program. If you need a word processor, you'll be extremely pleased with Wordflair. It's fast, flexible and easy to use. But in desktop publishing, data processing, graphs and spreadsheets, its abilities are limited.

Wordflair meets my math needs quite handily, but I would never recommend it for corporate finances. It's fantastic for creating simple newsletters, but a publisher would be dismayed by its limited layout capabilities.

Wordflair is ideal for the small business or individual who needs the abilities of several products and doesn't want to spend the time and money buying and learning multiple programs.

Yes, there are products that perform individual functions equally well or better. Wordflair's strength is that its functions work together, in one program, instead of five. ■

Dan Frucbey is a paramedic and clip-art entrepreneur who lives in Santa Rosa, Calif. He wrote the word processor comparison for the April 1990 issue of START.

THE CATALOG™

Quality Products You Can Trust



CYBER TEXTURE™ The Object Raster Master

by David Ramsden

Turn your DEGAS or NeoChrome pictures, or CYBER PAINT animations into CAD-3D objects with CYBER TEXTURE. Imagine a DEGAS picture pasted around a CAD-3D object—with CYBER TEXTURE, you can do it! It even includes a mobius strip! And with CYBER CONTROL, CYBER TEXTURE objects can be animated for mind-boggling $f/x!$

Requires: 1 Megabyte RAM, a color system, CYBER STUDIO, and a source of low-resolution color images compatible with DEGAS or NeoChrome (such as CYBER PAINT). CYBER CONTROL is recommended for animating objects; CYBER PAINT is recommended for animating surfaces.

STO263 \$49.95

CYBER SCULPT™ The Advanced 3D Modeling Tool™

by Tom Hudson

Create the most fantastic shapes imaginable with CYBER SCULPT—the mouse-controlled, 3D solid-object modeler featuring sophisticated tools previously found only on high-end workstations. CYBER SCULPT adds push, pull, twist, and bend tools to the basic spin and extrude features found on CYBER STUDIO. The possibilities have now become endless!

CYBER SCULPT includes cross-sectional modeling for shapes like boat and airplane hulls, or dimensional topography. Variable magnification, spline path extrude and spin are only a few of the many sophisticated options. More include: object distortion; vertex pulling; magnetic distortion; cross-sectional model creation; complex and simple extrude with end-capping; 3D mirroring; 3D primitives; and 2D/3D coordinate display.

Requires: 1 Megabyte RAM and CYBER STUDIO
STO255 \$89.95

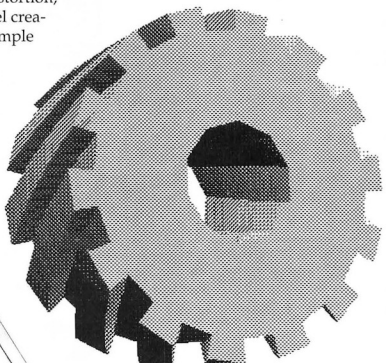
**BEST SELLING
SOFTWARE**

CYBER CONTROL™ The CAD-3D motion control language

by Tom Hudson

Create animations automatically in hours that would normally take days. Expand and enhance your ST graphics universe with this animation scripting language that locks into any CAD-3D 2.0 feature. Write your own BASIC-like programs with CYBER CONTROL™ using CAD-3D as a “graphics engine.” Just start the program and walk away—your ST and CYBER CONTROL will do all the work!

Requires: CYBER STUDIO
STO250 ~~\$59.95~~ NOW \$49.95



BOTH FOR ONLY \$119.95

ORDER NOW

TOLL-FREE
800-234-7001

MasterCard/Visa Orders Only - All 50 States





Two frames of CYBER STUDIO animation without CYBER PAINT enhancement. The same two frames are shown below them, after a CYBER PAINT touch-up.

CYBER PAINT™ 2.0

BEST SELLER

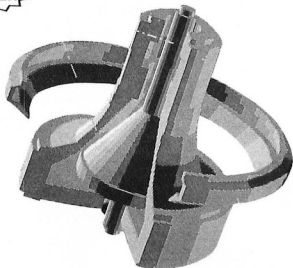
The pro animation studio

by Jim Kent

This program does it all! CYBER PAINT 2.0 is an animation system; a time-oriented paint program; a "cel" (celuloid) animation program; and a digital optical printer.

CYBER PAINT 2.0 contains all the standard paint tools—box, brush, rubber, line, fill, etc.—but adds the dimension of time animation. Images spin and glide around the screen like a magic carpet. Special features include a pixel f/x menu; palette change per frame and cut & paste color range; and an automatic traveling mask. All these features make CYBER PAINT 2.0 the fastest possible way to create professional looking animations.

Requires: 1 Megabyte RAM & Color Monitor (Upgrade from CYBER PAINT 1.0 \$25.00 plus original disk)
ST0251-\$79.95- NOW \$69.95



"Antic's CAD-3D™ is one of the best programs I've seen for the Atari ST* or anything else."

—Jerry Pournelle
BYTE MAGAZINE

BEST SELLER

CYBER STUDIO™

A two disk set featuring:

- CAD-3D 2.0 by Tom Hudson
- CYBERMATE™ by Mark Kimball

CYBER STUDIO is an intuitive 3D solid-modeling design system that has no limits. Sophisticated enough for professional artists, advertising agencies, and design firms—yet friendly enough for home and personal use. Let your creativity soar with the DEGAS®-style color design system; graphic lighting controls; enhanced spin, extrude and join tools; and GDOS output that supports laser and dot matrix printers.

CYBERMATE is a "post production" animation editing language that features sound effects; title generation and text display; sequence looping, cuts fades and dissolves; and color cycling animation.

Requires: 1 Megabyte RAM (Upgrade from CAD-3D 1.0 \$60.00 plus original disk and \$5.00 shipping and handling)
ST0236-\$89.95- NOW \$79.95

CYBER PRINT

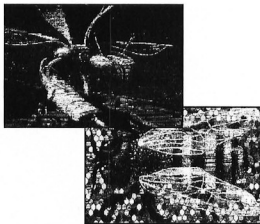
Great color prints from an affordable printer—DEGAS®, NEOchrome®, CYBER, and even SPECTRUM 512!

by Larry Bergan

At last! Color printouts of SPECTRUM 512, pictures! Fabulous, full color, accurate, detailed, beautiful pictures, all from the low-cost Okimate 20 printer.

If you need color printouts, CYBER PRINT makes the Okimate 20 the only choice. Three years of ongoing development has produced the best printing combination available for under \$5,000: CYBER PRINT, the Okimate 20, and your ST.

CYBER PRINT prints in three sizes; up to 32 pictures per page. Join individual pictures together invisibly into montages of incred-



ible detail. No matter which paint software you use, CYBER PRINT is the hardcopy solution!

Requires: 1 megabyte RAM, a color system, and an Okimate 20 printer
ST0264-\$49.95- NOW \$39.95

ORDER NOW

TOLL-FREE
800-234-7001

MasterCard/Visa Orders Only - All 50 States

SHADOW

Practical

Multitasking for your ST

by Double Click Software

SHADOW is like having two computers. It's a telecommunications program that runs in the background, freeing your ST to do other things during those long uploads and downloads.

Change programs, resolutions, use disk drives, press System Reset—SHADOW survives it all and continues your transfer, uninterrupted.

SHADOW operates as a stand-alone program complete with a VT52 terminal and background auto-dialer, or works with FLASH

"FLASH is my #1 choice on the Atari ST."

—Ron Luks, Founder of CompuServe's SIG* Atari and Atari Developers' Forum.

to provide the easiest, most powerful telecommunications environment you'll ever use.

New! Version 1.1 has many new enhancements, including a special mode so transfer buffer memory can be used and released, as needed. Ideal for computers with limited memory.

ST0259 \$29.95

FLASH™ 1.6

The most popular ST terminal program!

by Joe Chiazzese and Alan Page

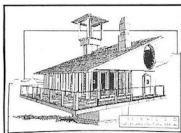
Simplify your online time and make telecommunications more enjoyable and less expensive! If you own a modem, you should be using FLASH—totally programmable plus built-in word processing; terminal emulation and bullet-proof file transfers. FLASH is packed with features including intelligent, programmable macro ("do") files; a capture buffer large enough to record an entire online session; and the capacity to support most major protocols.

ST0220 \$29.95

**BEST
SELLER**

BOTH FOR ONLY \$49.95

Complete your collection of CYBER GRAPHICS Design Disks



Architectural Design™

by Darrel Anderson

Requires: CAD-3D 1.0 or CYBER STUDIO

ST0243

INTERIOR DESIGN DISK

The All-Purpose Home Planner By David Stuart

Now that you've built your dream house with the ARCHITECTURAL DESIGN DISK, it's time to furnish it. This is an interior decorator's dream come true! Couches, drapes, sinks, refrigerators, dressers, everything can be easily customized to fit your personal needs.

Requires: CYBER STUDIO

ST0265

Create and fill your 3D graphics universe with the complete library of Antic Software's design disks. From architectural renderings to animated video cartoon characters, these disks will bring your video creations to life! All contain a potpourri of sophisticated 3D clip art and component parts. **A real bargain at \$29.95 each!**

Choose Any 3 and Pay Only \$59.95

MORE CYBER GRAPHICS DESIGN DISKS

ST0232 **Future Design™** by Darrel Anderson (c)1986
Requires: CAD-3D 1.0 or CYBER STUDIO

ST0224 **3D Fonts I™** by Tom Hudson (c) 1986
Requires: CAD-3D™ 1.0 or CYBER STUDIO™

ST0254 **3D Fonts II™** by Doug Thomas (c) 1987
Requires: CAD-3D 1.0 or CYBER STUDIO

ST0256 **Cartoon Design™** by Maurice Molyneux and Andy Eddy (c) 1987
Requires: CYBER STUDIO; CYBER CONTROL™ recommended

ST0261 **Video Editing Design™** by Maurice Molyneux and Andy Eddy (c)1987
Requires: CYBER STUDIO; CYBER CONTROL™ recommended; CYBER PAINT™ for special t/x

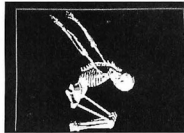
Choose Any 3 and Pay Only \$59.95

ORDER NOW

T O L L - F R E E

800-234-7001

MasterCard/Visa Orders Only - All 50 States



Human Design™

by Richard Berry

Requires: CAD-3D 1.0 or CYBER STUDIO

ST0242



THE MICROBOT DESIGN DISK™

by Darrel Anderson

Requires: CYBER STUDIO

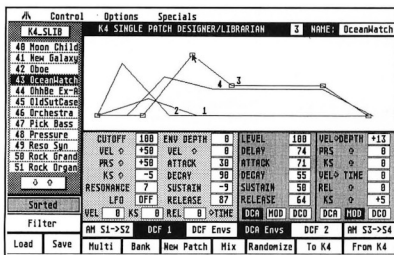
ST0262

**BEST
SELLER**

Products Update

K4 Voice Development System

The K4 Voice Development System from Musicode integrates an editor, librarian and sequencer to support all areas of the Kawai K4 synthesizer.



The K4 Voice Development System from Musicode lets ST users obtain the maximum from their Kawai K4 synthesizer. The K4 VDS integrates an editor, librarian and sequencer to support all areas of the K4 instrument.

Users may edit single- and multi-patches, and the effects, output and drum sections of the K4. The program has quick, clear displays, click-and-drag

graphic-envelope editing and provides for easy organization of your patches within libraries and banks where you may use sort, filter, copy, swap and delete functions. And the powerful sequencer is always available from any point in the program.

K4 Voice Development System, \$99. **Musicode, 5575 Baltimore Drive, Suite 105-127, La Mesa, CA 92042.**

Federation

Spotlight Software and Electronic Arts have teamed up to bring you **Federation**, a strategic space trading and combat adventure game for the ST.

Federation combines a challenging starship flight simulator with a sophisticated free-market system to create a unique blend of action and strategy. The player controls a ship equipped with a flexible flight control console, weaponry and a vital communication system. Use the ship's guidance system to dock with space stations or actually land on alien planets. Money buys power and more advanced weapons and shields, so savvy players will wheel and deal with the local populations to get the best possible price for their cargo. The player sets the goal: advance to the rank of Admiral of the Federation of Free Traders or amass the greatest fortune possible.

Federation, \$49.95. **Electronic Arts, 1810 Gateway Drive, San Mateo, CA 94404, 800/245-4525.**

Harmony

Accolade announced the release of **The Game of Harmony**, an arcade game for the new age in which players must use a combination of strategy and concentration not to annihilate objects on the screen, but to keep them from blowing up. Accompanied by randomly generated musical scores, players control a single sphere on a screen filled with constantly moving, multicolored orbs. Your task is to gather together like-colored orbs.

The Game of Harmony, \$44.95. **Accolade, 550 South Winchester Boulevard, Suite 200, San Jose, CA, 95128, 408/985-1700.**

ST SCSI Hard Disk Kits

Microvision announces ST/Mega SCSI hard disk kits. The **MV325** and the **MV650** provide 325 million bytes or 650 million bytes of disk storage. Desktop publishing, server and MIDI applications now use this much capacity.

The external chassis matches the ST/Mega style and color. The MV series drives are designed to save desk space with dimensions of 9.5 x 10 x 4.47 inches. The chassis includes a power supply, a rear-mounted micro-cooling fan, one SCSI ID and write protect. Changing the SCSI ID lets drives move easily between systems or daisy chain on a single system.

The MV325 and MV650 use Maxtor mechanisms which couple maximum reliability with ultra-fast 1-million byte/sec transfer rate and an 18ms average access time. Maxtor drives have proven their reliability in mainframe, mini-computer and server systems. The MV series drives are thoroughly tested and come preformatted so they just plug in and run.

MV325, \$1,995. MV650, \$2,995. **Microvision, 18180 Cornell Road, Suite E, Beaverton, OR 97006, 503/690-6639.**

If you have a new product for the ST, we'd like to hear from you. Please send press releases and product photos to **Products Update**, START Magazine, 544 Second Street, San Francisco, CA 94107

Latouche

Latouche, from Psychologi Logiciel, lets users design, load and save keyboard configurations from within their favorite program. It also lets users type accented characters by first typing the accent, then the desired character. All characters in the ST character

set can be used. The program can load a default keyboard at boot time and includes sample keyboards.

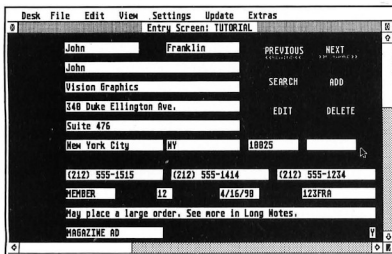
Latouche, \$14.95. **Psychologi Logiciel Software, C.P. 1522, Embrun, Ontario, K0A 1W0, 613/443-2435.**

G.I.M.E. Telecommunications

A new type of telecommunications program and a BBS, which have been in the conceptual and development stages for almost two years, are now available from Micro Creations. These unique applications — **G.I.M.E. Term** and **G.I.M.E. BBS** — boast a method of graphic image transmission that does not suffer from the long and drawn out transfer time of conventional methods such as Vid-Text graphics. Both programs have achieved an object-oriented system that is fast enough to be used routinely in daily on-line messages without becoming tiresome. Because the escape codes the system uses are VT-52 compatible (the ST's native screen protocol), the terminal will be completely compatible with ST BBSs that do not support this new extended graphic format. Sysops should be delighted to hear that the BBS is designed to take advantage of the GEM interface, making the job of running a board much less of an effort and more of a delight. Even the initial starting up of the BBS is a breeze due to the click and drag configuration program.

G.I.M.E. Term, \$30. **G.I.M.E. BBS**, \$40. **Micro Creations, 4609 Millbrook Way, Bakersfield, CA 93313, 805/397-9414.** ■

Maintaining mailing lists is easier than ever using Tracker/ST's integrated functions.



Tracker/ST

Step Ahead Software has released **Tracker/ST**, an exciting new productivity package designed specifically for the ST.

Tracker/ST is a fully GEM-based program that combines mailing list, mail merge and person-tracking features in a single integrated solution. **Tracker/ST**'s mailing list functions include multiple separate mailing lists, the ability to print labels for all names or for names that meet certain criteria, 10 preset label formats (including one for Rolodex cards), the ability to edit, add and save new label sizes and full support for label printing on the Atari laser printer.

Tracker/ST, \$79.95. **Step Ahead Software, 496A Hudson Street, Suite F39, New York, NY 10014, 212/627-5830.**

ST/ime \$59.95



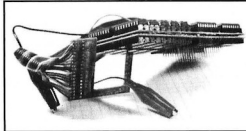
Lithium 10year battery backed-up clock and calendar module that fits in all the STs. Install it under one TOS ROM chip and all your files will be date and time stamped correctly. Comes with digital corner clock display. Frees up your cartridge port. Stop wasting time setting time! 3yr. warranty.

Z-RAM/2.5 MEG

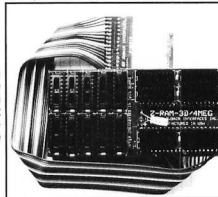
Ultra low-profile solderless 520ST/520STfm 2.5 Meg memory upgrade. Fits under all RF-Shields, including the older 520STs with external disk-drives. Plug & Play! Comes with 1yr. warranty, detailed manual, Ramdisk software and diagnostics on disk. **\$129.95 w/o RAM \$299.95 with RAM**

Z-RAM/Mega2-to-4

Solderless Mega2 RAM upgrade to 4 Meg. Plugs into the back of the Mega2 and will not interfere with internal hard-drives. The easiest way to upgrade your Mega2 without soldering! Comes with complete instructions and diagnostics. **\$149.95 without RAM \$319.95 with RAM chips**



ST MEMORY UPGRADES



Z-RAM 3-D/4MEG

520STfm/1040 2.5 to 4 Megabyte Solderless Memory Upgrade Kit

Innovative 3-D double-decker boards fit into the video-shifter metal box of the ST. Memory diagnostics and RAMdisk software included. 1yr. warranty and 30-day money-back guarantee. Super reliable data and ground connections make this the upgrade board for your ST.

OK(no chips) \$149.95
2.5Meg \$319.95
4Meg \$549.95

ZUBAIR INTERFACES, INC

5243-B Paramount Blvd.
 Lakewood, CA 90712
 Tel:(213) 408-6715
 FAX:(213) 408-6748

Advertisers List

	PAGE NO.		PAGE NO.
1ST STOP	12	GT SOFTWARE	96
ACCUSOFT	96	IMAGEN	13
ANDY'S MUSIC	72	INDEX LEGALIS	71
ANTIC SOFTWARE	8,57,79,89	ISD MARKETING	4
ATY	96	KONYO	BC
AVANT-GARDE SYSTEMS	40,96	MARK WILLIAMS	6
BETA-CAD	63	MEGAMAX	IBC
BRANCH ALWAYS SOFTWARE	75	MICROTYME	38
BRADEN RAY	27	MIGRAPH	3
BRE SOFTWARE	98	NICE & SOFTWARE	34
BUCKLEY ELECTRONIC	96	PANTHER GAMES	5
CARTER GRAPHICS	18	PASSPORT DESIGNS	28
CODEHEAD SOFTWARE	74	SAN JOSE COMPUTERS	82
COMPUTABILITY	14	SOFTWARE DISCOUNTERS OF AMERICA	10
COMPUTER GARDEN	75	SOFTWARE PLUS	71
COMPUTROL INDUSTRIES	56	SOFTREK	27
DATel COMPUTERS	77	STEP AHEAD	72
DIGITEK	2	TALON TECHNOLOGY	26
DR. T'S	78	TOAD COMPUTER	46
DUGGAN DEZIGN, INC.	47	WASATCH GENEALOGICAL	96
GENERAL VIDEOTEXT	47	WEDGEWOOD RENTAL	56
GOLD-LEAF PUBLISHING	19	ZUBAIR INTERFACES	94

This list is provided as a courtesy to our advertisers. START does not guarantee accuracy or comprehensiveness.

Be sure to mention START when you call these advertisers

Advertising Sales



Western Region
Advertising Sales Representative

JOHN FELLNER

544 Second Street
San Francisco, CA 94107
(415) 957-0886

Central Region
Director of Advertising and Sales

DENNY RILEY

544 Second Street
San Francisco, CA 94107
(415) 957-0886

Eastern Region
Advertising Sales Representative

MICHAEL EVANS

544 Second Street
San Francisco, CA 94107
(415) 957-0886

Next Advertising Deadline August Issue: Insertion orders May 4, 1990;

Ad copy due May 10, 1990; On sale July 1990

Address all advertising materials to: Wendy Johson, Ad Production Coordinator START, 544 Second Street, San Francisco, CA 94107

START SHOPPERS MART

CABLES WITH A TWIST

BUCKLEY ELECTRONIC ENTERPRISES is PROUD to ANNOUNCE that the CABLES WE SELL carry a LIFETIME WARRANTY!

- 3" HARD DISK DRIVE CABLE\$18.36
 - 6" FLOPPY DISK DRIVE CABLE\$15.99
 - 10" MIDI CABLES (2) PER PACK\$14.76
 - 6" MONITOR CABLE, BOTH MONO AND COLOR\$18.36
 - 6" 36 Pin PARALLEL TO CENTRONICS CABLE\$23.96
 - 6" NULL MODEM CABLE, MALE/MALE, FEMALE/FEMALE\$15.96
- We also carry a full line of parts and cables for the do-it-yourselfers. We also will make any cable to your specifications. Custom cables carry a 30-day warranty. We are the EXCLUSIVE distributor for WIZARD SOFT, graphic text adventure for the ST. You PAY what we PAY for SHIPPING the items to you.
- MasterCard and VISA and C.O.D.'s accepted (NO SURCHARGE). Credit cards charged the day the shipment leaves our door. Hours are Monday-Friday 9am-4pm, eastern time. D.C. call after hours and leave a message. WE WILL RETURN YOUR CALL!

Call 1 (413) 538-7060

Buckley Electronic Enterprises
Northampton Ma.01060

ATY Computer 3727 13th Ave.
Oakland CA 94610
ST Specialist (415) 482-3775

Super Buy! 520STFM with double sided drive only \$369
30MB hard disk, Megafite30 only \$499

Lowest prices on ST's and Mega's

1040ST	\$659	Mega2	\$1159
1040 + color	959	Mega2 + color	1449
1040 + mono	799	Mega2 + mono	1279
color monitor	339	Mega4	1579
mono monitor	159	Mega4 + color	1829
2 Sided Drive	199	Mega4 + mono	1699
85MB hard disk	785	Portfolio	379

STACY call for availability

30 to 40% discount on all Softwares

We carry monitor/mouse/disk master, scanner, printers, cables, 2400B modem, video digitizer, Mac/IBM emulators, and plenty more for the ST.

call for a free complete listing
Store Hours: Mon-Fri 3:30p.m. to 7p.m.
Sat and Sun 12p.m. to 5p.m.

CardFile v.1.4

I have looked three years for a program like this. I have over 1200 cards in my business file. It has the first appointment calendar I actually use. CardFile is extremely solid and professional.



- PRG and convenient Accessory versions included
 - Fast data entry and display of 13-field 'cards'
 - Simple but powerful 'filtering' capability
 - Print Filtered address books and phone lists
 - Address envelopes (with return) automatically
 - 'Send' addresses into your favorite word processor
 - Appointment calendar/diary • Print daily agenda
 - Phone autodialer • Any color or mono Atari ST
 - Spreadsheet and mail-merge compatible data files
 - Illustrated manual • Only \$25 (shipping included)
- Send check or m.o. and mailing address to GT Software
12114 Kirtan Ave., Cleveland, OH 44135-3612

Now! 15,000+ Programs on Your ST!

Run the most popular IBM software such as Lotus 1-2-3, dBase, Word Perfect, and much more!

Write or call for a FREE fact sheet and list of tested software!

pc-ditto II

by
Avant-Garde Systems
381 Pablo Point Drive
Jacksonville, Florida 32225 USA
(904) 221-2904

Don't Forget...

To Tell Our Advertisers That You Saw Their Ad In

START



COMPUTE YOUR ROOTS

The Only Complete Genealogy Package For Atari Computer Systems

Compute Your Roots for ST's

- * Gem Based
- * Fast, Multiple Field Search
- * LDD/Non LDD Forms
- * Family Group Sheet
- * Marriage Entry Form
- * Color/Mono ST w/ 512K min.
- * Single Data Entry System
- * Automatic Pedigree Links
- * Pedigree Chart
- * Individual Entry Form
- * Custom Sorted Lists
- * Many, many more Features

Compute Your Roots for 8 bits

- * Pedigree Charts
- * Family Group Sheets
- * History Writer
- * Chart Searcher
- * Requires 48K + Disk Drive
- * Cut & Paste Pedigree Chart
- * Single or Double Density
- * Simple & Colorful Menus
- * 10 & 15 inch Printouts
- * Requires Basic Lang. Cart.

To Order send Check or Money Order to the Below Address:
\$37.50 Atari 8 bit version \$39.95 Atari ST version
VISA/MASTERCARD Orders Call 801-465-3937
Wasatch Genealogical Software
2899 West 7550 South • West Jordan • Utah • 84064

Shopper's Mart

THIS COULD BE YOUR AD!

CONTACT:
Denny Riley
544 Second Street
San Francisco, CA. 94107
415/957-0886

START magazine

is the number one guide to the Atari ST. To make sure you don't miss a single issue, subscribe now and have START delivered to your mailbox each month. You'll save over \$99.00 off the single-copy price. See card in this issue for details.

START CLASSIFIEDS

PRE-DRIVEN SOFTWARE: Seldom-used ST games and simulations. Incredible prices, with original documentation. Send S.A.S.E. for listing. M. Bradac, 1348 S. Finley/3U Lombard, IL 60148

ZUBAIR INTERFACES announces three new Memory Upgrades and the new ST/Ime, an internal lithium battery backed-up clock calendar. See ad, page 94.



ELECTRONIC ACCOUNTANT FOR SALE! COMBINE GEM WITH DATABASE/SPREADSHEET POWER TO CONTROL EXPENSE/INCOME TRANSACTIONS. MINI LEDGER \$39.95 (CALIF. ADD 6.5% TAX). MONO/COLOR/520/1040/MEGA. RASCOM, 22128 NEWKIRK AVENUE, CARSON, CALIF. 90745.

PUBLIC DOMAIN SOFTWARE. Largest Selection—Currently Over 850 Disks. Fast Service and Great Support. See our Full Page Ad on page 59. Call Toll Free for our FREE 48 Page Catalog of Atari ST Software and Accessories. Visa/Mastercard/Discover Card Welcome. BRE Software (800) 347-6760, FAX (209) 432-2599.

SOFTWARE RENTALS. Call Toll Free from 50 states or write for FREE list. (Please specify computer). Major credit cards accepted. WEDGEWOOD RENTAL, 5316 Woodway Dr., Ft. Worth, TX 76133. 1-800-433-2938

Antic Software's PHASAR personal accounting software version 4.0 is available! (see our ad in this issue) 2.0 owners return your original disk with \$69.95 plus \$3.50 s&h. 3.0 owners send \$39.95 plus \$3.50 for s&h. . Send for upgrades to : ANTIC SOFTWARE, 544 Second Street, San Francisco, CA 94107; Attn: Customer Service.

FLEXFORM Business Templates for Aldus PageMaker 3.X. A full library of professionally designed business forms, \$49.95 per volume plus \$4.50 shipping & handling. ANTIC SOFTWARE, 544 2nd St., San Francisco, CA. 94107.1(800)234-7001

Choose from thousands of PD software programs. SS or DS disk filled with files you want. Send \$4.00 for an extensive library on disk. Jeff Butler 707 Elwell Ave. West Mifflin PA 15122.

FOR SALE: Many used ST Games in Excellent Condition with documentation. Also Several Original Games. Send to: BP PA, P.O. Box 2151, Willingboro, N.J. 08046 for Catalog!

Panther packs a punch! Panther Games of Australia introduces FIRE BRIGADE. See our display ad on page 5.

PUBLIC DOMAIN CLIP ART. Categorized high-quality collection in IMG format. 40 disks available, \$3.50 SS or \$6.00 DS. Send \$3.00 for Sample DS Disk with IMG Catalog or write for free catalog. THE KING'S DOMAIN, Box 609-N, Graton, CA. 95444

GFA BASIC USERS GROUP WORLD WIDE MEMBERSHIP. MONTHLY NEWS LETTER, AND PROGRAMMING TIPS \$15.00 YEARLY DUES. RASCOM, 22128 NEWKIRK AVENUE, CARSON, CA. 907465

DIGITEK's George Johnson announces RINGS OF MEDUSA for the Atari ST. Look to the Inside Front Cover for Digitek's display ad.

Can your Atari run Macintosh Software? If so you need Hot Spot the stunning creation, presentation program. For more information Call 1-800-234-7001

CONSTRUCTION ESTIMATOR 2.00: Very easy to use, make estimates for a house or small buildings. Create quantity and cost totals. Send \$39.95 to Micheal CO'Massey 9910 U.S. 395 North Reno, NV. 89506 ph 702-972-3659.

BUY SELL TRADE SWAP

START CLASSIFIEDS

544 Second Street, San Francisco, CA 94107

Telephone (415) 957-0886

Name	Company
Address	Phone
City/State/Zip	
MasterCard/Visa Number	Expiration Date
Signature	Issue(s) Ad to Appear
Number of words	Enclosed is my payment for \$

RATE: \$2.00 PER WORD—twenty (20) word minimum.

BOLDFACE: Add \$7.50 per line for boldface words or add \$40.00 for the entire ad set in boldface (any number of lines).

STARS: Add \$10.00 for one (1) line of six (6) stars ***** at top of ad.

TERMS: Prepayment is required. Check, Money Order, Visa, MasterCard, or American Express is accepted. Make check payable to Antic Publishing.

FORMS: Ads are subject to publisher's approval and **MUST BE TYPED.** Please underline words to be set in boldface.

GENERAL INFORMATION: Advertisers using Post Office Box numbers in their ads must supply permanent address and telephone numbers. Ad will appear in the next available issue after receipt unless otherwise specified.

DEADLINE: 90 days prior to cover date (e.g. March 1990 closes December 1, 1989 — March issue on sale February 1, 1990).

Clip this coupon, attach to typewritten copy and send with remittance to address on the left.

HANDWRITTEN COPY WILL NOT BE ACCEPTED

BRE Software

Call or Write for our
FREE Catalog

Lowest Prices

Order Lines/Catalog Requests: (800) 347-6760

Order Line Hours: Mon.-Fri. 8:00 AM-6:00 PM, Sat. 10:00 AM-5:00 PM Pacific Time
Customer Service/Order Status/Inquiries/Canada Orders: (209) 432-3072

Call with your best price on any Domestic or European software title for the ST, we will meet or beat it and give you a **FREE** Public Domain Disk when you mention this ad.

Public Domain Software

ST Software/Accessories



Over 850 Disks Available for the Atari ST

Only \$4.00 Each

Utilities, Games, MIDI, Applications, Music
Graphics, Educational, Clip Art and much more

FREE Disk & Catalog

Receive a coupon good for a **FREE** Public Domain Disk with any purchase when you Call or Write for our **FREE** Catalog.

- | | |
|--|---|
| #87 - Tutorial on GEM Desktop | #794 - Bloodwych Playable Demo (Color) |
| #145 - Five Children's Programs (Color) | #798 - The Pilot Flight Game (Color Only) |
| #244 - Strip Breakout (Color Only) | #801 - PrintMaster Plus Utilities |
| #374 - Two Database Programs | #807 - Mail/Envelope Labeling Programs |
| PrintMaster Cataloger | #809 - Screen Saver/Map Generator |
| #388 - Easy to use mailing list program | #810 - Quick V14 Turbo ST Demo |
| #393/394/777/774 - PrintMaster Graphics | #810 - Sheet V2.5 - S.W. Spreadsheet |
| #455 - Degas Elite Text Drivers | #812 - Opus 2.2 Spreadsheet (1 Meg/DBL) |
| #440/800 - Disk Labeling Programs | #814 - 2.5 Floppy Disk Analysis Prgs |
| #483 - Intersect RAM Baby
(RAM Disk/Print Spooler) | #815 - Compact Disk Database V11 (Color) |
| DCOPY - do everything Utility Prg | #816 - 2 Video Tape Databases |
| #456 - Bolo Breakout Game
from Germany (Req. 1 Meg RAM) | #818 - Populous/Bloodwych Hits, Maps |
| #500/600 - Publishing Partner Fonts | #819 - Star Trek written with STOS (Color) |
| #511 - Dungeon Master Maps Levels 1-7 | #821 - Diamond Back/Gogo ST Demos |
| #512 - Dungeon Master Hits/Character | #823 - 6 Virus Detection Programs |
| #514 - Monochrome Emulator V3.0 | #824/825/860/881 - ARC/LZH Utilities |
| #533 - PrintMaster Plus Graphics Borders | #826 - MG Utilities |
| #551 - Kid Shapes Ages 2-8 (Color Only) | #828 - ST Xlormer V2.55 - 8 Bit Emulator |
| #553 - Kid Publisher Ages 4-12 (Color) | #829 - Vantem V3.9 - Shareware Terminal |
| #555 - The Assistant Chat
Electronic Cookbook (Color Only) | #832 - Duplifix Blitz w/Cable Instructions |
| #557 - Children's Programs (Color Only) | #835 - Adventure Game Toolkit (DBL)
Shareware Adventure Game Creator
for Color and Monochrome |
| #564 - Cadenza Astrological V1.8 - Astrology | #861 - Disk Manager V3.2, DC Showout V1.0
DC Format V3.02, First Base V1.6 |
| #568 - HP LaserJet Disk/et Utilities | #867 - John Wayne & Balmain Cyberpant
(Populous/1 Meg/DBL) |
| #598 - Pac Man, Hangman (Color Only) | #872 - ST Term V3.5 |
| #590 - Dungeon Master Utilities | #879 - Public Painter - Mono Paint Prg
for IMG, Degas, NEO file formats |
| #595 - Fictionary Type Drawing Game | #883 - Calamus Outline Demo (Mono Only) |
| #599/670 - PagesFrom Fonts | #884 - GDOS Fonts (Monochrome/9 Pin) |
| #650 - Text Output Accelerator | #885 - GDOS Fonts (Monochrome/24 Pin) |
| #667 - Benjamin's ABC's for Kids (DBL) | #888 - Atari ST Subjects (Book) Programs |
| #672 - Disk Cataloger/Label Printer (DBL) | #889 - Super Boot V3.0 - All in one boot
program. Choose Auto prgs/Accs |
| #688/686 - HP LaserJet Disk/et Utilities | #895 - Chaos Strikes Back Demos/Walkthru |
| #694 - Turtle Hard Disk Backup V3.0 | #899 - PageStream V1.8 Demo |
| #695/802/892 - Hard Disk Utilities | #900 - ST Virus Killer V3.0 |
| #699 - Children's Programs: Kid Color,
Kid Adder, Kid Story, Kid Sketch | #902 - ST Writer V3.4 w/Spell V2.8 |
| #720 - Dungeon Master Maps Levels 8-14 | #902 - Grand Prix (DBL/Color)
Car Racing Game |
| #721 - Drawing Programs | #903 - STOS Games (DBL/Color) |
| #723 - Four Lottery Programs | #906 - Super Break Out V1.1a (Mono Only) |
| #726 - Children's Programs: Numerical Go
Around, The Wolf and 7 Kids Adv. | #908 - Animation Demo V1.01 (DBL) |
| #736 - Mot Term V1.1 Shareware Terminal | #909 - Pile Up V2.0 - Tetris Clone with
added features. (Color Only) |
| #737 - Calamus Demo (1 Meg/DBL) | #915 - Super Boot 24 & Touchdown |
| #741 - Copystar V1.0, Address Book Base | #921 - Animation (Color/1 Meg/DBL) |
| #749 - Barnimals - Listen/Guessing game
for ages 4-6 (Color Only) | #923 - Break 2 Scenarios |
| #753 - Megatools V1.0 - Shareware Utilities | #924 - Debbie Gibson Spectrum Pictures |
| #758/759 - Calamus Fonts | #928 - Double Sided Package |
| #763 - NeoDisk Icons | #940/941 - Epson Emulator for SL8M04
(2 Double Sided Disks) |
| #769 - Super Breakout (Mono Only) | #944 - Space Ace Demo (Color) |
| #790 - Pentimo Strategy Game (Mono) | |
| #792 - D&D Programs | |

- | | | | |
|--|----------|------------------------|----------|
| Battletech | \$32.95 | 3 1/2" Pin Feed | |
| Bloodwych | \$29.95 | Disk Labels (100) | \$4.50 |
| Bloodwych Data Disk | \$19.95 | Mouse Cleaning Ball | \$5.95 |
| Breach II | \$32.95 | Mouse/Joy 8" Extension | \$4.95 |
| Calamus Outline | \$189.95 | 10 1/2" Disks w/Labels | \$8.95 |
| Clue | \$26.95 | Megatouch Springs | \$9.95 |
| CodeHead Utilities | \$24.95 | FunctionZ | \$19.95 |
| D.A.S.H. | \$27.95 | Mouse Master | \$25.95 |
| DC Desktop | \$28.95 | Monitor Master | \$30.95 |
| DC Utilities | \$24.95 | TwoWay Board | \$28.95 |
| Diamond Back | \$26.95 | Video Key | \$64.95 |
| Dungeon Dragon II | \$24.95 | Atari Mouse | \$49.95 |
| Dungeon Master | | Cordless Mouse | \$89.95 |
| Chaos Strikes Back | \$24.95 | Supra 2400 Modem | \$114.95 |
| Falcon | \$29.95 | (Cable for ST \$19.00) | |
| Falcon Mission Disk | \$19.95 | Atari SF314 Drive | \$159.95 |
| FastBack | \$24.95 | Future GTS-100 Drive | \$179.95 |
| G+Plus | \$22.95 | IB 5 1/4" Drive | \$199.95 |
| Hillsfar | \$34.95 | Spectre GCR | \$229.95 |
| HotWire | \$26.95 | Mac 128K ROMs | \$129.95 |
| HotWire Plus Maxifile | \$39.95 | PC Ditto II | \$249.95 |
| Hoyle's Book of Games | \$24.95 | | |
| Maxifile | \$24.95 | | |
| Miami Vice | \$28.95 | | |
| MidMax | \$35.95 | | |
| Monopoly | \$26.95 | | |
| Omega | \$32.95 | | |
| Paperboy | \$23.95 | | |
| Pharos 4.0 | \$59.95 | | |
| Populous | \$31.95 | | |
| Populous: The Promised Lands
(Reforms Populous) | \$19.95 | | |
| Quartet | \$42.95 | | |
| Red Storm Rising | \$32.95 | | |
| Risk | \$26.95 | | |
| Space Ace | \$38.95 | | |
| Their Finest Hour | \$42.95 | | |
| Trump Castle | \$26.95 | | |
| TV Sports Football | \$35.95 | | |
| Ultima V | \$38.95 | | |
| Wordfall | \$64.95 | | |

Duplifix Blitz

The Best and Fastest Disk Duplicator for the ST. Backs up a complete floppy disk faster than the ST can format a disk. More powerful than "software only" packages. Includes Blitz Software and Dual Drive Cable.

Requires 2 Disk Drives

\$34.95

ST Xlormer Cable

Use with ST Xlormer The 800/KiXE Emulator. Allows you to run 8 bit programs on your ST. The cable allows you to load programs from 5 1/4" disk or transfer them to 3 1/2" disks. With the cable, you can also load protected programs from 5 1/4" disks. Although the Xlormer will not run all 8 bit programs, it runs quite a few and is very useful in transferring files from an 8 bit to your ST. Please call for more information concerning compatibility.

\$19.95

Receive the latest version of ST Xlormer FREE w/purchase of cable when you mention this ad.
Since Derek Alcock has released the ST Xlormer into the Public Domain, he has made the instruction manual available separately. We have the ST Xlormer instruction manual for \$9.95. We also have 8 bit programs ready to use on 3 1/2" disks. See our catalog for more details.

Call for Latest Titles

The Atari ST Book

of Tips, Instructions, Secrets and Hints for the 520, 1040 and Mega ST begins where the Atari Owner's Manual left off, providing a step by step instructions that helps both beginning and experienced users to get the most out of their ST.

\$16.95

Atari ST Book II: Intermediate and Advanced Atari ST Subjects

No Knowledge of Programming is Required. Topics covered include: Hard Drives, Running IBM Software, Disk Structure, File Recovery, Connecting 5 1/4" Disk Drive, Assembling your own Hard Drive, Select A File Editing, Binary/Hex/Decimal Codes, ASCII File Problems, Escape Codes and much more!

\$16.95

Intermediate and Advanced Atari ST Subjects

Includes 200 Pin Feed Disk Labels and more than 10 different Public Domain Disk Labeling Programs on 2 disks.

\$12.95

Super Disk Labeling Special

Includes 200 Pin Feed Disk Labels and more than 10 different Public Domain Disk Labeling Programs on 2 disks.

\$12.95

Introductory Offer - Above Disks Just

\$2.99 Each

Music Studio Package

Over 300 Songs on 7 Disks
Also includes:
- 4 player programs to play songs through your ST Monitor or a MIDI keyboard
- Deluxe Piano - Turns your ST's keyboard into a Piano
\$16.95

Bible on Disk

King James version
A Search program is included
Single Sided Package
(7 Disks) \$34.95
Double Sided Package
(8 Disks) \$24.95

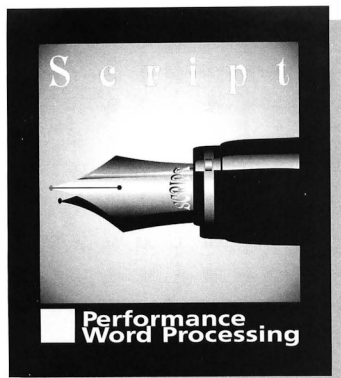


Write to: BRE Software, Dept. SRT, 352 W. Bedford Ave, Suite 104, Fresno, CA 93711



No Credit Card Surcharge. Visa/MC/Discover \$15.00 min. COD Orders Welcome. Phone Orders \$20.00 min. Shipping: PD. Disks \$3.00 Demo, \$5.00 2nd Day Air, Canada \$3.50 Air Mail; Software/Demo \$3.50 min., 2nd Day Air \$6.00 min., Canada \$6.00 min. Hardware/Accessories/Demo \$4.00 min. COD Add \$4.50 (48 States only). Hawaii/Alaska/Puerto Rico Call for SH rates. California residents add 6.75% sales tax. Please allow 2 weeks for personal checks to clear. RMA # required for returns, please call our customer service number. Software items replaced with same title only. FAX (209) 432-2559



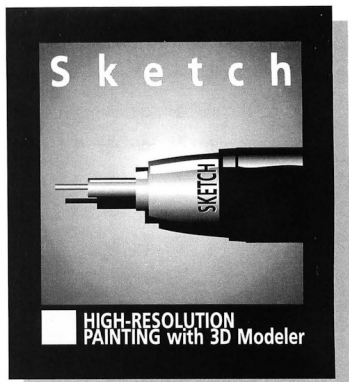


THE WRITE CHOICE FOR YOUR LEFT BRAIN.

Who else gives you high-speed editing of up to four documents at a time, support for graphic proportional fonts, image importation and spell checking, all in one highly intuitive package? — only **Script**.

Produce professional looking letters and documents with ease using different fonts and sizes. Add headers, footers and footnotes — you can even insert the current page number, time or date. Make any text bold, italic, underlined, superscript or subscript. Import and crop graphic images. All of this is done on-screen while you edit. Print the results using the highest resolution of your printer; whether 9-pin, 24-pin, inkjet, or laser.

Using proprietary text imaging routines Script outperforms GDOS based word processors hands down. Wait no more — get **Script!**



THE ONLY CHOICE LEFT FOR YOUR RIGHT BRAIN.

From fancy letterheads and logos to precision illustrations and image touchup, **Sketch** makes high-resolution painting a breeze.

Use ultra high-speed tools to paint lines, rectangles, ovals and splines (smooth curves). Cut and paste with surgical precision. Create unusual effects such as bending, stretching and distorting. Customize the brush shape, fill pattern, fonts, line style and spray pattern. Work with large images up to 1280 by 1600 pixels. Use the 3D modeler to layout and position objects, then use the painting tools to add shading — no other paint program gives you this ability. So unleash your creativity with **Sketch!**

Megamax APPLICATION
SYSTEMS
DALLAS
1200 E. COLLINS, #214 RICHARDSON, TX 75081

The **MASTER 3S** light years ahead of the rest . .

ATARI® ST™ FULLY COMPATIBLE

- FULL 1 YEAR WARRANTY
- QUALITY DRIVE MECHANISM
- ON/OFF DISABLE SWITCH
- SMALLER SLIMMER DESIGN
- DIRECT DRIVE MOTOR
- EXTREMELY QUIET OPERATION
- ADVANCED INTERNAL CIRCUITRY
- FCC APPROVED
- READY TO RUN
- LSI ELECTRONICS
- PASS THROUGH CONNECTOR FOR DAISY CHAINING
- DOUBLE SIDED / DOUBLE DENSITY 880K CAPACITY



Let the **MASTER 3S** add new
dimension to your ATARI® ST™.

NEW Optical Mouse
for ATARI® ST™.



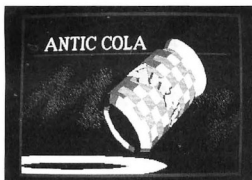
800-356-5178
Inside CA 714- 633-1026

Distributed by
KONYO International, Inc. / FAX 714-633-5339



THE CATALOG™

Quality Products You Can Trust



CYBER TEXTURE™ The Object Raster Master

by David Ramsden

Turn your DEGAS or NeoChrome pictures, or CYBER PAINT animations into CAD-3D objects with CYBER TEXTURE. Imagine a DEGAS picture pasted around a CAD-3D object—with CYBER TEXTURE, you can do it! It even includes a mobius strip! And with CYBER CONTROL, CYBER TEXTURE objects can be animated for mind-boggling f/x!

Requires: 1 Megabyte RAM, a color system, CYBER STUDIO, and a source of low-resolution color images compatible with DEGAS or NeoChrome (such as CYBER PAINT). CYBER CONTROL is recommended for animating objects; CYBER PAINT is recommended for animating surfaces.

STO263 \$49.95

CYBER SCULPT™ The Advanced 3D Modeling Tool™

by Tom Hudson

Create the most fantastic shapes imaginable with CYBER SCULPT—the mouse-controlled, 3D solid-object modeler featuring sophisticated tools previously found only on high-end workstations. CYBER SCULPT adds push, pull, twist, and bend tools to the basic spin and extrude features found on CYBER STUDIO. The possibilities have now become endless!

CYBER SCULPT includes cross-sectional modeling for shapes like boat and airplane hulls, or dimensional topography. Variable magnification, spline path extrude and spin are only a few of the many sophisticated options. More include: object distortion; vertex pulling; magnetic distortion; cross-sectional model creation; complex and simple extrude with end-capping; 3D mirroring; 3D primitives; and 2D/3D coordinate display.

Requires: 1 Megabyte RAM and CYBER STUDIO
STO255 \$89.95

**BEST SELLING
SOFTWARE**

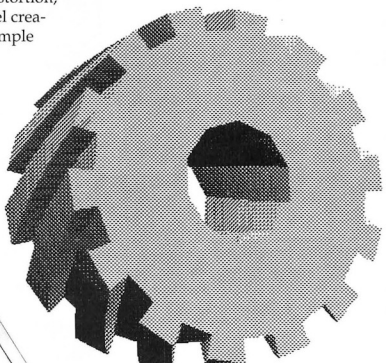
CYBER CONTROL™ The CAD-3D motion control language

by Tom Hudson

Create animations automatically in hours that would normally take days. Expand and enhance your ST graphics universe with this animation scripting language that locks into any CAD-3D 2.0 feature. Write your own BASIC-like programs with CYBER CONTROL™ using CAD-3D as a "graphics engine." Just start the program and walk away—your ST and CYBER CONTROL will do all the work!

Requires: CYBER STUDIO

STO250 ~~\$59.95~~ NOW \$49.95



BOTH FOR ONLY \$119.95

ORDER NOW

TOLL-FREE
800-234-7001

MasterCard/Visa Orders Only - All 50 States





Two frames of CYBER STUDIO animation without CYBER PAINT enhancement. The same two frames are shown below them, after a CYBER PAINT touch-up.

CYBER PAINT™ 2.0

BEST SELLER

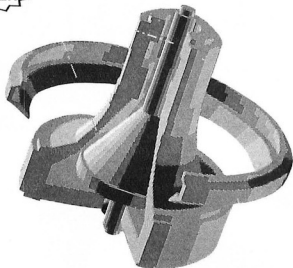
The pro animation studio

by Jim Kent

This program does it all! CYBER PAINT 2.0 is an animation system; a time-oriented paint program; a "cel" (celuloid) animation program; and a digital optical printer.

CYBER PAINT 2.0 contains all the standard paint tools—box, brush, rubber, line, fill, etc.—but adds the dimension of time animation. Images spin and glide around the screen like a magic carpet. Special features include a pixel f/x menu; palette change per frame and cut & paste color range; and an automatic traveling mask. All these features make CYBER PAINT 2.0 the fastest possible way to create professional looking animations.

Requires: 1 Megabyte RAM & Color Monitor (Upgrade from CYBER PAINT 1.0 \$25.00 plus original disk)
ST0251-\$79.95- NOW \$69.95



"Antic's CAD-3D™ is one of the best programs I've seen for the Atari ST* or anything else."

—Jerry Pournelle
BYTE MAGAZINE

BEST SELLER

CYBER STUDIO™

A two disk set featuring:

- CAD-3D 2.0 by Tom Hudson
- CYBERMATE™ by Mark Kimball

CYBER STUDIO is an intuitive 3D solid-modeling design system that has no limits. Sophisticated enough for professional artists, advertising agencies, and design firms—yet friendly enough for home and personal use. Let your creativity soar with the DEGAS®-style color design system; graphic lighting controls; enhanced spin, extrude and join tools; and GDOS output that supports laser and dot matrix printers.

CYBERMATE is a "post production" animation editing language that features sound effects; title generation and text display; sequence looping, cuts fades and dissolves; and color cycling animation.

Requires: 1 Megabyte RAM (Upgrade from CAD-3D 1.0 \$60.00 plus original disk and \$5.00 shipping and handling)
ST0236-\$89.95- NOW \$79.95

CYBER PRINT

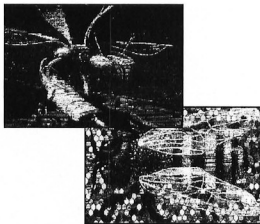
Great color prints from an affordable printer—DEGAS®, NEOchrome®, CYBER, and even SPECTRUM 512!

by Larry Bergan

At last! Color printouts of SPECTRUM 512, pictures! Fabulous, full color, accurate, detailed, beautiful pictures, all from the low-cost Okimate 20 printer.

If you need color printouts, CYBER PRINT makes the Okimate 20 the only choice. Three years of ongoing development has produced the best printing combination available for under \$5,000: CYBER PRINT, the Okimate 20, and your ST.

CYBER PRINT prints in three sizes; up to 32 pictures per page. Join individual pictures together invisibly into montages of incred-



ible detail. No matter which paint software you use, CYBER PRINT is the hardcopy solution!

Requires: 1 megabyte RAM, a color system, and an Okimate 20 printer
ST0264-\$49.95- NOW \$39.95

ORDER NOW

TOLL-FREE
800-234-7001

MasterCard/Visa Orders Only - All 50 States

SHADOW

Practical

Multitasking for your ST

by Double Click Software

SHADOW is like having two computers. It's a telecommunications program that runs in the background, freeing your ST to do other things during those long uploads and downloads.

Change programs, resolutions, use disk drives, press System Reset—SHADOW survives it all and continues your transfer, uninterrupted.

SHADOW operates as a stand-alone program complete with a VT52 terminal and background auto-dialer, or works with FLASH

"FLASH is my #1 choice on the Atari ST."

—Ron Luks, Founder of CompuServe's SIG* Atari and Atari Developers' Forum.

to provide the easiest, most powerful telecommunications environment you'll ever use.

New! Version 1.1 has many new enhancements, including a special mode so transfer buffer memory can be used and released, as needed. Ideal for computers with limited memory.

ST0259 \$29.95

FLASH™ 1.6

The most popular ST terminal program!

by Joe Chiazzese and Alan Page

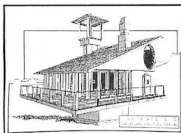
Simplify your online time and make telecommunications more enjoyable and less expensive! If you own a modem, you should be using FLASH—totally programmable plus built-in word processing; terminal emulation and bullet-proof file transfers. FLASH is packed with features including intelligent, programmable macro ("do") files; a capture buffer large enough to record an entire online session; and the capacity to support most major protocols.

ST0220 \$29.95

**BEST
SELLER**

BOTH FOR ONLY \$49.95

Complete your collection of CYBER GRAPHICS Design Disks



Architectural Design™

by Darrel Anderson

Requires: CAD-3D 1.0 or CYBER STUDIO

ST0243

INTERIOR DESIGN DISK

The All-Purpose Home Planner By David Stuart

Now that you've built your dream house with the ARCHITECTURAL DESIGN DISK, it's time to furnish it. This is an interior decorator's dream come true! Couches, drapes, sinks, refrigerators, dressers, everything can be easily customized to fit your personal needs.

Requires: CYBER STUDIO

ST0265

Create and fill your 3D graphics universe with the complete library of Antic Software's design disks. From architectural renderings to animated video cartoon characters, these disks will bring your video creations to life! All contain a potpourri of sophisticated 3D clip art and component parts. **A real bargain at \$29.95 each!**

Choose Any 3 and Pay Only \$59.95

MORE CYBER GRAPHICS DESIGN DISKS

ST0232 **Future Design™** by Darrel Anderson (c)1986
Requires: CAD-3D 1.0 or CYBER STUDIO

ST0224 **3D Fonts I™** by Tom Hudson (c) 1986
Requires: CAD-3D™ 1.0 or CYBER STUDIO™

ST0254 **3D Fonts II™** by Doug Thomas (c) 1987
Requires: CAD-3D 1.0 or CYBER STUDIO

ST0256 **Cartoon Design™** by Maurice Molyneux and Andy Eddy (c) 1987
Requires: CYBER STUDIO; CYBER CONTROL™ recommended

ST0261 **Video Telling Design™** by Maurice Molyneux and Andy Eddy (c)1987
Requires: CYBER STUDIO; CYBER CONTROL™ recommended; CYBER PAINT™ for special t/x

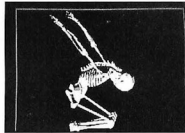
Choose Any 3 and Pay Only \$59.95

ORDER NOW

T O L L - F R E E

800-234-7001

MasterCard/Visa Orders Only - All 50 States



Human Design™

by Richard Berry

Requires: CAD-3D 1.0 or CYBER STUDIO

ST0242



THE MICROBOT DESIGN DISK™

by Darrel Anderson

Requires: CYBER STUDIO

ST0262

**BEST
SELLER**



RETROMAGS

Our goal is to preserve classic video game magazines from years gone by, before they are lost forever.



Thanks goes out to everyone who makes this possible. Starting with the original writers and editors, to all the people involved in acquiring and digitizing these magazines.



People interested in helping us out, in whichever way possible. Either by donating magazines, scanning, editing or helping in the distribution, visit us as www.retromags.com



We are only interested in preserving magazines which are published prior to the year 2000.



We have no desire, nor intent to profit from these scans in any way.



So please, if you come across people trying to sell these releases,



DO NOT SUPPORT THEM!

THANK YOU!

