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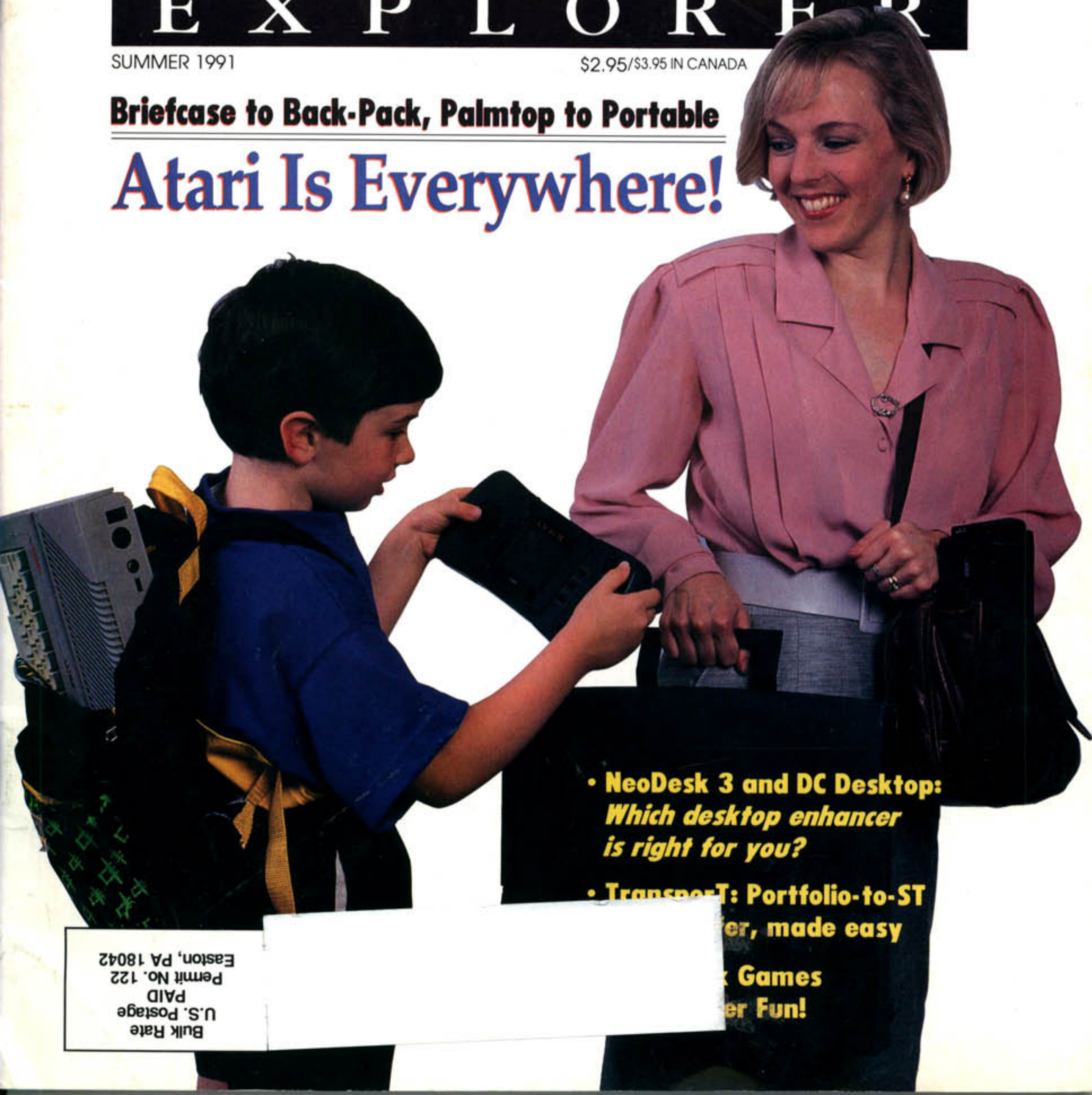
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By JOHN JAINSCHIGG

Editorial

Regular readers will note that the issue of Explorer you're presently reading is dated Summer, rather than the expected May/June or July/August. Don't panic. Nothing's wrong. This is merely a seasonal dodge designed to reduce costs and extend newsstand life during the long, hot months when nobody wants to buy advertising. Explorer will be producing three more issues before year's end, for its regular total of six issues in 1991.

In fact, Atari Explorer is growing by leaps and bounds! Now the largest-paid-circulation magazine serving the American Atari marketplace (not to mention the only glossy), we're expanding coverage in a number of key areas. To insure that Explorer can keep up with the demands of being the magazine of record in the Atari world, we're adding a range of new contributors and staff.

Among the changes you'll note in the current issue, we're responding to the volumes of mail we've

So, What Else Is New?

received from Atari 8-bit owners, demanding regular coverage. Michael Bennett's fascinating piece on Educational Computing Systems describes a cost-effective, teacher-friendly curriculum that lets small schools provide quality computer instruction on a budget, using Atari 8-bit systems and PD software. John Quinn's review of ICD's FastBack examines

this important program: a must for eight-bit hard drive and RAM disk users!

Portable computing buffs will enjoy our in-depth review of the Atari Stacy transportable professional computer. Over the past few months, I've experimented with my own Stacy 2 in a wide variety of contexts, with great results! In the office, it's been my constant aid, both as a writing tool (using WordPerfect), and as a useful adjunct to Explorer's PageStream-based desktop-publishing system.

With the advent of the powerful, new ST Desktop, featured on the Mega STe and TT systems, many owners of regular STs have been searching for ways to increase the functionality of their older desktops to comparable levels. This issue features reviews of two popular third-party "Desktop Enhancers," the formidable DC Desktop, from Double-Click Software, and the exciting new

release of Gribnif's Neo-Desk 3. Each of these fine products takes a distinctive and unique approach to expanding the power of the ST's standard user-interface.

Music mavens will want to check out our review of PDC Software's revolutionary sample-sequencer, TCB Tracker. Tracker is already the most popular music development platform among European software engineers, and our review will show you why!

Developer Focus

Explorer is also homing in on ST developers! In this issue, you'll read Oscar Steele's interview with Nevin Shalit, President of Step-Ahead Software and author of the powerful contact-management package, Tracker ST. And you'll read about how GFA SystemTechnik, of Germany, is coming back into the U.S. market with a bang — opening a fully-staffed American sub-

sidiary to market an upgraded version of the ever-popular GFA BASIC to both ST and PC markets! Check out the deep upgrade discounts GFA is offering to current registered owners!

Portfolio Steals the Show!

Portfolio Palmtop owners will be excited by our review of Artisan Software's Transport, a well-designed and easy-to-use package that simplifies the task of moving files back and forth between the Portfolio and any ST computer. Speaking of Portfolio, everybody's favorite palmtop MS-DOS computer has been getting a lot of press, lately! Under the able hands of Atari's Don Thomas, Portfolio recently stole the stage at the well-attended Laptop and Palmtop show at New York's Sheraton. The show culminated in a spectacular interview, later broadcast by ABC News, in which Don outlined the bright future Atari sees in the Portfolio product line. With the help of John Feagans (formerly with Atari, now heading a company that markets Portfolio, among other products) Don demonstrated a few of the numerous add-ons and software packages now available for the machine, including MegaByte Computers' impressive 512K memory-upgrade and Canon's BJ-10e bubble-jet printer — a portable printer fully compatible with IBM's X24E Proprinter.

Summer Games!

Finally, there's entertainment! ST Game nuts will love our reviews of eight new ST entertainment packages, including ReadySoft's hot new import from Britain's Empire Software, the astounding Team Yankee tank-war simulation! And Lynx owners will enjoy flying in formation with Warbirds, arresting bad guys with the brand-new APB, and more! Five new games in all!

A Sad Goodbye

As many of our readers are no doubt aware, STart/Antic Magazine suspended publication with its April issue, pending the possibility of sale by Antic Publishing. Founded by Jim Capparell, Antic was the first Atari-specific magazine, and in many ways defined the genre for magazines that followed. Its sister publication, STart, was one of the first magazines to support the Atari ST, breaking new ground in computer publishing by distributing linked paper and disk editions.

In his Editorial last May, STart's Tom Byron expressed regret for Explorer's own suspension of publication, part of a reorganization that kept the Official Atari Journal off newsstands until January of this year. By now, of course, it's clear the reports of our death were greatly exaggerated. We hope that in similar fashion, STart will re-

emerge as an even better publication than before. In the meantime, I'm sure that fellow readers will join me in expressing thanks to STart for helping us get the most out of our Atari computers.

Luckily, though STart Magazine has closed its doors, its voices are not completely silenced. Several of your favorite STart authors are now preparing material for publication in Atari Explorer, and their unique viewpoints will enrich our editorial mix in coming issues. The expertise of writers like Dave Plotkin, Paul LeFevre, and others, will help make Explorer better than ever!

International Greetings!

Explorer's international readership, always strong, continues to grow! With this issue, we welcome new distributors in Hong Kong, Malta, Iceland, Costa Rica, and Turkey, with many more to come. To our new readers in these countries, greetings and welcome to the Atari Explorer family!

Several thousand copies of this issue are also being distributed at August's International Atari Show in Dusseldorf! We hope our German friends and colleagues enjoy reading our magazine. Und geniessen Sie die Ausstellung! ■

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Letters

To the Editor

Educators' Atari Club

Dear Editor,

We wish to thank you for including our name on the list of public-domain software distributors in your January/February issue. We are having a problem, however, and hope you can help us. Our catalog is over 20 pages long and 8" by 10" in size. We have to use special mailing envelopes and the postage is over \$1.15. We normally ask for \$2.00 worth of stamps to mail out our introductory package, which includes our catalog and an issue of our TEAC Newsletter, plus other information. But since our notice appeared in Atari Explorer, we have been receiving small envelopes with a single stamp attached. Could you possibly include a short note in your next issue requesting \$2.00 worth of stamps, in-

stead of a single stamped, self-addressed envelope?

— Peter A. Loeser,
President
The Educators'
Atari Club
P.O. Box 1024
Laytonville,
CA 95454

Oops! Well, you heard the man. Like most special-interest groups, the Educators' Atari Club performs a valuable service for the Atari community, under a tight budget. We urge readers with an interest in education to correspond with TEAC and ask for their catalog and other resource materials. But please! Send \$2.00 in stamps!

Portfolio/8-bit Connection

Dear Editor,

I'm next to a computer novice. Although

I've had an 8-bit for some ten years, I use it only for word processing and a little bit of gaming. My distant location makes it impossible to seek information from a user group, a bulletin board, an 800-number ... hence this letter.

The Atari Portfolio makes me drool, but I have doubts. Here's how I'd want to use one:

1) I'd take it along on vacations/trips, do some writing, bring it back and dump my product into my 130XE.

2) I'd compose letters slumped in my easy chair before taking them to the computer for printing.

3) As a wargamer who plays by mail, I'd take the Portfolio to the game map to record the positions of those dozens of counters, then take it to the computer to complete my letter to my opponent.

Now every ad, every article, I've seen on the Portfolio unfailingly men-

tions how great it is that you can dump its files into a PC. Big deal. I don't have a PC. I don't want one. Can Portfolio talk to a 130XE? Can I somehow finagle Portfolio text into my PaperClip word processor?

— Larry Bucher
Vientiane, Laos

Yes, indeed! Though not much has been written about it in the popular press, the Atari Portfolio can transfer data to and from an Atari 8-bit computer with relative ease. On the Portfolio side, all you'll need is the optional Serial Interface, which adds an AT-style 9-pin RS-232 serial port to the system. Since MS-DOS will support text-file transfers through the serial port directly, no special software should be required for the applications you describe.

On the 8-bit side, you'll require an interface that gives your 130XE a standard serial port, plus communications software to drive it. The most cost-effective package we know about is ICD's PR:Connection (\$44.95 from ICD, 1220 Rock Street, Rockford, IL 61101 (815) 968-2228), which adds an "Atari 850-style" 9-pin RS-232 port to any Atari 8-bit computer, and comes complete with the requisite communications software.

Once you've got both machines set up for serial communications, you'll have to connect them. To do this, you'll need to cobble up a

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"null-modem" cable to mate the Portfolio's 9-pin serial port with the (differently wired) 8-bit interface's 9-pin serial port. Unless you're a soldering whiz, the easiest way to create such a cable is to assemble it from multiple adapters, available off-the-shelf. A workable recipe might start at the 8-bit side with ICD's "direct-connect" modem cable (\$7.95), which plugs into the 8-bit's 9-pin serial port and terminates in an "industry-standard" 25-pin male db connector. Next, plug that into a 25-pin female/25-pin male null-modem adapter. Then insert a 25-pin "female both sides" adapter, also called a "gender changer," so that the cable terminates in a female db-25 connector. Finally, complete the connection by adding a standard 25-pin male to 9-pin female IBM AT-style modem adapter. (All three of the latter cables sell for around \$3.95 each, and can be ordered direct from Lyben Computer Systems, 1150 Maplelawn, Troy, MI 48084 (313) 649-4500). What with all those "males" and "females," the result sounds like an orgy, but it should work reliably.

Now turn everything on, and load up your terminal software on the 130XE. Set the baud rate as high as it will go (9,600 baud), and use the protocol settings: no parity, 8-bit words, 1 stop bit. Set the Portfolio's serial interface to the same baud rate and

protocol settings, using the "RS-232 port" entry on the SETUP menu. Set up the 8-bit terminal software's "capture buffer" to record input from the serial port. Finally, decide what text file you wish to transfer from the Portfolio, and enter the following at the DOS command prompt: "COPY filename > COM1: (RETURN)." The actual copy process should take only a few moments.

Save the contents of the capture buffer to disk. Your word processor should be able to read or convert this "text" file to its own file type. One further thing to watch out for — the Portfolio terminates each line of a text file with character number 13, the ASCII standard code for "carriage return." The 130XE, however, employs a slightly different system, called ATASCII (Atari ASCII), under which each line of a text file is terminated with character 255. Most 8-bit communication software packages feature an option to translate all incoming character 13's into character 255's, and this option should be engaged for Portfolio to XE data-transfers.

Transferring text from the 8-bit to the Portfolio is also fairly easy. Start by saving your word-processor document as a text file. Then, use the "upload ASCII" feature of your terminal software package to transfer that file over the serial connection. Capture the incoming text on the Portfolio by

issuing the command "COPY COM1: > filename (RETURN)." When the transmission is finished, close the Portfolio file by sending a Control-Z character from the 8-bit (hold down the CTRL key and press the "Z" key). The file should then be readable on the Portfolio. Again, remember to engage the ATASCII/ASCII translation option on your 8-bit terminal software package.

Portfolio and Nicads

Dear Editor,

Knowing that non-rechargeable batteries are one of the bigger sources of unrecycleable waste in the world, I routinely run my Portfolio on NiCd batteries. They work great until they run low. But if the computer gives you a "Low Battery" message, you have only seconds to replace them before all information is lost. Is there any way to change the power level at which the "Low Battery" message is given?

If I ran the computer with the data running off of the A: drive (rather than the internal C) and the batteries were to go flat, would I still lose all my information since the card runs off of the computer battery (rather than the card cell) when it is in the computer?

— William L. White,
M.D.
Ft. Knox, KY

There are several potential problems with using rechargeable batteries in the Portfolio. First, as you've noticed, the power-drain curve of a rechargeable battery is different from that of an alkaline cell. Both curves are flat to start, since both batteries provide power at a constant level when they're fresh. At the end of the cycle, the power provided by an alkaline cell falls off fairly gradually, while a NiCd's power level tends to drop more suddenly. This has a way of fooling the Portfolio's power sensor, which works on the assumption that once power has dropped below a certain "safe" threshold, there's still a reasonable amount of time left to install new batteries. Unfortunately, you can't "reprogram" the sensor to operate another way.

Normally, the Portfolio's RAM memory is protected during a battery-change by power drawn from a trickle-charged Lithium cell on the motherboard. But when rechargeable batteries run dry "all at once," the way they have a tendency to do, the Lithium cell can't supply enough power to keep the system up for more than a few seconds. So you lose the contents of internal memory.

A second, unrelated problem is that some rechargeable batteries are slightly larger than equivalent alkaline cells. Using these batteries can bend the Portfolio's power

contacts so that intermittent failure can occur if smaller alkaline cells are later used.

For these reasons, Atari does not recommend the use of rechargeable batteries in the Portfolio, though they realize that many ecology- and economy-minded users will wish to do so. In this case, the best advice we can offer is to be conservative about batteries. Always back up files to a memory card between sessions. Compose a batch file that will configure the system automatically to your liking, and back it up. Then, if you should lose power, you can bring the

system back up to spec, quickly. Incidentally, if your memory card's power cell is fresh, there should be no danger of losing data from the card if the machine loses power while the card is inserted.

Mega Ste Modem?

Dear Editor,

I wanted to write and tell you how much I enjoyed this most recent issue of your magazine. The articles about Desktop Publishing were very interesting and informative.

The article about the Mega STe was also very interesting, but how is a standard Hayes-compatible modem going to plug into those modem ports on the back of the Mega STe? They look like joystick or mouse ports. Other than this, the STe looks great! All those colours and the 16 MHz speed are just too good to pass up, and all my software will run on the newer machine as well as my peripherals. Those IBMers can say what they want, but I think the ST's are easier to use, and the new STe's are pretty fast. Keep up the good work.

— Beth Jane Freeman
Wantagh, NY

Don't let the Mega STe's 9-pin serial ports fool you! In fact, IBM owners have been dealing with this kind of serial port for a while, since it's standard on the AT-class machines. All you need to hook up a Mega STe to a standard modem is a "9-pin female to 25-pin male" serial cable, otherwise known as an "AT-style modem cable," or equivalent adapter. These are available for just a couple-three bucks at Radio Shack or any other full-service electronics retailer. ■

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NEW Products

PORTFOLIO

PBASIC 4.5 is here! **BJ Gleason**, of The American University, Thin Air Labs, has released version 4.5 of his popular batch-oriented BASIC interpreter for everybody's favorite palmtop PC! Originally written as an entry in CompuServe's Portfolio Forum Programming Contest (it won), PBASIC has enjoyed a growing following since the release of

version 2.1 in September of 1990 (reviewed in Atari Explorer, January/February 1991, page 70).

Version 4.5 is a profound upgrade of the original, including numerous new features. Full string support is now standard, as are multi-dimensional arrays, @location support for formatting PRINT statements on-screen, worksheet im-

porting commands, .PGC (Portfolio Graphic File) support providing 4 to 6 frame-per-second animation capabilities, serial port support, advanced looping statements (WHILE/WEND, REPEAT/UNTIL), and numerous other functions. A new utility, PBCODE, is also offered that permits the encryption of PBASIC source code files in a format that permits execution, but not listing — a security device for those

wishing to distribute PBASIC programs. PBASIC is free with essential on-disk documentation (send S.A.S.E. and IBM diskette or 128K Portfolio memory card). The manual, which is strongly recommended, is \$35.00.

*BJ Gleason,
The American University,
CSIS (Thin Air Labs),
4400 Massachusetts Ave.,
N.W.,
Washington, DC 20016*

TekNow!, a Phoenix-based company specializing in computer-messaging products, has announced a new text-paging interface that permits Atari Portfolio users to send full-text messages to any alpha-capable pager. The software-based system, called **SAMpage**, is billed as a "mobile dispatcher." SAMpage uses the Portfolio's built-in dialer to send messages over the phone to one of TekNow!'s enhanced Al-

phaBox or PageRouter intelligent front-end systems, attached to a standard paging terminal. The front-end then completes the connection by dialing the alpha pager and forwarding the message. Currently, TekNow! is approaching paging companies with the idea of installing AlphaBoxes to provide Portfolio SAMpage support to the general paging market. Institutions may also wish to consider the cost-effective

Portfolio, plus SAMpage and AlphaBox, as cornerstones of their own in-house alpha paging system.

At the Portfolio end, SAMpage works almost transparently. The user simply selects the name of the person to be paged from the Portfolio Address Book application, enters the message, then holds the handset of a phone next to the Portfolio's speaker during transmission. A single message

may be delivered to many different pagers, and the software is capable of accessing multiple front-end nodes.

*SAMpage software,
\$89.00
AlphaBox front-end
system, \$3,295.00 and up.
TekNow!
1500 South Priest,
Suite 101,
Tempe, AZ 85281
(800) 899-7262*



ComputerBooks now offers two medical software applications — a **pharmaceuticals database** and a **Physician's Reference** program — available on memory cards for the Atari Portfolio computer.

The Pharmaceuticals database contains more than 400 commonly-used medications arranged alphabetically by generic name for easy access. Each generic drug entry has five sub-fields with information pertaining to dosage and administration, warnings and contraindications, therapeutic and pharmacologic classifications, trade names and

forms of supply. (\$129.95)

The Physician's Reference provides a battery of information on common questions and issues arising in patient care, ranging from blood gas interpretation to methods for calculating nutritional requirements. A simple "question-and-answer" front end simplifies database access. (\$89.95)

ComputerBooks
Newport Trade Centre
20351 Irvine Ave.,
Suite 9
Newport Beach
CA 92658
(714) 966-2023

Online Technologies has just introduced **TimePAC-5**, a time/expense management system that utilizes the Atari Portfolio palmtop computer. TimePAC's menu-driven system guides users through the entry of account names and numbers, work codes, and job descriptions. Thereafter, the user simply selects an account, presses one key to begin and another to conclude or interrupt timing. At the end of the day, users can review the

day's account times on the screen and make adjustments as necessary.

Using the Portfolio's optional serial or parallel interfaces, time and expense entries can be printed out or transferred to a host computer for billing or management reporting. (\$125.00)

Online Technologies, Inc.
23715 Mercantile
Road #203,
Beachwood, OH 44122
(216) 831-6160

Megabyte Computers has announced that it has developed an internal solution to upgrading the Portfolio's RAM from 128K to 512K. The upgrade service costs \$350.00, and turnaround time is said to be within 14 days. Megabyte warranties the upgrade for six months.

After the upgrade has been performed, the

capacity of the Portfolio's internal C: drive can be set to a maximum of 464K. The expansion is said to have a negligible effect on battery life. Megabyte is also selling pre-upgraded Portfolios at \$599.95.

Megabyte Computers
909 Melbourne
Hurst, TX 76053
(817) 589-2950

ST PRODUCTIVITY

Desk File Do... Display Print Sequences

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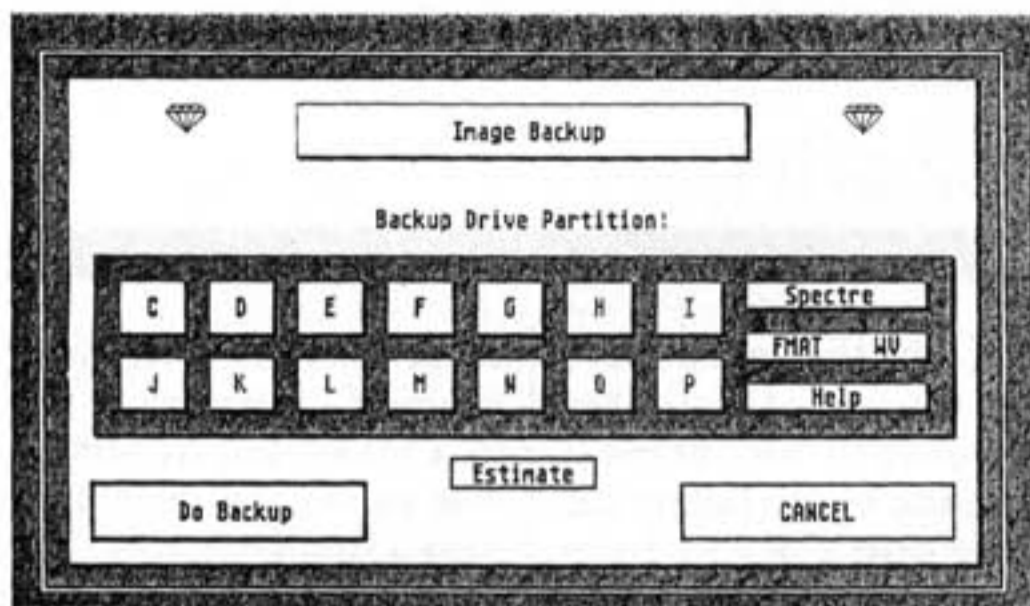
Inv. Out Look Note Save Undo Drop New Prev Next

Informer II has the flexibility to manage a wide variety of data and form types, and can be used for applications such as inventory and invoice-generation.

Soft-Aware has just released version 2.00 of **Informer**, their groundbreaking database product for the Atari ST. **Informer II** is a semi-relational data and graphics manager, capable of processing internal and external data records as well as presentation graphics. Storing its databases partially in memory, **Informer II** is fast and responsive. It's also fairly efficient: around 36,500 records can be stored on a Mega 4 ST.

Informer can store any Atari screen-graphics as part of a database record, exploiting NEO, Degas, or Snapshot files directly. Employing a full GEM interface, the program can be used effectively by beginning and intermediate ST users. (\$99.95)

Soft-Aware Unlimited, Inc.
334B North Euclid Ave.
Upland, CA 91786
(714) 982-8409



Diamond Back II's image-backup facility can backup and restore to different-sized partitions.

Oregon Research Associates, has just released version 2.24 of **Diamond Back**, their popular ST disk-backup utility. DBII has numerous new features, including the ability to backup and restore Spectre (Macintosh) partitions, full support for partitions greater than 16 MB, and the ability to restore partition images to different size partitions. Diamond Back II employs a complete GEM user interface to simplify the normally time-consuming and

sometimes technical-demanding task of backing up valuable data. Also included with the package are Diamond Format, a floppy-formatting utility, and Diamond Find, a file-search program.

(\$44.95; existing owners may upgrade to version 2.24 for \$7.50)

Oregon Research Associates
16200 S.W. Pacific Hwy.,
Suite 162
Tigard, OR 97224
(503) 620-4919

Zocra Technologies has introduced **STipple**, a sophisticated file viewer and graphic-image translator for the ST and TT. STipple reads a wide variety of graphic image file formats, including NEO, Degas, GIF, PCX, IFF, LBM, MacPaint, Mac Startupscreen, CP8, FastLoad (.FL), and AIM (.IM). Since STipple automatically determines file type, loading and viewing image files is a breeze! By employing sophisticated (and user-alterable) dithering, grey-scale, and color-equivalency algorithms,

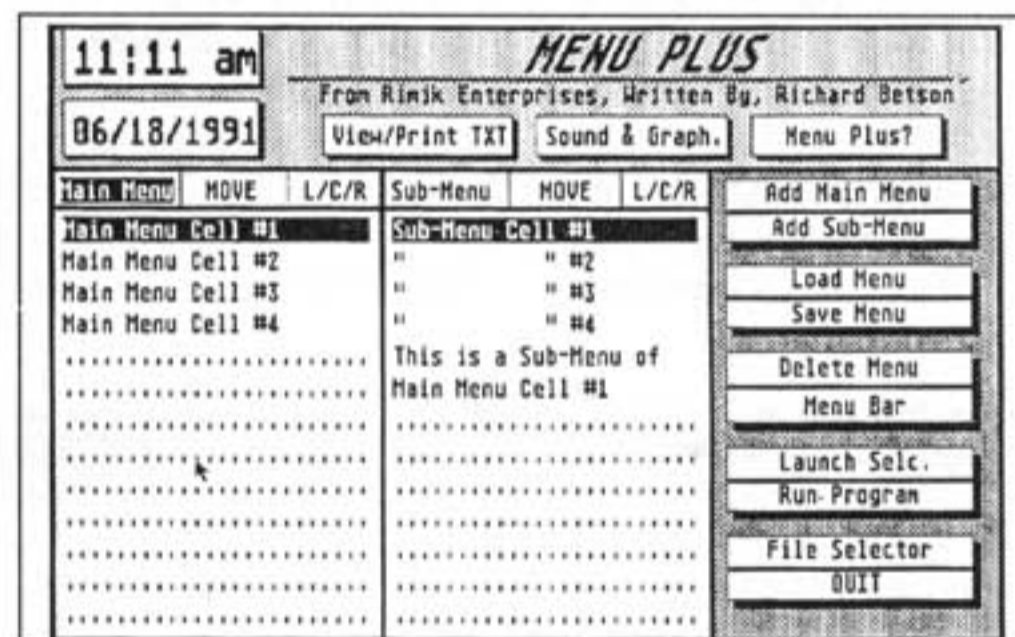
STipple can display files created on Amiga, Macintosh, or PC. Image-manipulation functions include edge enhancement, vertical and horizontal scaling, color editing, cropping, and large screen monitor support. STe 4,096-color mode and 5 of 6 TT special resolutions are supported! A 28-page user manual and bonus FixMac program are included. (\$35.00 plus \$2.00 S/H)

Zocra Technologies
4-319 MacKay St.,
Ottawa, Ontario
K1M 2B7, Canada

Projets Informatiques, of Quebec, have released a very interesting new tool for mathematicians, engineers, and students. **Solutions** is a "math processor" for the Atari ST that performs much of the grunt-work of applied mathematics, including the simplification and expansion of algebraic expressions; numerical and polynomial integration; algebraic differentiation; single- and multiple-variable statistics (mean, standard deviation, etc.); function and data-graphing, and more! The program employs a GEM interface to enter and manipulate equations and

symbols, and uses GDOS to display and print special math characters. Special integer and bit-manipulation features permit the execution of many functions with binary numbers (perfect for those nasty CRC polynomial reductions!) 120 unit-types are built in, and additional units may be specified. Software and documentation are completely in English, and a well-written, 177-page manual with index is included. \$99.00 (\$119 CAN)

Projets Informatiques,
P.O. Box 302
Quebec, G1L 4V8,
Canada



Menu Plus lets you launch applications from a handy system of categorized menus.

Rimik Enterprises has introduced **Menu Plus**, a "program launching" utility that gives you quick access to over 160 of your favorite ST programs. Programs can be entered and executed via mouse-click from a menu-tree system of categories and sub-categories.

The program uses only

about 38K of memory, and also offers the ability to view Degas, Spectrum 512 and NEO pictures, to print and show text files, and to play and edit ST-Replay sound files! (\$39.95)

Rimik Enterprises
836 Osborne St.
Vista, CA 92084
(619) 630-1217

ST-PLUG of Ontario is pleased to announce that they are offering the entire line of "**Budgie UK**" products to North American ST users. This popular line of budget-priced ST software has been receiving rave reviews from ST User, ST Format, and other British ST publications. ST-Plug is also distributing

STUFFED, a disk-based quarterly for ST users, based in Aberdeen, England; and ST Music Matrix, a disk magazine for music mavens, published out of Fife, Scotland.

ST-Plug
1670 Heron Road
Box 22026, Ottawa,
Ontario, Canada K1V 0C2
BBS: (613) 731-2779

Hi-Tech Advisers have announced availability of version 5.75 of their ST Inventory Control program, **Inventory-Pro**. The upgrade adds numerous new features, including the ability to add new items while posting quantities to existing items.

(\$49.00; \$50.00 extra buys a 2-year automatic-upgrade subscription plus tech support).

Hi-Tech Advisers
P.O. Box 7524
Winter Haven, FL
33883-7524
(800) 882-4310

ST MUSIC

New Sound Music has announced two new packages for the ST, based around collections of "pre-recorded" sequences in Type 1 Standard MIDI file format, compatible with a wide variety of ST sequencing programs, synthesizers, drum machines, and synth modules.

Jazz Through MIDI is a complete course in jazz improvisation, featuring over 60 jazz classics sequenced for piano, bass, drums, and solo instrument. Lesson manual comes complete with sheet music (solo lines and chords). (\$45.95)

Background Rhythm Patterns is a kind of

"musical clip-art" package, containing over 150 popular rhythm accompaniments (piano/bass/drums) in a wide variety of pop styles.

They're designed for use as realtime backup for live performance, inclusion in jingles or other forms of composition, or simply for learning different styles of music.

Also included is a collection of over 30 popular breaks, intros, and endings. (\$42.95)

New Sound Music
P.O. Box 37363
Oak Park, MI 48237
(313) 355-3643

CardFile™ 3

Personal Information Manager

CardFile™ 3 is the complete personal information manager for your Atari ST.

With CardFile you can create easy to use Rolodex® style address books and phone lists.

A powerful and intuitive *Filter* function lets you instantly find any name, address, or phone number. Or it can even find a group of cards that match any particular information you want.

Its powerful built-in calendar can keep track of all your appointments, meetings, and important dates. Call up any day and plan out your agenda.

CardFile's Daily Agenda feature will remind you of any upcoming appointments for the next two days when you

turn the computer on in the morning. There's even an option to print a daily or weekly agenda.

CardFile is very convenient. It runs as either a desk accessory or program. Its data is easily imported by most programs and it will even type an address directly into your word processor.

It will print address books, phone lists, and mailing labels. Add a modem and it becomes an autodialer!

All this and more is available for the low price of \$39.95. To order your own copy, call us at (800) 284-4742.

GRIBNIF SOFTWARE

P.O. Box 350 • Hadley, MA 01035
Tel: (413) 584-7887 • Fax: (413) 584-2565

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ST DESKTOP PUBLISHING

PDC Corp. has released a new book that's a must-buy for all Calamus users. **The Calamus Font Resource Guide** contains neatly-reproduced, 14-point alphabetic samples of Calamus fonts from ICD (AGFA Compu-graphic) as well as a wide variety of fonts from third-party suppliers.

The 77-page Guide includes complete contact

information (prices have not been included since these change frequently), as well as information about font design, conversion, and other utilities. (\$19.95)

PDC Corp.
4320-196th S.W.
Suite B140
Lynnwood, WA
98036-6721

Computer Publications, Unltd., of Colorado, are planning the release of a new "magazine within a magazine" to cover Atari ST desktop publishing. CPU's flagship publication, **ST Connection**, has long been a favorite of ST public-domain and shareware enthusiasts. The new four-page insert, **ST-Link**,

will premiere with the September 1991 issue.

ST Connection (w/ST Link), \$14/year, 12 issues; \$48 (w/corresponding Disk of the Month)

Computer Publications Unltd.
P.O. Box 2224
Arvada, CO 80001-2224
(303) 423-6805

Dennis Palumbo has just released **Font Disk 4** for PageStream and Calamus on the Atari ST.

Included are three professional fonts: Garmond, Garmond Bold, and Garmond Light, each including upper- and lower-case letters, numbers, punctuation, and foreign and special characters. This type face family is a perfect likeness of the popular Garamond serif type.

Included on the PageStream version are

Dot Matrix font files (.DMF); Screen Fonts in 12, 24, and 36 points; Font Metric files (.FM); PostScript downloadables (.PS), and PostScript Header files (.PSF).

Each font includes its own defined kerning pairs table.

\$34.95 (PageStream)
\$29.95 (Calamus)

Dennis Palumbo
104 Barrymore Blvd.,
Dept. U.
Franklin Square, NY
11010

LYNX

Atari Corp. has announced 25 new games for the Atari Lynx, slated for release by the end of 1991!

Featured in a beautiful new 4-color preview bulletin, the new games include Hard Drivin, Rolling Thunder, Hockey, NFL Football, Stun Runner, World Class Soccer, Turbo-sub, Vindicators, Toki, Hydra, 720, Scrapyard Dog, Casino, Basketbrawl, Xybots, Checkered Flag, Geo Duel, Viking Child, Bill & Ted's Excellent Adven-

ture, Golf, and Grid Runner.

Also anticipated are the release of **Crystal Mines 2**, from Color Dreams, and **Fidelity Ultimate Chess**, from Tele-games — two new Lynx products from the growing family of Lynx 3rd-party software manufacturers!

For catalog, write
Atari Corp.
1196 Borregas Avenue
Sunnyvale, CA
94089-1302

8-BIT ENTERTAINMENT

Pondering About Max's is a new adventure game for Atari 8-bit computers, recently released by **Change in Heat Development Corp** of IA. P.A.M. is described as a "video-arcade epic incorporating wit, intelligence, music from pop star Howard Jones, and video graphics above and beyond the cur-

rent state of the art." Shipped on a single "floppy" disk, P.A.M. consists of four semi-independent program sections, and requires at least 64K of RAM. (\$22.95)

Change in Heat, Inc.
12 Bella Vista
Iowa City, IA 52245

James R. Glenn Software, of Annandale, VA, has released the Atari 8-bit version of **Valgus 2**, originally released for the ST in 1990.

Valgus 2 is an action board game that involves blocking the computer as it attempts to move pieces from the edges of a grid,

towards the center, combining aspects of "Go" and checkers with realtime arcade feel! It requires 48K of RAM, disk drive, and joystick. (\$12.00)

James R. Glenn Software
8252 The Midway
Annandale, VA 22003

ATARI 8-BIT

SOFTWARE - PARTS AND BOOKS FOR ATARI XL / XE & 800/400 COMPUTERS

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Factory fresh TANDON mechs. make difficult repairs a snap. Units are complete with Head, Stepper, Spindle motor, belt etc. Just plug in, no difficult alignments or adjustments required.

\$47⁵⁰

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Exact replacement transformer for 800/400, 1050 810, 1200XL, 850, and XF551 units. Part #CO17945.

\$14⁵⁰

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Power Pak for 800XL, 600XL, 130XE, 65XE & XE Game.

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New and complete subassembly. Easy internal replacement.

130XE/65XE **\$35.00**
800 **\$40.00**
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XL 40 PIN LSI CHIP SET

A Complete set of 40 Pin Large Scale Integrated Circuits for your 800XL, 600XL or 1200XL computer.

Great for quick repairs! Set contains one each of the following: CPU, GTIA, ANTIC, PIA AND POKEY.

\$16⁹⁵

800 4 PIECE BOARD SET

Includes Main Board, Power Supply Assembly, CPU Module and 10K Revision B Operating System Module. All boards are new, tested and complete with all components.

\$28.50

800/400 MODULES

NEW PARTS COMPLETE WITH IC'S
• CX853 16K RAM Module **\$9.50**
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• 800 10K "B" OS MODULE **\$8.75**
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• 400 POWER BOARD **\$9.50**

MISCELLANEOUS

600XL 64K UPGRADE KIT **\$29.95**
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ACE JOYSTICK **\$7.95**
POWERPLAYER JOYSTICK **\$19.95**
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PADDLE CONTROLLERS **\$9.95**
REV. "C" BASIC ROM IC **\$15.00**
Newell 1 Meg 800XL Upgrade **\$47.95**
Newell 1 Meg 130XE Upgrade **\$47.95**
850 or PR MODEM CABLE **\$14.50**
850 or PR PRINTER CABLE **\$14.50**
8-BIT MONITOR CABLE **\$9.95**
PRINTER INTERFACE **\$43.95**
XEGS Keyboard Extension Cable **\$14.50**
I/O 13 PIN PC CONNECTOR **\$4.50**
800XL RF MODULATOR **\$9.50**
RF CABLE (COMPUTER TO TV) **\$3.75**
1050 TRACK ZERO SENSOR **\$8.50**
850 12pc IC set - all except ROM **\$19.50**
ANIMATION STATION **\$74.95**
SUPRA 2400 BAUD MODEM **\$124.95**

BOOKS

Mapping the Atari (XL/XE) **\$24.95**
Mapping the Atari (800/400) **\$18.95**
Compute's First Book of Atari **\$12.50**
Compute's Third Book of Atari (Includes a high quality type in Word Processor) **\$12.50**
First Book of Atari Graphics **\$12.50**
2nd Book of Atari Graphics **\$12.50**
Graphic Book Combo #1 & 2 **\$19.95**
XE USERS HANDBOOK **\$21.95**
XL USERS HANDBOOK **\$21.95**
Assembly Language Guide **\$21.95**
USING NEWSROOM **\$19.95**
YOUR ATARI COMPUTER **\$17.95**
Programmers Ref. Guide **\$14.95**
HackerBook Tricks & Tips **\$5.00**
Write Your Own Games **\$5.00**
How to 6502 Program **\$5.00**
Basic Reference Manual **\$5.00**
INSIDE ATARI BASIC **\$5.00**
DOS 2.0 Reference Manual **\$7.50**
Tech Ref. Notes for 800/400 **\$19.95**
Basic Playground Workbook **\$5.95**
SpeedScript Word Processor **\$14.95**

SAMS Repair manuals for 1050, 800XL, 130XE, 800, 400 contain schematics, parts lists, labelled photographs, oscilloscope and logic level readings. **\$24.95 Each**

ATARIWRITER + PLUS WITH SPELLCHECK

Complete Disk based package **\$29.95**

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You get both Atari's 8 bit professional bookkeeping system and the handy CX85 numeric keypad for one low price. Packages Factory sealed **\$19⁹⁵** 4 DISK SET

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P:R: CONNECTION

Serial / Parallel interface for connecting a wide variety of standard RS232 modems and standard Centronics Parallel printers to your Atari 8-bit computer. Direct replacement for the 850 interface. **\$79.95**

P:R: or 850 to Printer Cable **\$14.50**
P:R: or 850 to Modem Cable **\$14.50**

CARTRIDGES

For XL's/XE's 800/400

PAC-MAN Cartridge **\$4.00**
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* DATASOFT DISKS *

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SPECIAL: SCOTT ADAMS GRAPHIC ADVENTURES 1-6. PACKAGE INCLUDES: ADVENTURELAND, PIRATE ADVENTURE, ADVENTURE #3, VODOO CASTLE, THE COUNT AND STRANGE ODDESY **\$14.95**

Disks-XL's/XE's/800

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Deeper Dungeons (Req. Gauntlet) **\$16.95**
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TRAILBLAZER by Mindscape **\$16.95**
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SPIDER OUAKE **\$12.50**
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MANIAC MINER **\$12.50**
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ONE ON ONE BASKETBALL **\$9.95**
LORDS OF CONQUEST **\$9.95**
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TOP GUNNER COLLECTION **\$14.95**
SILENT SERVICE Disk **\$14.95**
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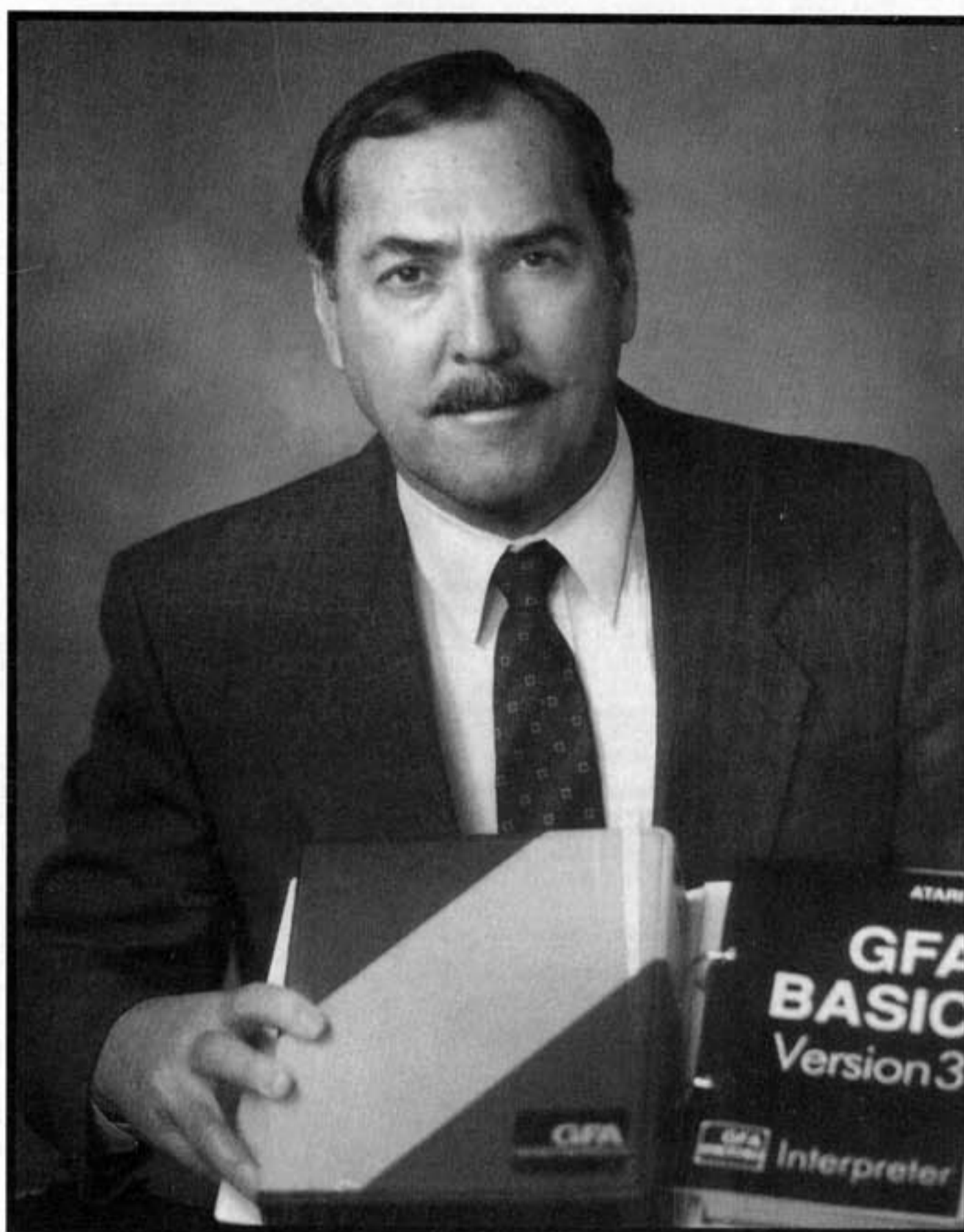
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If you corralled a gang of hobbyist ST programmers, locked them in a room, and asked them what language they used most, probably six out of ten would tell you GFA

BASIC. The first decent third-party BASIC to pop up on ST software shelves, GFA's ease of use, integrated compilation, and comprehensive documentation swiftly gained a loyal and devoted following among BASIC programmers eager to become more productive on their STs. Off to a fast start, the language has managed to retain its immense popularity in the face of important competition, including Atari's own ST BASIC, True BASIC, and newer products from Advan Language Designs and other vendors.

Designed by Frank Ostrowski, a German programmer with long experience in editor and compiler design, GFA BASIC is a product of GFA Systemtechnik of Dusseldorf, a major supplier of software tools to companies such as Mercedes-Benz and BMW. Accustomed to affiliate marketing, GFA Systemtechnik initially decided to license MichTron Software to distribute and support the product in its American release. MichTron did an excellent job of introducing the product to American ST owners, supplying a continuous stream of updates, bug fixes, and



GFA BASIC: Back to Business

By CLAYTON WALNUM

Maurice Giguere, President of GFA Software Technologies, Inc., intends to support GFA's Atari constituency to the fullest.

enhancements; offering online and telephone support; and publishing a series of books and demo disks on GFA programming in the ST environment.

When, two years ago, MichTron lost its license to distribute GFA products in the U.S., Antic Software took up the gauntlet, selling GFA BASIC through its popular Catalog. But users soon discovered that although Antic's interest guaranteed the availability of product, the stream of new information, documentation, and support was slowly drying up. What GFA BASIC badly needed was the full-time support of a dedicated staff — a staff with the time and technical know-how to meet its user's needs and act as a conduit for information and ancillary products originating in the rich German ST market.

Facing the possibility of shrinking market share and declining consumer interest, GFA Systemtechnik decided to make a decisive move. In late March of this year, the company announced the formation of an American subsidiary, GFA Software Technologies, Inc., to sell and support GFA products in the US. Maurice Giguere, a veteran software marketer and support specialist, was chosen to head the subsidiary, as president.

Former VP of Sales and Marketing for McCormack & Dodge, Giguere has twenty years of experience supporting major corporate and industrial application and development systems. "Customer support for mainframe products used in 'mission critical' situations is far more intense and responsive than the support consumer software users have come to expect," Giguere says. "We plan to apply this kind of intensity to supporting GFA products in the U.S."

GFA Software Technologies has opened offices in Salem, MA, complete with full-time support and business staff. "We will sell and support all of the GFA BASIC products." Giguere specified. "Antic

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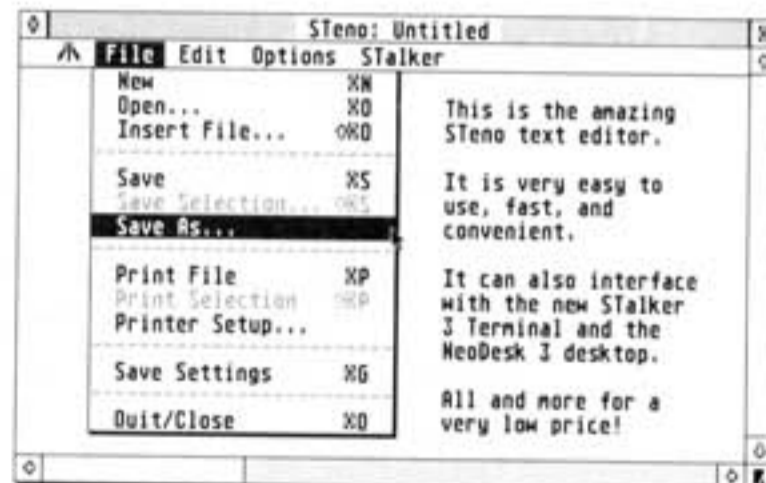
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may still decide to sell GFA BASIC through their catalog," he continued, "but all support, no matter where the package was purchased, will be through us."

Support will initially be offered by telephone, and the subsidiary intends shortly to provide online support, most likely via an inexpensive national information service such as GENie. Once that online support is in place, users will be able to get quick responses to their queries about GFA BASIC. The final support structure will continue to evolve over the next few months, as GFA executives get a better handle on consumer response.

"Our immediate goal," said Giguere, "is to start bringing American users up to date with new versions of the product line. Most Atari ST GFA BASIC users are still with Version 3.0. So our first priority is to get the current version 3.5 for the ST, and our new version 3.6 for the TT, out on the market. We're going to offer ST 3.0 users an upgrade to 3.5 for only \$49.

"Though back-compatible with prior versions, the new ST products are designed to be compatible with GFA systems running on multiple platforms, including a brand-new series of just-announced PC versions for MS/DOS and Windows 3.0. These new products open a whole new world of opportunity to programmers who wish to generate portable applications. For ST GFA BASIC programmers who wish to develop for both ST and PC platforms, we're offering fully 50% off suggested list price on our new PC versions!"

Frank Ostrowski designed the new ST, TT, MS/DOS, Windows 3.0, OS/2, Unix, and Amiga versions of GFA BASIC to address the problem of porting applications between similar-looking, but often very different Graphic User Interfaces. In addition to a large library of generic commands, compatible across all hardware platforms, each version offers a library of semi-generic user-interface functions designed to simplify the task of managing menu bars, windows, alert boxes, and other features common to all GUI's.

"The object," Ostrowski is quoted as saying, "was to make porting a GFA BASIC application

from the Atari TT to Windows potentially as simple as changing some of the deeper system calls." Naturally, each version of the language also contains a number of commands and functions that address hardware and operating system-specific capabilities, so programmers are not bound by transportable approaches.

"We've maintained a high degree of compatibility," said Giguere. "Almost all source code written on the ST can be ported to the MS-DOS and Windows versions. The only exceptions are system-level function calls." This means that ST owners who also own IBM compatibles can get their software running on both platforms. ST users who fit into this niche will be delighted to know that GFA Software Technologies plans a special promotion for the MS-DOS and Windows versions of GFA BASIC, which are considerably more expensive than virtually equivalent versions running on Atari platforms.

Giguere's plans for GFA BASIC in the U.S. don't stop there. When asked about other new products, Giguere indicated that GFA Software Technologies will be releasing into the public domain several applications programmed with GFA BASIC. They will also market commercial products programmed in GFA BASIC, with a MIDI sequencer from France heading the list.

"We want to be the focus for GFA BASIC software from all over the world," said Giguere. GFA Software Technologies will distribute PD software online, as well as form alliances with commercial PD vendors, if demand is sufficient.

In spite of their low visibility over the last couple of years, GFA Software Technologies is determined to keep their place as the publishers of the most-preferred BASIC for the ST line of computers. With their aggressive philosophy toward establishing a direct link with their customers, they should be able to accomplish this goal easily.

GFA BASIC owners should now be able to get fast, expert answers to their problems. Nothing outside the software itself is more important to users of a programming language. ■

GFA Software Technologies

27 Congress St.
Salem, MA 01970
(508) 744-0201
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GFA BASIC, Version 3.5 for Atari ST, 3.6 for Atari TT

Interpreter: \$94.95
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GFA BASIC ST users. PC
packages include
interpreter only. Compiler
will be shipped to registered
users at no extra charge,
when complete.)

ST Games



SYSTEM: Atari ST

REQUIREMENTS:
Color Monitor

SUMMARY:
Twisted
arcade-puzzle
game that would
have Dali and
Escher scratching
their heads.

MANUFACTURER/
DISTRIBUTOR:
Psygnosis Ltd.
29 St. Mary's Court
Brookline, MA
02146
(617) 731-3553

PRICE: \$34.99

some sort of fiendish M.C. Escher jigsaw nightmare. Sneering at physics in the most unusual ways, *Never Mind* represents one of Psygnosis' first forays into the strategy-puzzle-action game arena.

The basic premise of the game is this: you must recreate pictures whose pieces have been scattered around a three-dimensional playing board. Pieces are often in hard-to-reach places on other planes; places accessed by hopping down a teleport tube. If you are

lucky, you will find yourself emerging on the correct plane, with the direction of gravity properly aligned for you to walk around without falling off. You must gather all the pieces of the puzzle on the proper plateau and assemble them correctly. This must all be done before a giant pie in the sky runs out of pieces.

Never Mind

The claim on the box is not too far off base: *Never Mind* is truly unlike anything else on the shelves. And it is guaranteed to keep you challenged for weeks, if not months or even years. This multi-planar puzzle game is right out of

Sound warped? It is. And it gets better. Some of the pictures are animated, and you must re-integrate them while they flail and gyrate. Giant malicious chess pieces roam around on early levels, picking up puzzle pieces and putting them down randomly. If that weren't enough, on later levels you'll encounter moving blocks and bridges, dissolving tiles, and transporters that send you to a completely different level —any one of 250 different levels, I might add. And it all happens at a blistering pace that will have your ankles sweating.

Fortunately, there is some relief available. You can click on a question mark in the lower left corner to be given a password. This password can be used at the initial screen to choose at which level you want to start. You can also pause the game, but this feature hides the board, so don't count on it for a quick cheat.

While this is an amazingly wild game in many respects, the Psyclipse team could have done a few things slightly better. The manual is a bit misleading at times, and seems more geared to clever writing than useful information. Some of the gorgeous graphics are too blocky to make out easily, making it hard to determine where some puzzle pieces should go. Providing a non-timed version of the game would have been thoughtful, allowing people to enjoy it at their own pace and see as many levels as they like rather than working up ulcers fighting the sky-pie.

Regardless of these details, *Never Mind* earns a distinction that is rare these days — it is truly unique and different enough to raise a few eyebrows. And if action-puzzle games are your bag, then *Never Mind* might just save you from the avalanche of shoot-'em-ups and adventures long enough to survive until the arrival of whatever *Psygnosis* surely has waiting just around the corner. ■



Wrath of the Demon

In a misguided attempt to gain mystic power over unknown forces, the not-so-bright wizard, Anthrax, summons up a demon to do his bidding. The demon, who prefers his own agenda for reinstating Darkness in the land, returns the favor by zinging Anthrax with a bolt of pure evil.

Now the demon is hard at work, marshalling his forces in a bid for ultimate hegemony. It's a crisis! Can't someone be found to carry news of this disaster to the king?

Enter you. Pack your bag, hop on a rented horse, and set out on the quest of a lifetime. *Wrath of The Demon*, by Readysoft (creators of *Dragon's Lair* for the ST), is a

SYSTEM: Atari ST

REQUIREMENTS:

Double-sided drive
strongly
recommended

SUMMARY:

Outrageously
animated action
adventure entertains
enormously.

MANUFACTURER:

Readysoft Inc.
30 Wertheim Court,
Unit 2
Richmond Hill, Ontario
Canada L4B 1B9
(416) 731-4175

PRICE: \$49.95

no-nonsense, action-packed game of extraordinary magnitude. With the graphic fury of any Psygnosis game and the fantasy elements of King's Quest and Barbarian all rolled into one, this is one heavy-duty adventure.

You start out at a bullet pace. After reading the stately, somber introduction, you find yourself flying along on horseback in front of a multi-level parallax-scrolling background. The scenery is lavish and beautiful, but you won't have a second to watch it: you must watch the ground every moment to avoid the obstacles that your horse must jump over. You also need to catch potions and gold as they slide along beneath you. Jumping rocks and ducking birds, you must collect enough potions and money to last you for quite a while. You'll need every one, too, because this is just the beginning.

"Wow" is pretty much the only word that can do justice to this program. Readysoft has outdone itself in creating a fantasy world detailed enough that you will want to play again and again just to see the myriad things you missed last time. The graphics are stunning, from multi-level parallax scrolling to confrontations with humongous creatures of nasty disposition that you must hastily dispatch, or risk dismemberment.

This game has potential to become one of this reviewer's personal favorites. It caters less to the fantasy gamer than to the action fiend, but it employs elements of both to bridge the gap. Its big problem is one that it shares with other Readysoft games: it comes on four disks and requires significant disk access, but it cannot be installed on a hard drive. Readysoft should make this an option for future games. It would make the difference between games that are great and games that are absolutely perfect. Wrath of the Demon comes highly recommended. ■



SYSTEM: Atari ST

REQUIREMENTS: Color monitor, joystick

SUMMARY: One of the best race games yet for the ST.

MANUFACTURER:

Accolade Software
550 S. Winchester Blvd.
San Jose, CA 95128
(800) 245-7744

PRICE: \$49.95,
Scenery disks
\$21.95 each

Test Drive II: The Duel

Driving simulations are extremely popular in the arcades, bringing the player as close as

possible to actually getting behind the wheel of that Ferrari and taking on a whole slew of professional drivers — without getting maimed, of course.

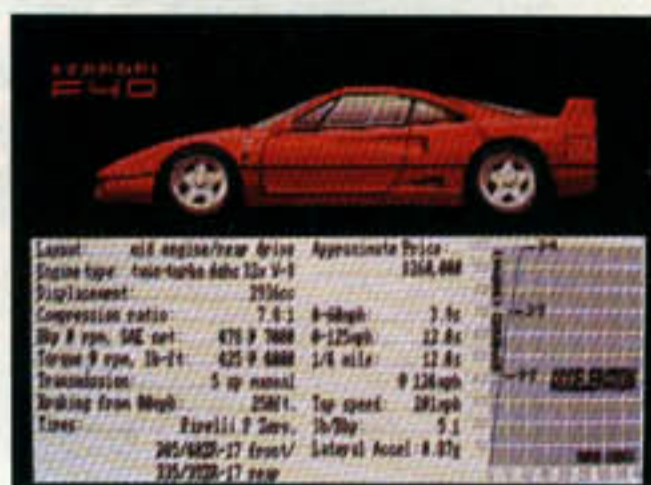
While fun in the arcades, however, racing games have rarely translated well to microcomputers. Without a steering wheel to grip and graphics-dedicated circuitry, racing games have typically been slow, flickery, and unpleasant to play. Until now.

Accolade software's Test Drive II: The Duel is a sequel to their popular Test Drive. Like all good sequels, it takes the essence of the original, adds all sorts of new flavors and angles, and runs with them. Taking into account the continuing lack of a steering wheel (despite the upgrade), Test Drive II is one of the best racing games available for the Atari ST.

"Slick" is one of the weaker words I could use to describe this game. Test Drive II is flashy and complete down to every ar-

cade detail. The graphics are wonderful. There is no graphic time lag here — your car responds quickly and smoothly to commands (almost too smoothly at times), and the scenery slides by without a hitch. Roadsigns are readable (and occasionally vital); tunnels dark and foreboding; and if you plunge off a cliff, you watch your car nose down and plummet into the ground. The music and sounds are sparse but well placed.

After you take a look at the articulate, witty instructions, boot right up and get ready to floor it. After a tastefully simple off-disk protection puzzle, the demo screens and selection screens come up. From the initial selection screen you can choose options for the race. Will you select the Ferrari F40 or the Porsche 959 (or one of ten other cars available on disk



from Accolade)? Shift or Automatic? Will your race be against time or against another driver? Do you want to use the standard scenery or plunge through Europe or California with additional scenery disks? Traffic density; cop speed; your opponent's ability: all these variables can be set, each affecting game play either directly or indirectly.

The available scenery and car

disks for Test Drive II are fun to have, increasing the number of cool vehicles you can test out and the places you can go. As usual, however, this game cannot be installed on a hard drive, so it is very advisable to have two disk drives if you intend to use any additional disks. Otherwise it just won't be worth the trouble of constant disk-swapping.

On the whole, however, Accolade has done an excellent job of putting Atari ST users behind the steering wheel. With twelve hot cars to choose from and three different scenarios to drive through on your horsepowerful mission, Test Drive II will greatly appeal to driving fans of all ages. And it will make the decision of whether to buy a Ferrari or a Porsche that much easier to make, of course. Sigh. ■

Stryx

There is a pattern emerging in the Psygnosis games coming from the Psygnosis crew: they are all extraordinarily hard. One of their more recent releases in the strategy-arcade market is Stryx, a game that combines horizontal scrolling shoot-'em-up, Space War-style games, and jumping-climbing platform games into one huge and very difficult package.

SYSTEM: Atari ST

REQUIREMENTS:
Color Monitor

SUMMARY: Tricky, smart, genre-spanning shoot-'em-up with lots of action and ram-paging robots.

MANUFACTURER:
Psygnosis Ltd.
29 St. Mary's Court
Brookline, MA
02146
(617) 731-3553

PRICE: \$34.99

The story so far: the robots are rebelling! Yup, they finally wised up and ate the golden apple, or whatever it is that robots do to get smarts. Anyway, they are unhappy with the current arrangement and have decided that they want to change it by killing everything human. Bad news. However, the humans foresaw this development and built an insta-destruct device into every computer and robot. Good news. But, the robots know this and have stolen the keys that

operate this Lifeforce device. Bad news again. Fortunately, the humans have you, a half human/half robot super-creature that can go in and activate Lifeforce manually. Good news? Hmmm, they don't say what this will do to

you. But then you don't have a choice since they built you.

You begin the game climbing and leaping around the various levels of the first of four Dome cities. On these platforms you will find weapons, passes, keys and other such useful objects that will eventually help you get to the Lifeforce computer in the fourth Dome. You'll also run across hordes of lethal robots who want to crash your system but good. These range from floating bat-like things to teleporting goons with guns — even a vicious recreation of Robbie the Robot (who also adorns the box and the title screen).

When you are low on energy, you must go into the hive for a coffee break. In this complex web of tunnels and caverns you can find energy crystals to repower both you and your weapons. This segment is strongly reminiscent of Oids, a Lunar Lander-style game from a few years ago. You float around, dealing with inertia and linear momentum and other such annoying laws of physics, trying to find the vital crystals. Don't ogle the scenery too long, however, 'coz you are not alone down there. The robot mining crew has set up defenses that will try to take you out quickly. And they will very likely succeed, too.

Finally, if you can find the proper exit, you will mount a speedbike and travel the corridor to the next Dome, blasting all the enemies that get in your way. I wouldn't count on getting there very soon, however.

Except for a somewhat less-than-terrific manual with its constant misuse, or at least misunderstanding, of the term "cyborg," this is an excellent game. Difficult, sure, and the manual could be a lot more helpful, but Stryx is well executed and lovely to look at. But why Robbie? He was such a nice robot ... ■

SYSTEM: Atari ST

REQUIREMENTS:

Color Monitor
Double-sided
drive strongly
recom-
mended.

SUMMARY:

Dirk the
Daring is
back on his
longest, trick-
iest, and
goofiest mis-
sion ever.

MANUFACTURER:

Readysoft Inc.
30 Wertheim Court -
Unit 2
Richmond Hill, Ontario
Canada L4B 1B9
(416) 731-4175

PRICE: \$59.95



Dragon's Lair II: Time Warp

There's trouble in
paradise. Dirk the

Daring, hero of Dragon's Lair, has rescued the beautiful, buxom princess Daphne and saved her from the jaws of the evil Dragon. Hooray and all that.

But just as Dirk and Daphne were ready to settle down to their well-earned happily-ever-after, who should come along but the evil wizard Mordroc. He has other plans for Daphne, including kidnapping and eventual marriage. Dirk, being the romantic sort he is, will have none of this.

But Dirk's quest will not be easy (what fun would it be if it were?) Mordroc has whisked Daphne away beyond the reaches of normal time, and Dirk must use his every wit to find and rescue her. Add to that a deranged mother-in-law the size of Pittsburgh who is out to smash Dirk with a rolling pin, and it becomes clear that Dirk's work is cut out for him. Dragon's Lair I was just a warm up for this baby. Dragon's Lair II: Time Warp is certainly a worthy successor to the original Don Bluth game. The animation and color are just as stunning (truly like living a cartoon), the sounds are even better, and it has more scenes than ever — almost four times as many as the

Continued on Page 25

The Untouchables

Continuing in their trend of converting popular films into computer magic, Ocean software has released *The Untouchables*, an ST version of the 1989 box office smash with Kevin Costner and Sean Connery. They have included six vital scenes from the film, attempting to bring the whole cinematic experience right onto your ST.

You are Elliot Ness (or Kevin Costner, whichever you prefer to think of yourself as), a Treasury agent who has been assigned to clean up Chicago during the Prohibition era. The thorn in the side of Chicago's law is Al Capone, a media-savvy mob boss so powerful that he need never come in contact with any illegal activities — he just orders them and rakes in the profits. As a result, no one can lay a finger on him. Your job is to bust his operations and get enough evidence to have Capone indicted and sent up the river for tax evasion.

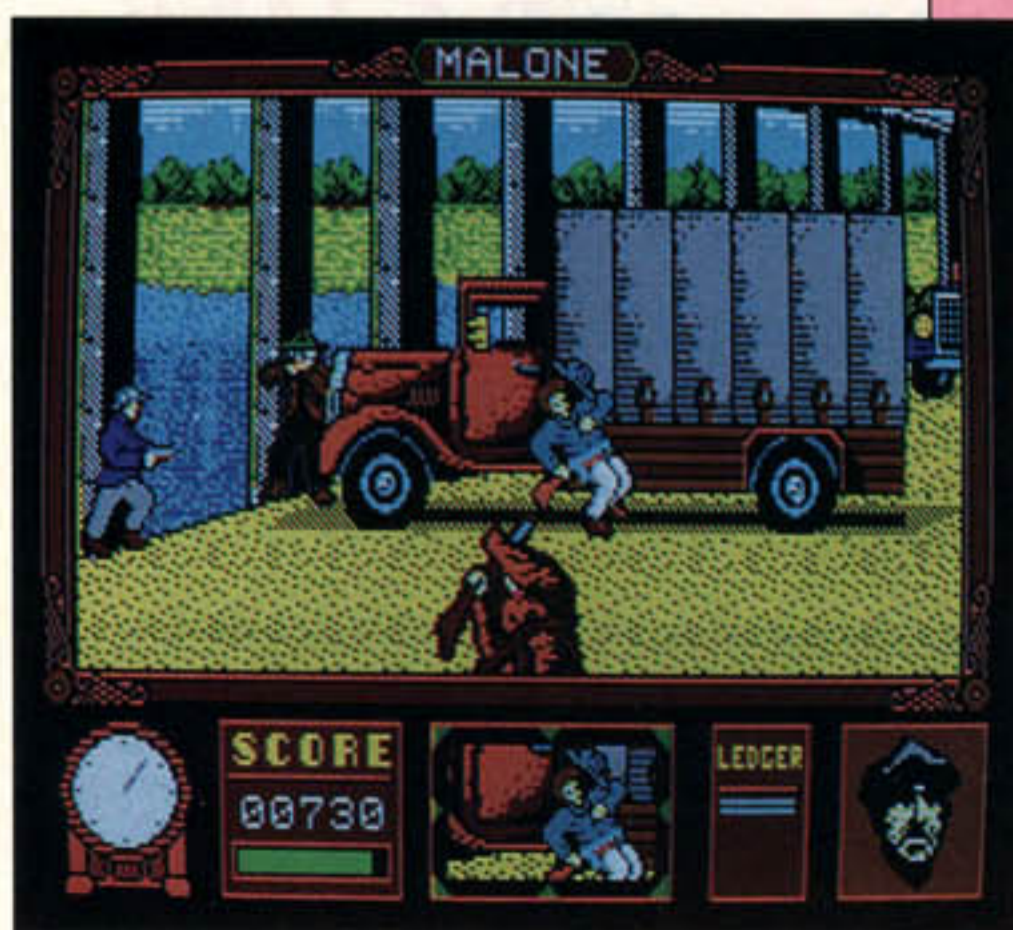
The game is divided into six scenes: The warehouse shootout, the bridge bust, the chase to the train station, the station itself, saving Capone's ac-

countant, and the rooftop fight between you and Capone's lead hitman. Each of these varies in style and control method. For example, the first screen is a simple scrolling, climbing platform-style shoot-the-bad-guys-and-collect-the-loot type game, and the controls are fairly simple. During the bridge shootout, however, you must control all four Untouchables by switching between them, a feat that takes some getting used to.

The first two screens of the game are quite a bit of fun, but it would be hard to say much beyond that, since I never managed to get any further. The first screen is especially hard. Even after I managed to figure out the controls properly, it was very easy to get killed without accomplishing much. And even after becoming proficient at staying alive, the time limit was short enough to make it an Olympian task simply to collect the ten pieces of evidence. It would be thoughtful to have had a non-timed option to allow players to test their skill and still be able to see higher levels within fifty games.

As with all Ocean games, instructions are offered not in booklet form, but printed on both sides of a poster, included with the package. I think Ocean should reconsider this method of documentation, since the poster is difficult to handle during game play.

Despite the difficulty factor, which is very high, I really do like this game. It does not suffer from the same disk-switching mayhem that has plagued certain other Ocean efforts, and it is quite a lot of fun. The graphics are somewhat basic but very well used, and the sound is good, with little musical themes before each level. With your Tommy gun and your team backing you up, you may prove yourself Untouchable by taking out Capone and saving Chicago. ■



SYSTEM: Atari ST

REQUIRED EQUIPMENT:

Joystick, Color Monitor

SUMMARY: Fun but difficult joystick-wrencher, Roaring 20's-style

DISTRIBUTOR/ MANUFACTURER:

Electronic Arts/
Ocean Software
P.O. Box 7578
San Mateo, CA
94403-7578
(415) 572-ARTS

PRICE: \$39.95

Nightbreed

Clive Barker, prodigal successor to Stephen King as horror mogul extraordinaire, recently directed an excellent film based on his novel *Nightbreed*. *Nightbreed* is a horror story, but with an interesting twist.

The heroes of the book and movie are creatures monstrous and fantastical, whose sanctuary in the necropolis called Midian is breached and overrun by mortal men, victims of prejudice and manipulation.

Despite action and gore aplenty, Barker's horror-story-cum-sociological-study went above the heads of many, both in book and movie form. Now Ocean software has converted the film into an interactive action-adventure that tries to capture the essence of the original story without going over anyone's head. You play the game from the point of view of the story's main character, Aaron Boone, a psychiatric patient who has just been informed by his psychiatrist that he may have perpetrated a series of violent murders in recent weeks, based on information revealed under hypnosis. Having no memory of this, you commit yourself to an asylum for care. You gradually realize, however, that you were meant for something greater, and go in search of a mystic graveyard called Midian. Escaping the asylum, you plunge into a world of death, monsters, secret cities, hate and a mission beyond anything you ever believed possible.

The game is divided into several separate, graphically rich sections, each with its own control schemes and goals. For example, you must get from the asylum to Midian by way of a detailed overhead map. You must drive your car along the roads of the town, avoiding (or ramming) police roadblocks and trying to keep from running out of gas. Once at Midian, you must choose the proper course of events to allow you to avoid death and enter the necropolis (no easy feat).

If this game has one thing going for it, it is accuracy. It follows the movie very closely. The game rides the brink between action and adventure, but is basically an action game with an adventure format. It is linear in structure, so you must



SYSTEM: Atari ST

REQUIRED EQUIPMENT:

Joystick, Color monitor

SUMMARY: Horrors-galore

action drama lets you live the flick, but with some inconsistencies.

DISTRIBUTOR/

MANUFACTURER:

Electronic Arts/
Ocean Software

P.O. Box 7578
San Mateo, CA
94403-7578
(415) 572-ARTS

PRICE: \$39.95

complete things in the proper order to win the game, but the tasks themselves are action games. So if you know the movie, you will know which path to follow. This by no means will rob you of any challenge, however; the action scenarios are often quite difficult to master.

Though all portions of the game are accompanied by well-rendered graphics and good sound, *Nightbreed* varies in quality from scenario to scenario: The map-driving portion is so easy as to be only a distraction; running from Peloquin in the graveyard is difficult at

best, with a strange control scheme; navigating Midian itself (the real meat of the game) is fun but very difficult. It would have been kind on Ocean's part to provide players with a non-linear option so all sections of the game could be accessed without hassle, since it may take a good while to even get inside Midian.

All in all, *Nightbreed* is an uneven game with some good moments. A good way to see if it's for you is to watch the movie (or read the book) before buying. ■



Team Yankee

I had originally intended to write up ReadySoft's Team Yankee in a one-paragraph "New Products" release. But after the obligatory run-through stretched beyond eight hours, I figured the whole story should be told. Let me state plainly, at outset, that I despise military strategy games. Nor am I a fan of amped-up, super-accurate simulations that take longer to master than WordPerfect.

Happily, however, although Team Yankee incorporates elements of both strategy and simulation, it goes way beyond either genre in excitement, challenge, and playability. The game is based on a 1987 novel by Harold Coyle that tells the story of a U.S. tank company called upon to beat back the first Soviet ground offensive of the third World War. Playing the game, you take command of the four units of Team Yankee in five mission scenarios, each of which pits you against the advancing Soviet menace in a different way: attack, defense, "search and destroy," etc. To win the game, the cycle of battles must be fought through five times in all, each level offering substantial variation and increasing challenge.

Your four units each consist of four vehicles — sixteen vehicles in all — ranging from M-1 Abrams tanks to mobile missile-launchers. Luckily, the designers of Team Yankee decided, in the interests of playability, not to expect you to

SYSTEM: Atari ST

REQUIRED
EQUIPMENT:

Color Monitor

SUMMARY: Bar none,
the best realtime
tank-war simulation
we've ever seen.

Buy two!

DISTRIBUTOR:

ReadySoft, Inc.
30 Wertheim Court,
Unit 2
Richmond Hill
Ontario, Canada
L4B 1B9
(416) 731-4175

PRICE: \$59.95

control each vehicle independently. Instead, you drive Team Yankee at the unit level, treating each unit as if it were a single entity, using one set of movement, viewpoint, and weapons icons, plus a set of "formation" buttons that offer a degree of control over the position of individual vehicles relative to one another and to the unit's line of march. On the "quadrant mode" screen, four sets of miniaturized icons and viewports allow you to control all of Team Yankee's units simultaneously. Alternatively, by switching to full-screen view, a single unit can be

commanded more precisely, using enhanced controls and a larger, higher-resolution viewport.

Each unit's viewport can display three different "views" of battlefield circumstances. A map-like "strategic view" allows for unit movement — you simply click where you want a unit to go and set your throttle, and the unit will make best speed towards that destination (given the vagaries of terrain) until it either reaches it or is deliberately brought to a halt or redirected. A second "status view" lets you monitor your unit's hardware (i.e., ammunition and damage), and human resources (crew morale) both of which affect the capacity of the unit to fight effectively and to respond to your commands. Third, and most important, is a "combat" view, that displays the battlefield from ground-level in full, 3-D, realtime, solid animation. When combat view is selected, controls become available for traversing the turret a full 360 degrees (two separate compasses help you sort out what's happening when your turret is pointing one way while your unit is moving another) giving you a global view of your immediate surroundings.

Additional unit combat controls include 10-power magnification of the field of view, infrared (wherein

vehicles show up in bright green due to the heat they release, useful for night-fighting and for seeing enemies hiding in tree-cover), and laser range-finding. Controls are also provided for engine smoke-generation and weapons selection.

Weapons include high-explosive shells (HEAT), SABOT armor-piercing shells, TOW long-range wireguided missiles, machine-guns, and smoke shells, though only the lead unit carries the full range of armaments. Each weapon type is distinguished by characteristics of range, accuracy, and penetrating power, and efficient fighting depends on correlating weapons and targets appropriately, according to the varying ability of different Soviet units to withstand damage. Your Soviet opponents, almost needless to say, have a similar range of vehicles and weaponry at their disposal, all simulations of current Warsaw Pact war machines.

All this wonderful hardware would be no more than window-dressing, however, were it not for the fact that it overlays a battlefield simulation that is extraordinary in every respect. The physical aspects of the simulation: terrain, movement of units, resistance and vulnerability of individual vehicles and vehicle types, deployment of weapons, etc., are processed simultaneously without a hitch, often for an enormous number of active vehicles. In the higher levels of the game, moreover, the intelligence and strategic capabilities of individual Soviet units becomes quite impressive, and confront you with some fairly tricky individual and coordinated strategies.

But Team Yankee doesn't stop there in its pursuit of excitement and verisimilitude. Everything counts in this game, both hardware and human. To propose just one example, the amount of time it takes to load a given weapon (and the accuracy of that weapon) is a function both of the weapon type, as noted above, and of the crew's "morale" — an index that drops when a unit sustains damage, and rises when successful kills are made. The resulting feedback loop induces marked emotional tension in the player, who feels the thrill of victory and the agony of defeat through the fluctuating response of his weapons systems.

Cosmetically, also, the program is nearly perfect. The 3-D graphics are flicker-free, even when the system is presenting four viewpoints, simultaneously. Sound, which is mostly digitized, is both realistic and evocative. The manual, while reasonably short, is well-written and remarkably informative. A "practice scenario" is offered to let players master the skills of combat without suffering humiliating defeats. And last, but not least, though the game can easily be played from floppy disk, it may be installed on a hard disk at will. And a copy utility is even included to facilitate this installation! The verdict: Team Yankee is a winner! Happily, ReadySoft has committed to marketing additional ST products from this same developer (Empire Software, who also developed the ST version of Hunt for Red October), so we can expect more such excellent software in the near future. ■

Dragon's Lair II

Continued from Page 21

original. With this much new ground to travel, you will be puzzling out Dirk's moves for a long while.

As in the original, you control Dirk's reactions to situations with the joystick or keyboard. As he wends his wily way through all manner of bizarre, beautifully animated scenarios, you must help him get out by moving him in the right direction or attacking appropriately. This is an extremely difficult procedure, since the scenes are thrown at you with alarming speed. And since all of them are new, it will take a lot of trial and error to figure out which series of moves will keep Dirk alive.

The game's single problem is that it is still not installable on a hard drive. This is something I usually try not to harp on, but for a game like this it is all but necessary. The game is *constantly* accessing the drive in a slow and noisy fashion, and game play and all-around fluidity would be greatly improved if it were simply accessing off a hard drive. It is annoying to wait for long disk loads between game sessions when the game you're playing is so easy to lose.

With that small exception, Readysoft has done just about everything right in DL2, including bringing back my favorite part of the original: when Dirk is reincarnated, his skeleton rises against an eerie background of skeletons and is reanimated in a flash of blue light. Despite the loading problems, this is a great game to play. It will take some patience to really get far, but it will be worth it, if just to show off to your friends. ■

By JOHN B. JAINSCHIGG

Travels

Doubtless, there's an aspect of portable computing that lends itself to macho fantasies of traveling light, shooting

trouble, and filing late-breaking dispatches from a camouflaged pup-tent in a muddy foxhole. And hey, I'm as vulnerable to macho fantasy as the next galoot. But having used portable computers since

With

they were first invented, I've had years to hone fantasy against

A Hands-on
Look at Atari's
Transportable St

the grindstone of common sense. And I've become convinced that the point of portable computing has (almost) nothing to do with the *portable* part (i.e., the part that lends itself to fantasy).

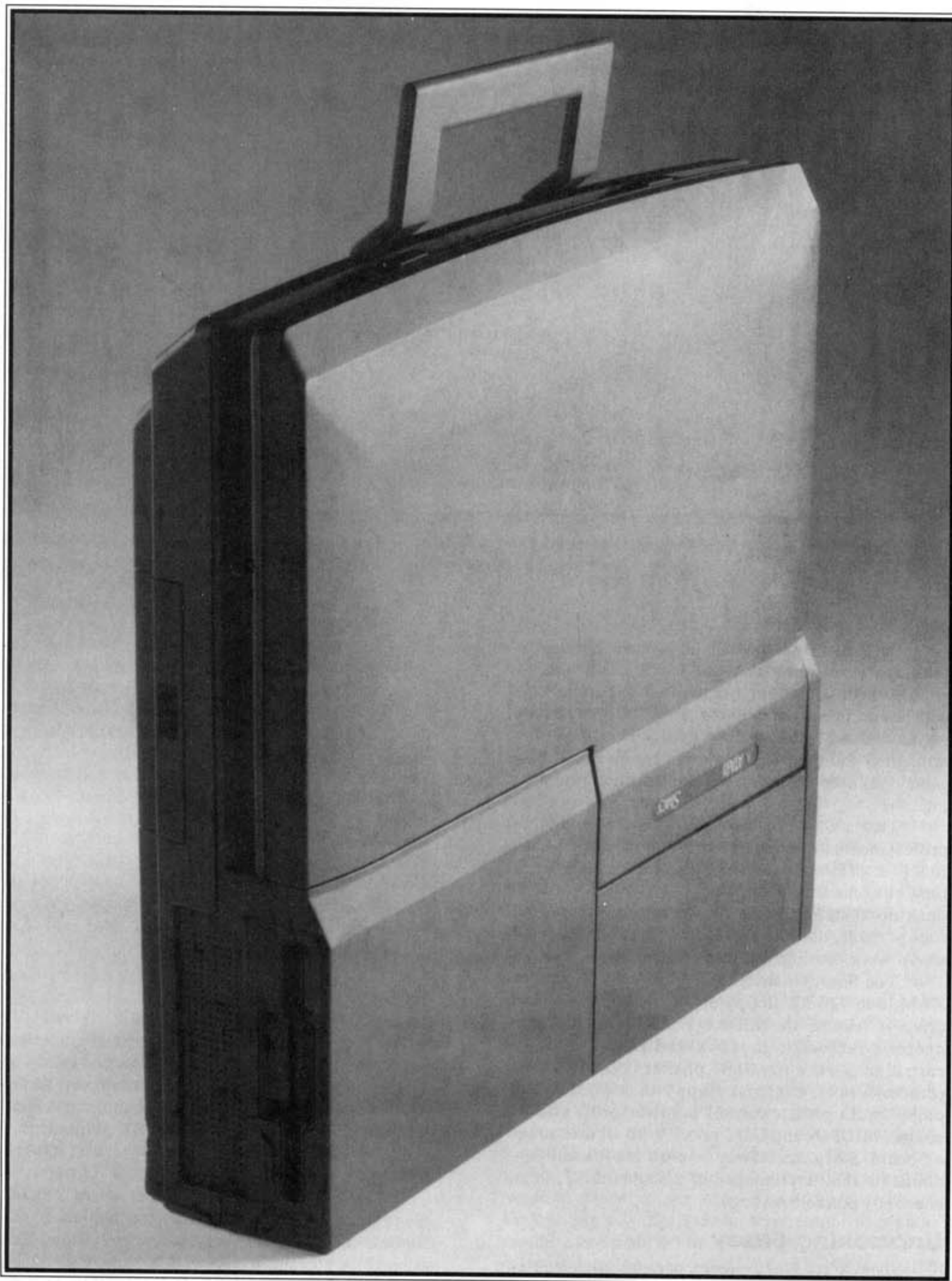
Instead, like travel irons, little-sewing-kits-in-a-thimble, and those wonderful guides to fast-food restaurants in Paris, the

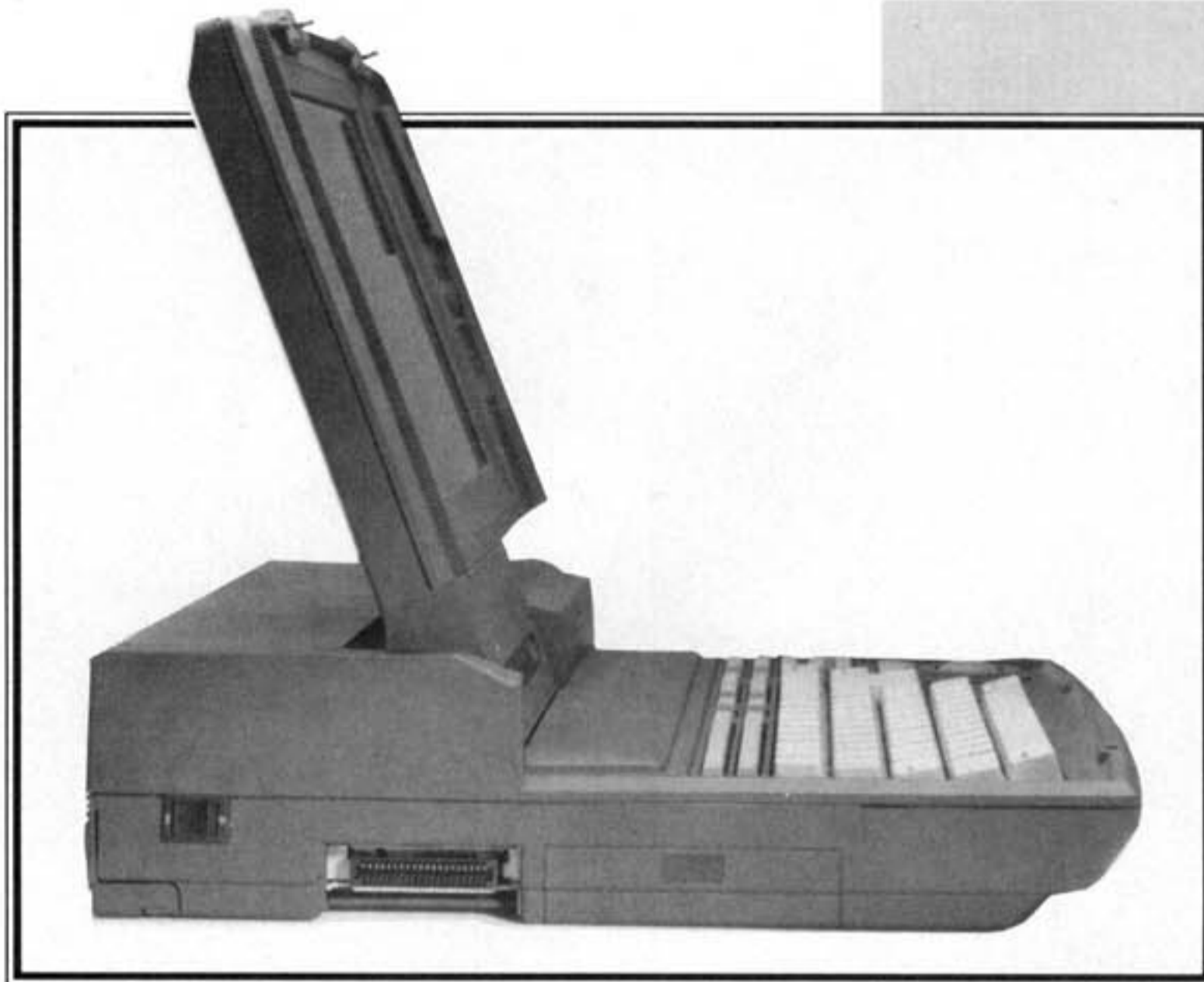
Stacy

real purpose of portable computers is to make us feel *completely at home*, wherever we are. A good portable computer makes it possible to emulate, in a variety of un-

familiar contexts the not-terribly-glamorous-but-hopefully-quite-productive workstyle you normally enjoy.

PHOTOGRAPHY BY JEFF MACWRIGHT





Left side of the Stacy, showing the ST-compatible cartridge port (cover removed).

For musicians, this can be particularly important, since so much of what a musician does — whether with a computer or with an instrument — depends on fluency and timing. That fluency can only be maintained if the systems used for composition, arranging, and other homely tasks are essentially the same ones used for recording, touring, and performing.

That's why musicians, film people, and other professionals have eagerly been awaiting the Atari Stacy. It offers the same power and functionality they've come to expect from conventional Atari ST desktop systems, but offers these facilities in a transportable, durable package that's appropriate for studio work, touring, and live performance.

The Stacy is currently available with 2 Mb of RAM, one 720 Kb floppy drive, and a 20 Mb hard drive. It features the full range of ST ports and connectors, including joystick and mouse ports, a cartridge port, a parallel (printer) port, RS-232 (modem) port, external floppy disk port, DMA daisy-chain port, external monitor port, and of course, MIDI IN and OUT ports. With all this power on-board, Stacy can closely — even transparently — duplicate the functionality of a standard ST, in an eminently portable package.

Unpacking Stacy

The Atari Stacy comes packed in a slightly more compact box than a standard Atari system,

Atari Stacy, At a Glance

CPU: 8 Mhz 68C000
(CMOS 68000)

ROM: 128K

RAM: 2 Mb

DISPLAY: Flat-panel Super-twist LCD, emulates ST 640 x 400 monochrome graphics mode. Separate port is provided for RGB color monitor.

KEYBOARD: 94-key full-travel, including 10 function keys, separate cursor-control keys, numeric keypad.

POINTING DEVICE: Built-in, two-button trak-ball, emulating ST mouse. Switch permits alternative use of conventional mouse.

PORTS: ST mouse, joystick, 128K cartridge, serial (RS-232), parallel (Centronics), external floppy, external hard drive (DMA), RGB/monochrome monitor port, MIDI IN/OUT.

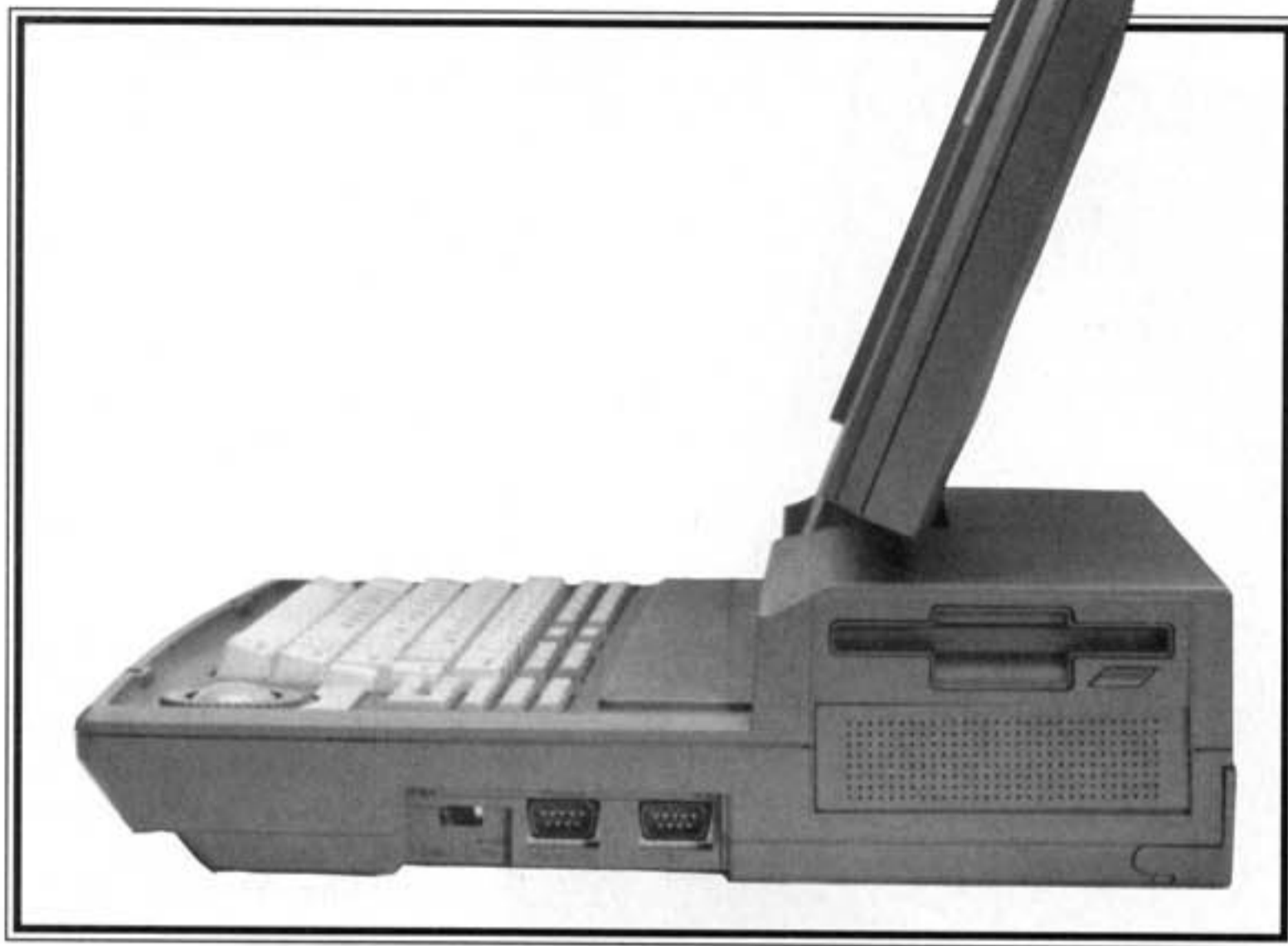
OPERATING SYSTEM: GEM, Rainbow TOS in ROM

MASS STORAGE: One 720 Kb high-density microfloppy drive (3.5"), reading and writing in MS-DOS compatible format. 20 Mb Conner Peripherals internal hard drive.

SUGGESTED RETAIL PRICE: \$ 1,999.95

doubtless both because the machine itself is smaller than a standard ST and because — as a portable — it is far less vulnerable to breakage in transport. Along with the one-piece Stacy system unit comes an external power adapter, a "generic" ST manual plus Stacy-specific addendum, an ST Basic Quick Reference manual, and two disks.

The first of these disks is a standard ST language disk, bearing a copy of Atari ST Basic, the Control Panel desk accessory, and other utilities. The second disk contains a copy of Atari's new hard disk utilities for Stacy, a revision necessitated by Stacy's



Right side of the Stacy, showing external mouse and joystick ports and mouse/trak-ball select switch (cover removed). The internal Conner Peripherals 20 Mb hard drive is mounted beneath the floppy disk drive, and is concealed by a perforated cover.

built-in hard drive, which incorporates new drive-controller hardware.

As you would expect, the Stacy is compact when closed, measuring a scant 3-5/8" high, 15 inches wide, and 12-3/4" deep. The one-piece handle, attached to the keyboard end of the unit (see photograph), folds back into a recessed well when not in use. Standing on end, like a piece of luggage, the unit is comfortably stable. While in this position, the hard disk and floppy drive rest below the unit's center; important, since it insures that if the unit ever does fall over, these most delicate components have the shortest distance to fall. Since the hard and floppy drive units represent most of the mass of the device, placing them towards the rear also adds to the unit's overall stability in "carry mode."

While the Stacy might be stable, it isn't exactly a lightweight. Though every attempt has been made to keep the weight of the unit to a minimum, it still weighs in at a hefty twelve pounds; light enough to shlep from one airport ramp to the next, but hardly the kind of thing you want to carry around all day. The handle, while secure, well-balanced, and reasonably comfortable to grip, is clearly not designed for carrying the Stacy more than a few blocks.

Luckily, a variety of third-party companies have recently come out with universal laptop cases that fit the Stacy quite nicely. Our current favorite, from Computer Coverup, Inc., is made of

water-resistant 1000-denier Cordura (Suggested retail: \$85 from Computer Coverup, Inc., 2230 S. Calumet, Chicago, IL 60616, (312) 326-3000, (800) 282-2541 for details). Sleek and elegant, it fits the computer like a glove, has a comfortable shoulder strap, and provides external and internal pockets for power adaptor disks, and extra supplies.

Setting up Stacy

When closed for transport, Stacy is fully sheathed in grey ballistic plastic, and is almost hermetically secure. The LCD screen is clamped firmly over the keyboard by two metal hooks, protecting both delicate components from impact.

Tight-fitting covers shelter the cartridge port and mouse/joystick ports on the sides of the keyboard, while a long, hinged cover clamps firmly over the array of ports in the rear.

Setting up Stacy for business is generally as simple as opening up and folding back the screen, and doing likewise with the rear protective cover, which folds down into a step that slightly elevates the rear of the unit. Though early press-releases touted the Stacy as having the capability to run off batteries, production Stacys are designed to run off line current, supplied by the included power adapter. A cord from this adapter plugs into a jack in the rear panel.

Stacy's power switch is at the rear of the left-hand side of the unit, well out of reach of accident in normal use. When switched on, the machine boots exactly like a standard ST, first examining the hard disk for an autoboot driver, then examining the floppy drive, then finally — if frustrated in both cases — coming up with the default desktop.

The Stacy hard drive is shipped unformatted. Owners should therefore boot the first time with the enclosed hard disk utility diskette, which contains a hard disk driver in its \AUTO folder. The next step will be to format and partition the hard disk, using the supplied utility program, HDX (Atari Advanced Hard Disk Utility v. 3.02). Finally, most users will wish to install a bootable driver on the Stacy's hard drive, using the utility program INSTALL, allowing the Stacy to boot directly from the fixed disk's root parti-



The Stacy, set up for work (note rear port cover folded down to form elevating step.) Stacy's full 94-key ST-compatible keyboard features all ST function keys, cursor-control keys, and numeric keypad, as well as a built-in trak-ball emulating a standard ST mouse.

tion. The process of formatting and preparing the hard disk for use is fairly simple, and any ST veteran should be able to handle it without referring to the manual.

The Stacy internal hard disk is fast, quiet, and seems very reliable. (N.B.: it's made by Conner Peripherals, reputed to be the fastest-growing OEM hard-drive manufacturer in the world.) Though the drive powers up at the same time as the CPU, boot-time is still considerably shorter than when using a standard 1040 with external hard drive.

Not that you can't attach an external hard drive to a Stacy, if you want. The system DMA connector, mounted on the backplane, permits daisy-chaining up to seven DMA-interfaced devices, such as external hard drives and Atari laser printers. When setting up this type of system, it's important to remember that the Stacy's internal hard drive is SCSI device 0; all DMA devices must be set with unique device numbers.

The LCD Screen

Once the machine is turned on, first-time users will wish to set display brightness and contrast, managed by turning a set of knurled dials mounted flush with the case on the right-hand side of the screen. The brightness knob controls the intensity of the backlight behind the transparent LCD (the backlight can be turned off in brightly-lit conditions); while the contrast knob controls the opacity of pixels on the display itself. Grouped below the controls are a series of activity lights, which indicate status of the internal floppy and hard drives.

The Stacy's LCD, which precisely emulates a standard ST's 640 x 400 monochrome display, is exceptionally clear and readable when brightness and contrast are appropriately set. The image itself is cyan, which is very easy on the eyes. Pixel refresh is somewhat slower

than on a standard VDT, which tends to cause a bit of "ghosting" about the fast-moving mouse pointer or quickly-scrolling text, but after a while, this is hardly noticeable. Moreover, because of the slower refresh (and therefore fade) rate of the LCD, the Stacy's screen does not pulsate subliminally in time with 60-cycle line current, as do standard VDT displays. Moreover, the Stacy display emits no ionizing radiation.

Keyboard and Trak-ball

The Stacy's keyboard (see photo) emulates that of an ST in every particular, except for key placement and size. The main keyboard, which is full-size, has marginally better tactile feedback than the keyboard found on a standard ST — its response is firm, precise and "snappy," ideal for the experienced touch-typist. Ten small function keys are grouped to the upper left of the main keyboard, in two rows — an arrangement that habitual function-key users must adapt to in switching from the single row of function keys on a standard ST. Help and Undo keys are in the center, while insert, Clr/Home, and cursor-control keys are grouped into a T-formation above the right of the main keyboard.

Again, this arrangement requires some adaptation, though after several days of constant use, I find

my hands falling quite naturally onto the cursor keys when I choose to use this portion of the user-interface. The numeric keypad is to the right of the main keyboard, and is pretty teensy-weensy — not exactly an accountant's dream, though fine for intermittent use (for example, with an on-screen calculator).

First-time users will wish to test the built-in trak-ball to see if rolling it moves the Stacy's on-screen mouse pointer. If not (mine didn't), it means the system has arrived from the factory with the mouse/trak-ball switch set to "mouse" mode — apparently a common situation.

To correct the problem, remove the plastic cover from the well on the right side of the Stacy's keyboard, exposing both the switch in question and the Stacy's standard mouse and joystick ports. Flip the switch to activate the trak-ball, or install a standard ST mouse (which may be ordered from Atari), and you're under weigh.

The two-button trak-ball is admittedly a compromise. Pointer-positioning with the trak-ball, though at first difficult, swiftly becomes easier with practice; and basic "point and click" operations (such as those used to select from menus) are quite manageable. Unfortunately, because it's nearly impossible to hold down the left button while moving the ball, "click and drag" operations (such as those used to move and copy files from window to window) are difficult to perform one-handed. If you don't mind carrying a standard mouse, then by all means, buy one and use it.

Rainbow TOS

Stacy incorporates TOS 1.4, also called Rainbow TOS, which adds several convenient features to those enjoyed by owners of older STs. Here are just some of the improvements:

The GEM file selector has been completely

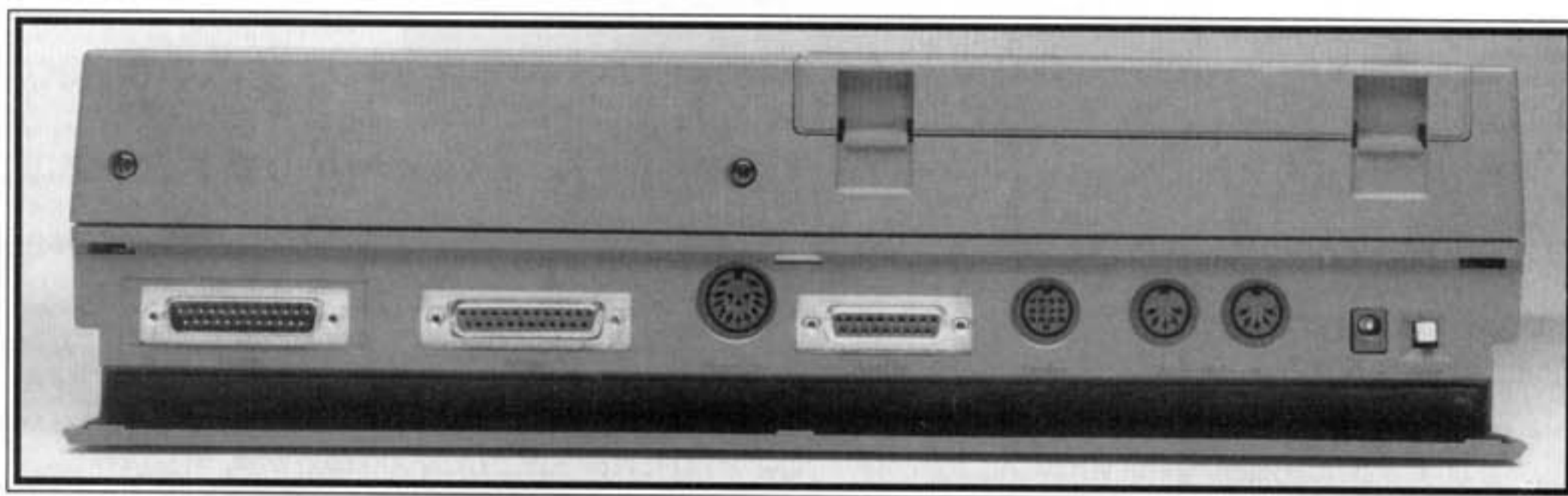
redesigned, and now includes a bank of drive-selector buttons (*a la* Universal File Selector), that permit instant selection of the root directory on drives A through P (naturally, drive identifiers representing uninstalled drives cannot be selected).

The use of wildcards in pathname specifications has been made more reliable, meaning (for example) that it's now possible to display only those files in a directory with .DOC extensions, simply by ending the path specification with the expression *.DOC.

Window-to-window file-copy functions have been enhanced, allowing you to skip or overwrite conflicting filenames during group copies, without terminating the operation. It's now possible to move files from place to place, without copying them, simply by holding down Control as you click and drag (the actual operation involves copying the file, verifying the copy, then deleting the source file, allowing a degree of security in what would otherwise be a fairly drastic process). Pressing UNDO will abort any copy, move, or delete operation.

Further changes: the desktop's INSTALL APPLICATION function has been enhanced to allow you to set a given GEM program for auto-execution on startup (finally!) A new, uniform dialog box has been implemented for use with both format and disk-copy operations. Folders can be re-named. Pressing the ALT key during bootup will cause an otherwise-configured system to boot from floppy, rather than hard disk. Pressing Control/Alternate/Delete initiates a warm boot, while pressing Control/Alternate/ Right-Shift/Delete causes a full cold boot.

And (last but not least), disks formatted with Rainbow TOS are fully MS-DOS compatible, which means that if you share information with IBM PS/2's and clones, you don't have to format your data-interchange disks on the IBM.



Stacy backplane, with step-cover folded back. From left to right, items are: RS-232 serial port, printer (Centronics) port, external floppy connector, hard disk (ACSI DMA) connector, monitor connector, MIDI Out/In ports, external power jack, and reset button.

Mouse Accelerator 3

To round out the Stacy's system software suite, Atari has included a copy of Ken Badertscher's Mouse Accelerator 3 utilities. This "terminate-stay-resident" software package offers a variety of optional conveniences to the professional Stacy user. Mouse Accelerator 3 works in one of two ways, depending on whether it's executed from the desktop (double-click on MACCEL3.PRG) or executed on bootup from the \AUTO folder. When run from the desktop, MACCEL displays a configuration dialog box offering access to the following functions:

1. The mouse accelerator, which renders the mouse pointer more sensitive to trak-ball or mouse movement. Imposing a degree of acceleration makes it easier to use the Stacy's trak-ball.

2. Screen-saver, a utility that monitors the Stacy's keyboard (and/or modem) to determine system activity, and begins rhythmically changing the screen from black-on-white to white-on-black after a prescribed interval of inactivity. This prevents "burn in" of a static image on the Stacy LCD.

3. Automatic parking, another "timed" function that parks the Stacy's hard drive heads after a period of inactivity. This last feature is quite useful, as it of-

fers a degree of security against accidentally transporting the system with the heads stopped down over the vulnerable hard disk media. Under normal circumstances, users will probably wish to run the SHIP utility (included on the hard disk utilities diskette both as a function of HDX and as a stand-alone program, SHIP.PRG) before they turn off the system, prior to transporting it.

By selecting SAVE from the MACCEL3.PRG configuration dialog, Stacy users can save the current settings in their copy of the program. If the program is then copied to the \AUTO folder, it will install itself and implement these settings whenever the Stacy is turned on.

Our own Stacy has run flawlessly for two weeks, under daily drill with Cubase, C-Lab Notator, and other music products, plus a whole range of conventional "productivity" software such as Microsoft Write, FSM/GDOS, PageStream, the Mark Williams C-Language Development System, and a host of other programs.

During that time, I've not noticed a single software incompatibility, glitch, or other problem that would lead me to believe the Stacy is not wholly compatible with standard STs. ■



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496 Calamus 1.09 demo (1DM)
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963 Nude Women IMG Clip Art
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872 PageStream utilities
521 PageStream 1.8 demo (D)
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820 Algebra I & Verbal-Linear Problems
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64 Human Anatomy Tutor (C)
1100 Math Circus: colorful math teacher (C)
890 Solar System (C)/World Geography (M)

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894 Mac Nudes and PicSwitch utility
964 Women in lingerie (C)
903 Simpsons digitized sound/animation
1117/1118 Erotic Spectrum Nudes (C) **NEW!**
961/962 Sexy Spectrum Nudes! (C)
1172 Star Trek World: info & pics! (CD) **NEW!**

GAMES

1067 3D Tron light cycles: great! (C)
989 Berzerk clone w/ digit.sound (CJ)
1142 BoulderDash/Dig Dug clone (C) **NEW!**
1140 Bullet Train: track action (1C) **NEW!**
988 Dan's Dungeon-major action (CJ)
987 Dungeon Adv-awesome DM! (C)
1139 Futuristic racing/shooting (C) **NEW!**
876 Fuzzball: Q*BERT clone (CJ)
860 Go Up: Lode Runner clone (M)
138 Grand Prix 2.1 car racing (C)
884 Hollywood Squares TV show (C)
142 HRS: Adult graphic adventure (1CD)
895 Mini-Golf & Shanghai clone (M)
859 Mystic Mirror: 2 player Dung. Master (C)
985 Name this Tune + 100 tunes (CJ)
139 Nude shoot 'em up (1C)
133 Nude strategy games (C)
124 Risk/Tetris clones (M)
1141 Scramble cave arcade clone (C) **NEW!**
1000 Skate Tribe: best action/grafx in PD (CJ)
880 Sorry! Excellent board game (C)
155 Strip Breakout (C)
881 Stu's Pool with digitized sound (C)
878 Welltris clone & Tetriside (C)

INFO

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By JOHN QUINN

Over the past several years, substantial numbers of Atari 8-bit users have discovered the speed and convenience of advanced mass-storage alternatives.

RAMdisk use has increased many-fold since the introduction of the 130XE, whose 128K of RAM makes possible the installation of a fairly large RAMdisk; while hard-drive use has grown, largely through the efforts of companies such as ICD, Inc., who

market a full line of easy-to-use hard-disk interfaces and support software for 8-bit machines, including the popular "DOS alternative," SpartaDOS.

While RAMdisks and hard-drives can vastly increase productivity, there is one "downside" to their use: in-

creased vulnerability to equipment failure. The contents of a RAMdisk, accumulated at the cost of considerable effort during a work-session, can disap-

pear forever if the system crashes, unexpectedly. Failure of a hard-drive unit or accidental corruption of control software can cause the loss of megabytes of precious data.

RAMdisks and hard-drives are also vulnerable to simple human error. Switching

off the CPU will kill the contents of a RAMdisk as surely (indeed, more surely) than any system crash. And though saving a picture file under the same name as your July books won't render your hard-drive inoperable, it sure will scramble your accounting system!

Flash

ICD's sophisticated backup package makes using 8-bit RAMdisks and hard-drives easier and more secure!

back!

For these reasons, RAMdisk and hard-drive users must be careful to back up their storage systems regularly to floppy disk — the former at least once, preferably several times during the course of each work session; the latter, on a weekly or more frequent basis, depending on the sensitivity and value of the data involved. Backing up the system, of course, takes time and effort; considerable effort in the case of a hard drive, where the sheer size of the storage medium means backing up to a succession of floppy disks, via a laborious series of manual copy operations. Because backing up is such a bother, hard-drive users are especially prone to neglecting this important chore, leaving them vulnerable to disaster, when it strikes.

Enter Flashback!

As a major supplier of RAMdisk software and hard-drive systems for the Atari 8-bit line, ICD, Inc., of Rockford, IL, knew there was a need for software that would facilitate the backup process, encouraging users of high-volume mass storage to back up their systems more frequently. In typical ICD fashion, the company has created one system of low-priced utilities that answer to any and all backup needs, speeding the backup of both RAMdisks and hard-drives through one, consistent user-interface. The system, called Flashback!, runs only under SpartaDOS. However, since many 8-bit hard-drive users are already employing SpartaDOS, this is less of a limitation than it might seem, at first glance.

Flashback! comes on one 5-1/4" floppy disk. The disk contains two files: FLASHBK.COM and RESTORE.COM. FLASHBK.COM is the program that backs up your RAM or hard-drive to floppy disks (or to another hard drive), while RESTORE.COM, as its name implies, restores the backed-up files to their original state on the medium in question.

Both programs are quite user-friendly, and completely menu-driven. To load FLASHBK.COM, all you need to do is type FLASHBK at the SpartaDOS command prompt (X FLASHBK if using SpartaDOS X). Once the program loads, it displays the menu shown in Figure 1, and tells you to "Press START to begin."

When performing a standard backup, the first thing you must do is decide on source and destination drive and pathnames. The source drive and path define where the data you wish to back up is presently located; the destination defines the location where the backup files will reside. Source and destination are completely open-ended — you can back up a

RAMdisk to a hard-drive subdirectory, a collection of subdirectories to floppy disks, or practically any other combination. The only limitation, naturally, is that you're not allowed to back up a drive to itself, though Flashback! will backup one hard-disk subdirectory to another on the same disk.

Next, you can press "C" to select or de-select the "Catalog" option. When active, this option causes Flashback! to create a subdirectory on the destination path, containing a printable text file of backup information. The catalog file includes filenames and extenders for all backed-up files, byte counts, time and date-stamps, volume numbers of both source and destination disks, and the source pathname. While many users may elect not to employ the catalog option, it provides vital information for those seeking to keep track of multiple backups of important data.

The [E]xtend option is also a yes/no toggle. Choosing "yes" will cause Flashback! to split files across floppy disks as necessary, during multi-file backups, insuring that every byte of available floppy disk space is used. Selecting "no" will force Flashback! to save only as many files on each destination floppy as will fit in their entirety. Most users will elect to employ the "Extend" option, speeding the backup process and employing floppy disk space most efficiently. When using RESTORE.COM, the process of restoring split files is handled transparently. However, it should also be noted that files backed-up under Flashback! can be restored individually, using SpartaDOS'

COPY command; and even split files can be restored manually, via the Append option. Thus, the only reason one might select not to employ Extend is if one anticipates having to restore on a system that does not employ SpartaDOS, a situation that would render impossible the restoration of files split across disk boundaries.

One of the most time-consuming aspects of a manual backup is the need to format destination floppy disks. Flashback! can automate this process, automatically formatting target floppies as they are inserted, then backing up files on them in one, smooth, uninterrupted motion. Flashback! will initialize disks in single, double, and dual (1050) density, in both single- and double-sided formats, so you're free to exploit all the features of your available target drives. If you have a high-speed drive, such as the Atari XF551 or Indus GT, Flashback! will even format in high-speed mode (under SpartaDOS X). However, when performing backups to a series of floppy disks, Flashback! will not allow you to change

SYSTEM: Atari 8-bit

REQUIREMENTS: RAMdisk,
MIO, and/or hard drive;
SpartaDOS; 5-1/4" floppy
drive.

SUMMARY: Excellent
hard-drive/RAMdisk
backup system for the
Atari 8-bit computer.

PRICE: \$20.96

MANUFACTURER:
ICD, Inc.
1220 Rock Street
Rockford, IL 61101
(815) 968-2228


```

[S]OURCE: D1:
[D]EST. : D2:
[C]ATALOG DIRS AND FILES:NO
[E]XTEND FILE ACROSS DISKS:YES
[F]ORMAT DESTINATION DISKS:NO
[B]ACKUP FILES SINCE DATE:00/00/00
[A]RCHIVAL BACKUP ONLY:NO
[Q]UIT FLASHBACK! AND RETURN TO DOS

```

Figure 1. FLASHBK.COM's main menu, showing the numerous backup options available.

```

[S]OURCE: D2:
[D]EST. : D1:
[P]ROMPT TO RESTORE EACH FILE:NO
[Q]UIT RESTORE AND RETURN TO DOS

```

Figure 2. RESTORE.COM's simple and easy-to-understand menu makes restoring files a breeze!

format parameters during the process. Moreover, there are certain obscure drives that Flashback! doesn't know how to format. Users of 3-1/2" drives, for example (yes, they exist for the Atari 8-bit line!), will have to format a sufficient number of floppies, manually, before starting a backup procedure.

SpartaDOS actively updates a file's date-time stamp when the file is created or altered. Flashback! can thus offer the option of only backing up those files that have been "touched" since a particular date. Use of this option can vastly increase the speed required to perform regular backups, since only brand-new, or newly-altered, files are actually saved. To help manage this type of backup procedure, Flashback! even remembers when you last backed-up the selected source disk, rendering a separate tally of backup dates redundant (though still necessary, where complete security is desired). It should also be noted that effective use of this option is only possible when file dates are reliably maintained, systemwide. This, in turn, means paying close attention to clock-setting, clock-card battery changes, and other details of clock management. It may also mean limiting, or at least closely managing, the use of application software that doesn't handle file date-stamps in the same way as SpartaDOS. Such files may sometimes be rendered compatible with SpartaDOS by using SpartaDOS' "set file date and time" option.

The [A]rchival Backup option is only available to users of SpartaDOS X, which supports a single-bit "arc" flag in the header of each file, denoting if the file has been backed up or not. When this option is

selected, Flashback! will only back up those files whose "arc" bits are not set, and will then set the bits, preventing later redundant backups of the same material. Like the "backup since date" option, the Archival Backup option reduces the number of files that actually get copied, speeding the backup process. However, only files created or maintained under SpartaDOS X may be reliably backed-up with this option.

Backing Up and Restoring

Once all options have been set, the backup process is initiated by pressing the START key. Now all you have to do is watch it work, inserting floppy disks when the system requests them. The actual time required for backup may vary widely, depending on the volume of files being copied, as well as the speed and capacity of source and destination drives. Flashback! attempts to use RAM to best advantage in managing copy operations, so backups are always performed as efficiently as possible, given the constraints of the system.

Restoring files is equally easy. Just type RESTORE (or X RESTORE, when using SpartaDOS X). The menu shown in Figure 2 will appear. Here, the options are simpler — you just have to specify the source and destination paths (here, the "source" is the drive from which you are restoring, the "destination," the drive to which you are restoring), and determine whether or not you wish to be prompted before each file is restored. This latter option is helpful if you wish to restore only selected files from a comprehensive backup.

Pressing START commences the restore procedure. All you have to do is hand floppy disks to the system, as requested. As noted above, it is also possible to restore backups on a file-by-file basis using SpartaDOS' own COPY command (with or without the Append option, as necessary, to conjoin files split across disk boundaries).

Conclusions

Overall, I would rate this package as excellent. Before backing up your drive, Flashback! tells you all about the work it is performing (i.e., number of files and directories involved in the backup, etc.), and offers similar information prior to file restoration. I have used this package many times, and I am quite satisfied with it. I would suggest, however, that one option be added to both FLASHBK.COM and RESTORE.COM: that of printing out a backup or restore catalog, automatically. The automatic generation of hard-copy would eliminate one stage in managing the backup of complex systems.

This single complaint, however, is hardly worth mentioning. I would call Flashback! a must-buy, especially for hard-drive users, and users of hardware-based RAMdisks. ■

An 8-Bit Curriculum



It was the fall of 1983, and the home computer wars were in full swing. Celebrities such as Bill Cosby, Alan Alda, and William Shatner were each endorsing one of the many brands of microcomputer available at the time.

In my science classes, students were starting to ask questions like

By MICHAEL BENNETT

“How does a computer work?” and “What do you know about computers?”

A good teacher admits when he doesn't know the answer to a question, but then tries to find out what the answer is. I knew very little about computers at that time, but was determined to learn as much as possible. On a teacher's salary, however, I could not afford to go



Schools on a budget can use Educational Computing Systems' multi-subject software — and cost-effective Atari 8-bit systems — to meet their educational computing goals!

out and spend several hundred dollars to buy an expensive computer. At that point, I began an intensive study of the available models, their capabilities, and their price tags.

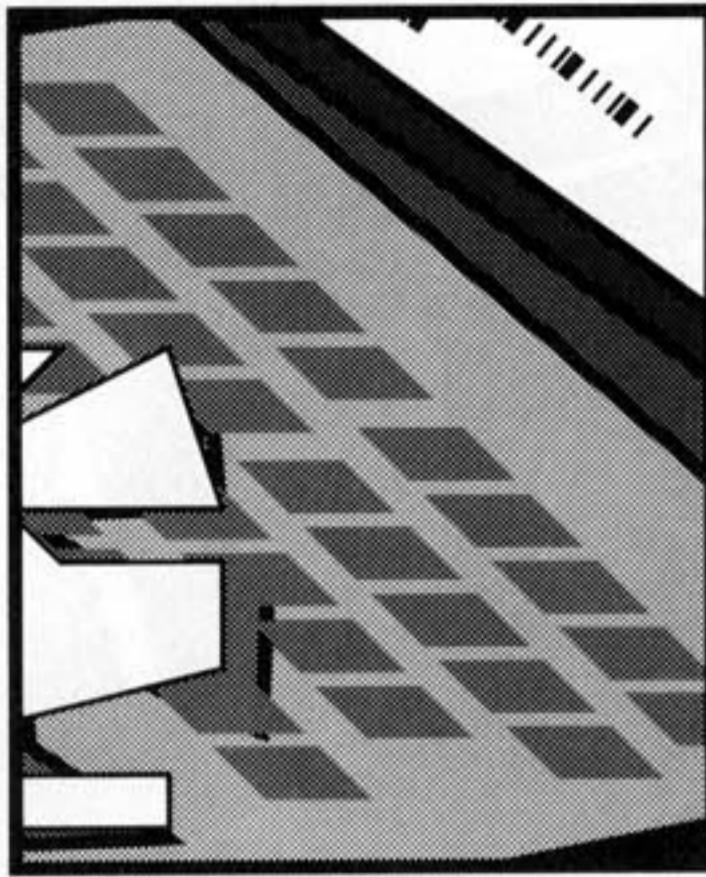
Most computer systems available then were very costly — except for one product line: the Atari XL series. Buyers could choose between the more expensive, but still

affordable 800XL, with 64K of memory, or the less costly 600XL, with 16K. Thus it was that on Christmas Eve of 1983, my wife and I bought a 600XL, with 1010 program recorder.

That 600XL made many trips to school, where students were amazed at its colors, sounds, and processing power. Back then, 16K and a 6502 microprocessor were a powerful combination. At the same time, I began making plans to computerize some of the grunt-work of teaching. One of my major goals was to write a BASIC program that would reduce the time required to calculate grades. As with many beginning computerists, I cut my programming teeth by modifying the code of existing programs, copied out of magazines and books. I also began exploring the ways in which commercial application software could make my work easier. The AtariWriter word processing cartridge was a boon to test and worksheet construction, and letter-writing became a breeze!

In 1984, some of the students at school began asking for a class in computer science. Together we formulated a proposal for obtaining computer equipment and presented it to the school administration. Though our school had little money to spend on such "luxuries," they agreed to support the class and purchased five 600 XLs, with tape storage systems. Getting a curriculum to use with the Ataris was not as easy, however. Seemingly, nothing was available. Most textbooks were either specific to other brands of computer, or so generic that major modifications were necessary to use the lessons with an Atari.

Unfortunately, neither Atari, nor the normally-very-helpful Atari user community could be of much assistance. While almost everybody could name significant individual educational programs designed for the machine, nobody seemed to be offering a coherent, multi-program computer literacy curriculum for Atari machines. I soon realized that the potential market for such a service might be very large, indeed. With the increased number of



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private schools across the country, and the existence of many smaller public schools in isolated areas, the need for an inexpensive way to teach about computers was obvious. That was the beginning of Educational Computing Systems.

As the next year passed, our school upgraded its equipment to include 64K computers with disk drives; enabling us to do more word processing, database management, spreadsheet work, and graphics. At the same time, we collected as much public-domain educational software as possible, and began using it for many purposes throughout the institution. Still, nobody had bothered to create a consistent curriculum, inclusive of software, that answered to a wide range of computer-literacy training needs. It was at this point that I decided to compile such a curriculum, myself.

The ECS Mission

The idea was to base the curriculum around public-domain software, providing such supporting materials and documentation necessary to weave these disparate programs into an educational system with a high degree of continuity. Many hundreds of hours were spent developing lesson plans, text, worksheets, and other materials to supplement the software. Once the basic elements were in place, the curriculum began undergoing a series of hands-on tests in the classroom. After three years of development, testing, evaluation, and revision, the format was finalized and the programs compiled and debugged.

At about the same time, I realized that if we were to go to market with the finished product, someone would have to be available to answer questions, troubleshoot, give advice on equipment-buying and budgeting, and generally supervise the implementation of the program at other schools. Over time, the "mission" of ECS slowly evolved to its final form.

The goal of Educational Computing Systems is to provide a computer-literacy curriculum, a software

library, and ongoing consultation to budget-minded schools that want to teach about computers. The service is customized for small school systems that may not have access to large financial resources.

The curriculum itself was intentionally designed with two things in mind: first, that a typical computer class will probably have more students than computers; and second, that a school may not have a teacher knowledgeable enough about computers to teach computer literacy effectively. Using the ECS system, it is possible to have classes in which groups of up to four students share a single computer (though the suggested ratio is two students per computer). And because of the simplicity of the software used in the curriculum, and the ready availability of

help either in person or by telephone, almost any good teacher can begin leading the course immediately, after a short period of familiarization with the materials.

Flexibility is a major aspect of the ECS curriculum. It is divided into modules which may be presented in almost any order. Thus, if a teacher wants to cover word processing first, instead of BASIC programming, this can easily be managed. The curriculum is provided as a master copy, and permission is granted to the participating school to make as many copies of this master as required. The curriculum also allows for the incorporation of other computer resource materials and software, should these be available.

ECS and Atari at King's Way Christian School

Like many small private schools, the King's Way Christian School of Douglasville, GA, struggles to offer quality education on a tight budget. When Administrator Ray Conway started thinking about computer literacy four and a half years ago, he wondered how in the world his tiny school could afford a state-of-the-art computer setup, even at the "discounted" prices offered to educational institutions by Apple and IBM. Luckily, Michael Bennett and ECS were there to provide the answer.

"Michael came down from Selma, described the ECS system, and demonstrated the Atari computers," recalls Conway. "He helped us find local distributors for the hardware, and together, we set up a computer lab using Atari computers, disk drives, and little TVs for monitors. The system has grown over the years, and nowadays our computer lab comprises a total of nine systems, including both a few old Atari 800 computers and the more modern 65XE's, and a pair of printers. We've based our complete computer science curriculum around

the ECS system, for grade 2 on up, and are now requiring one year of computer work as a prerequisite for graduation." When asked how the Ataris measured up next to competing systems, Conway answered: "These systems have put us miles ahead of other schools our size. The ECS/Atari combination has a couple of big advantages over competitive systems. Price, of course, is a big issue. We were able to set up our computer lab for a fraction of what it would have cost to go with Apple or IBM equipment. And the availability of help during system setup and afterwards was invaluable. Michael Bennett has done a remarkable job."

Educator Mary Ellen Conway is largely responsible for administering the computer program, which has branched out from the original ECS curriculum to include courses in word processing, programming, and other subject areas. "We teach our High Schoolers AtariWriter word processing right away," she says. "Many of them already have a little computer experience, and don't require brushing up in basic

computer literacy before getting to work on the machines. Afterwards, some of them elect to continue on into programming. ECS' High School curriculum in programming is self-guided, so it doesn't require much supervision or training to administer the lessons.

"Grade schoolers from 2nd grade on up are presently using the computers for spelling and keyboard training, as well as drill-and-practice. A program called CompuRead, which cost just \$12, is central to this program, and each teacher gets their own set of diskettes."

Both Conway and Cowling are enthusiastic about the continued success of King's Way Christian School's computer program and Atari computers. "Not only are we proud of the program," Conway adds, "but it's become a great selling point for increasing enrollment."

For more information, please write Administrator Ray Conway at King's Way Christian School, 6456 The King's Way, Douglasville, GA 30135

The ECS Curriculum

The term "computer literacy" has undergone many changes in meaning over the past few years, and there still remains no clear consensus on how it should be defined. Some define computer literacy as knowing how to turn on a computer and use whatever software is at hand. Others define it as an understanding of how computers operate. In the ECS curriculum, a compromise approach has been followed. Part of the series concentrates on binary code, bits and bytes, and the history of computer development. But there are also lessons on how to write programs (in BASIC and Logo) and on how to use the major types of software: word processors, databases, and spreadsheets.

Strong emphasis is placed on this last group of lessons, since most people who use computers today employ them primarily for use with commercial software in these three important categories. Though specific commands are naturally presented for each basic application used in the curriculum, the concepts students learn while using the programs transfer easily to applications running on other computer brands. Many students have attested to the fact that they were better able to use non-Atari computers at home or at work after taking courses based on the ECS curriculum.

Within each unit, the curriculum goes from the general to the specific. Broad concepts and terminology are covered at the outset; then a specific program is presented with all of its commands. Students are led through the process of using that program, in tutorial fashion. Later, the teacher may decide to review program commands, terminology, and other details with the class as a whole. Finally, handouts are provided that summarize the contents of each lesson, including program commands; giving students something concrete to refer to as an aid to further study and practice.

My
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create a curriculum based around public-domain software, providing such supporting materials and documentation necessary to weave these disparate programs into an educational system with a high degree of continuity.

Software Galore!

Software used with each unit is drawn directly from public-domain sources. This unique feature of the curriculum insures no hidden costs for a client school, once it has invested in the ECS service. By contrast, many texts and curricula available today require the purchase of specific commercial software titles. Even when copies are purchased at discount, or distributed to multiple computers under the terms of a "site-license" agreement, programs based on commercial software can be extremely expensive to run, when all costs are considered. ECS' public-domain software, however, may be freely duplicated as many times as required, producing copies for the classroom and even, as needed, for students' personal use, at home.

Nowadays, most educators agree that the earlier a child starts using computers, the better. With this in mind, ECS offers an additional elementary curriculum that focuses directly on the needs of children in grades four, five, and six. The course covers some very basic computer-literacy topics, such as computer safety, while students learn how to write simple programs using BASIC and Logo. Computer classes for younger students incorporate much of the software from the library of educational programs provided with the ECS general curriculum.

This library is a collection of over 160 public-domain programs, organized by subject matter onto twenty single-density disks. Areas of focus naturally include math and science, but also other subjects, including English and geography. Many of the programs are of the "drill and practice" variety, but the library also includes some very good simulations and problem-solving programs.

The library comes with full, printed documentation that explains the programs on each disk and provides any extra instructions that are needed. The disks, themselves, are set up to boot automatically, and individual programs are selected from a simple

menu which re-appears when the Atari's RESET key is pressed. This "master menu" arrangement is easy for even younger students to operate, and prevents the "what do I do next?" syndrome that might result if the student were faced with a blank screen and READY prompt.

Hands-On Help

The third, and most important, aspect of the ECS service is advice. When a school desires more information about ECS, the usual procedure is to schedule a conference. In that meeting, all points of the service are presented and discussed. If the school then wishes to use the ECS curriculum, plans are made outlining the objectives of the school's individual computer literacy program. All implementation details are carefully worked out, taking both the school's facilities and its personnel into account. ECS also provides information on where the appropriate equipment can be obtained. The school then purchases the equipment, and ECS will, if required, install it for them. Next comes a training session with faculty, during which the general operation of the computer systems are explained and demonstrated. During these workshops, teachers get lots of hands-on experience in using the computers and their applications. Each piece of software used in the curriculum is presented and thoroughly explained. Specific tips and suggestions on how to use the curriculum are offered and faculty questions are answered. Since most schools will wish to use their new computers as extensively as possible, ECS actually offers two different types of faculty workshop. One is of a general nature, aimed at any faculty member, and emphasizes word processing and classroom-management techniques, using the computers. The other workshop is designed specifically to address the needs of faculty that will be teaching the computer literacy curriculum.

Even after the equipment is set up, the workshops finished, and the program implemented,



Using inexpensive Atari 8-bit computers, ECS lets any school offer its faculty and students the gift of computer literacy, without the price.

ECS is never far away. Any time the school wishes to ask questions or has a problem with any aspect of the curriculum, software, or hardware, they may contact ECS for a quick and helpful response. This service may be of continual help as a school expands the number of computer systems in use. Of course, if any of the hardware develops a problem, the company it was purchased from is responsible for its repair or replacement within warranty limitations, though ECS is prepared to direct the school to firms capable of fixing out-of-warranty equipment, should the need arise.

If a school should be lucky enough to have a computer "guru" on staff, the school may purchase ECS' curricula and software library without investing additional funds for consultation.

Computer Literacy, Without the Price

It is indeed sad to see the state of the educational market for computers. Many schools, especially smaller ones, still do not have organized programs for basic computer literacy, much less programs that apply the computer to other subject areas and to the basic tasks of classroom management. Indeed, many schools lack the funds and expertise to even contemplate such ambitious programs, given the relatively high cost of "standard" computer equipment and commercial software.

Educational Computing Systems was formed to offer an affordable alternative that answers to all of these needs. ECS' combination of inexpensive Atari 8-bit computers with public-domain software, carefully-thought-out classroom materials, teacher training, and ongoing consultation can allow almost any school to offer its faculty

and students the gift of computer literacy, without the price. ■

For more information on the ECS Curriculum and other services please write to Michael Bennett at 2207 Glynn Arven Court, Augusta, GA 30906.

A sampled
"music
workstation"
for ST
hacker
and
hobbyist

By JOHN JAINSCHIGG

TCB Tracker

When it comes to producing high-quality sound, there's no substitute for external MIDI gear. Still, numerous opportunities exist for exploiting the ST's built-in sound generating hardware in meaningful ways,

provided the right software tools are available for doing so. Indeed, since the introduction of the enhanced STe computer, whose DMA-driven, stereo sound-generation capabilities rival the fidelity and presence of CD audio, a raft of new programs have appeared to facilitate the production of music for direct replay. While these utilities appeal to a broad range of ST users and hobbyists, they seem mainly targeted at programmers wishing to add music to their software creations.

Notable among the new arrivals is TCB Tracker, programmed by Anders Nilsson for MPH, and commercially distributed in the U.S. by PDC, a noted supplier of public domain and shareware. Like MicroDeal's Quartet (see review in our March/April 1991 issue, page 74), TCB Tracker is a sample-

sequencer, a hybrid program that combines the high fidelity of sampled sound with the nominal memory requirements of control-based sequencing. To understand how TCB Tracker operates, it's necessary to know something about how samplers and sequencers manage music.

Sampling and Sequencing

A sampler program is essentially a digital tape recorder. It captures sound from an external source (via an analog-to-digital conversion process that requires special hardware and a microphone — the ST Replay system is a popular example), then plays it back. The main advantage of sampling is fidelity: depending on the rate and bandwidth at which sound is captured, the quality of reproduction possible through sampling can rival that possible with CD or DAT (Digital Audio Tape).

Disadvantages, however, are numerous. Data representing only a few seconds of high-fidelity, full-score music can fill megabytes of memory, and high-bandwidth reproduction consumes a huge amount of CPU time. Moreover, while full-score samples may be post-processed in various ways (e.g., to remove overtones, harmonics, and other audio debris), actual "note by note" editing is next to impossible, since the individual notes in a digital recording are not represented by discrete units of data.

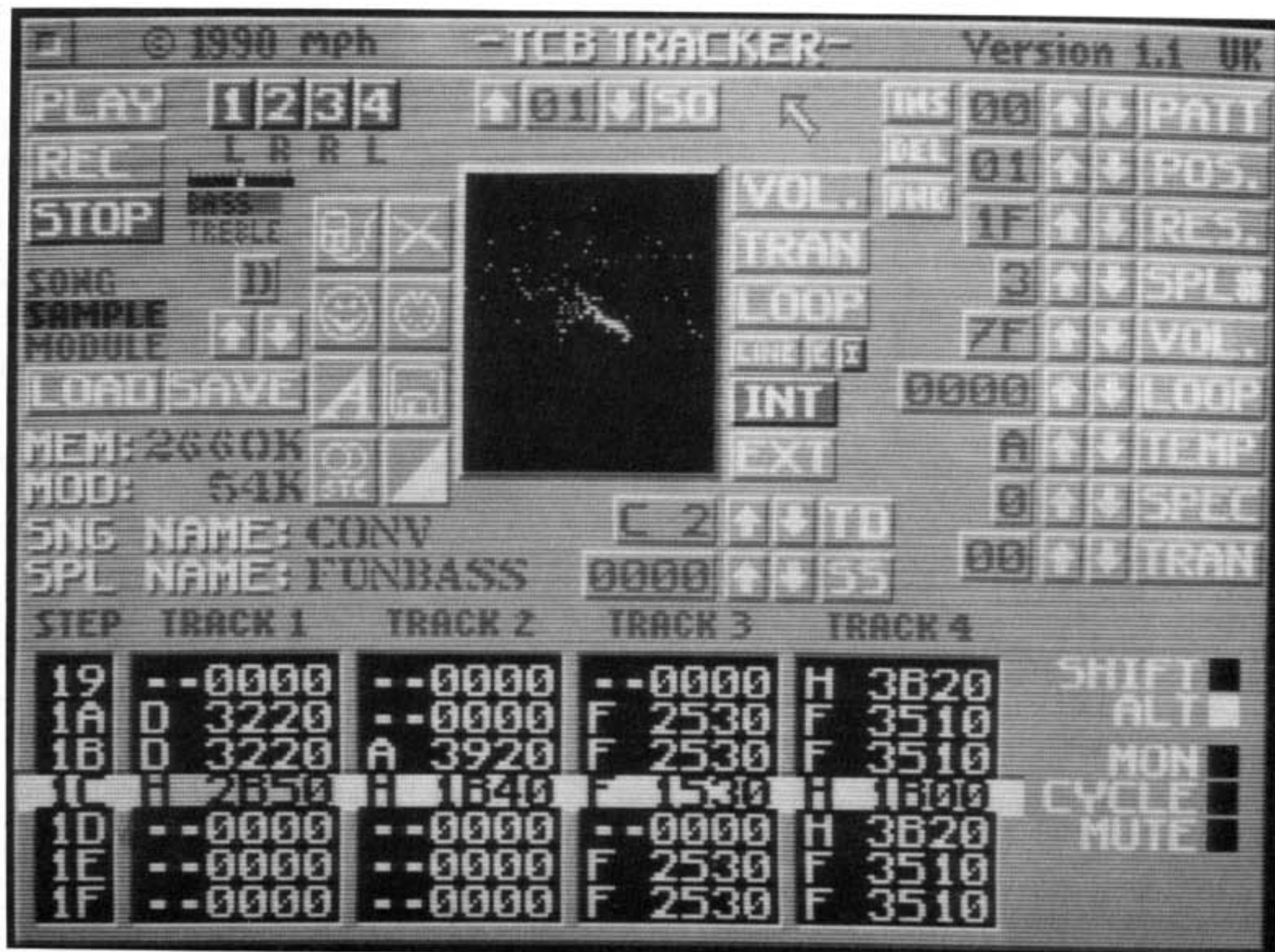


Figure 1. TCB Tracker's main screen, with its six control groups. Recording controls are at the upper left; disk-access controls below. Immediately to the right are mode icons, activating various features. "Marker" controls for parameterization, pattern-selection, and other functions are at the right; and the main track display is below.

SYSTEM: Any ST computer

REQUIREMENTS: Color monitor or TV, one double-sided disk drive, MIDI keyboard (for note entry) optional.

SUMMARY: Software-based, 4-channel stereo synthesizer, drum machine, mixing studio, and sequencer, with ST and STe replay drivers.

DISTRIBUTOR:

PDC, Inc.
4320-196th SW
Suite b-140
Lynnwood, WA 98036

PRICE: \$69.95 (+\$4 S/H)

For this reason, most "sampling" instruments, such as the Fairlight, Ensoniq Mirage, and others, are not primarily designed to operate as full-score digital recorders (though they can function in this mode in limited ways, if necessary). Instead, these machines sample the waveform of an individual instrument or other sound-source (e.g., a violin). This "single-instrument" sample can then be played at any pitch and with

varying dynamics, under the control of a keyboard or sequencer.

A sequencer does not concern itself with sound at all, at least not directly. Instead, it records music in terms of performance data (i.e., which synthesizer key was pressed, when, how hard, etc.), storing each note in terms of a small number of discrete data-elements. This kind of data takes up little memory space and can be edited in a wide variety of musically-meaningful ways (e.g., quantization, transposition, etc.). However, a standard sequencer normally requires an external instrument, such as a MIDI synthesizer, to realize sequences in audible form.

The Tracker Advantage

TCB Tracker combines aspects of both sampler and sequencer to perform its magic. Like a sequencer, Tracker records (or actually facilitates the transcription of) a song as a table of compact codes. It can then play back that table through a bank of high-fidelity instrument samples, driving the ST's

sound hardware directly (or indirectly, via DMA, on an STe) to produce remarkably realistic audio. The overall effect is something like driving an external MIDI sampler with a standard sequencing package, except that Tracker requires no external hardware!

While Tracker's fidelity is more than adequate when heard over an ST monitor or TV speaker, its real power can only be appreciated when the system is used to drive hifi equipment. Monaural audio output from a standard ST may be shunted to the AUX inputs of a stereo amplifier using one of a wide variety of cable configurations (or through ST Replay). Full stereo output from an STe may be sent directly to the AUX inputs by means of a pair of RCA cables. In STe mode, Tracker fully supports STe stereo capabilities, assigning two of its available four tracks to each side of the stereo image.

It sounds marvelous, and it is. Unfortunately, casual hobbyists, and those whose interests lie primarily in music, per se, may find TCB Tracker's spare, programmer-oriented system both inappropriate for their needs, and difficult to master. Tracker is primarily aimed at a fairly narrow audience of programmers who wish to add high-quality sampled music to software, using one of the included replay routines (assembly-language code for replaying songs composed with Tracker, as well as interface and initialization routines for assembler, GW and HiSoft BASIC, and STOS (Game Creator) environments are supplied with the program, and by the time you read this review, a C-language subsystem will also be available). Its purpose, therefore, is less to facilitate the creation of music, per se, than it is to render musical ideas into the form of compact, orderly data-sets (called "modules") that take up minimum RAM and can be replayed with minimum CPU overhead.

Using Tracker

More like a debugger than a sequencer, TCB Tracker's user-interface gives short shrift to purely musical concepts, in favor of features that allow programmers to work closely and efficiently with data. This limitation accepted, however, TCB Tracker is one of the most remarkable feats of programming this reviewer has ever seen. Anders Nilsson has completely reworked the ST's GEM user interface, providing a new, "multitasking" file selector; compact, graphic controls; and other enhancements. But-

tons and sliders on the main screen are shaded to appear three-dimensional in a style reminiscent of European game software. Indeed, almost too much attention is paid to certain cosmetic features of the program (an orbiting design that appears behind the HELP menu is gorgeous, but dizzying).

Overall, however, the interface is both well-designed and fun to use. It's clear that Nilsson is both a gifted coder, and one who has gained much of his facility by writing entertainment programs. One very nice touch: an entertaining "heliographic" image of the waveform of the sample currently being played is projected on a small subscreen in the center of the main display.

A few downsides to the user-interface must be mentioned, however. TCB Tracker works only with a color monitor in its current revision, and because it does not support the standard GEM menu bar, will not work in tandem with desk accessories. These are peculiar limitations to place on what is essentially a "productivity" program, and we hope they will be corrected in a later revision.

Another fundamental problem with the user interface is that in keeping with Tracker's identity as a programmer's aid, almost all parameters — sample and pattern numbers, volume, tempo, and other variables — are represented on-screen in hexadecimal notation. While assembly-language programmers will be immediately comfortable with this convention, BASIC and other high-level programmers

may not be. A hexadecimal/decimal conversion table is included in the manual, but no tutorial mention of notation is made, whatsoever.

Composing with Tracker

As noted above, TCB Tracker conceives of a song in terms of a binary data-set called a "module." Like a GEM resource, a Tracker module contains several different types of data: up to 128 "patterns" (fixed-length data-tables corresponding to short sections of a song) each containing four, parallel 64-step "tracks" a table of up to 16 instrument samples used in replay; plus tempo information, pointers, and other meta-data and header information. Though programmers need not fully understand module structure in order to use modules with one of the supplied replay routines, the structure is nevertheless outlined in detail in Tracker's comprehensive manual.

When Tracker replays a module, it executes patterns step by step, in the order you prescribe and at

TCB Tracker is a flexible and interesting program that should prove useful to almost any ST programmer.

the tempo you designate. The duration of an individual step thus corresponds to the shortest note-duration in your song, becoming your basic musical "quantum." Data stored at the step can trigger the replay of any available sample at any pitch within an overall 3-octave range, as well as cause the execution of one of a variety of "special effects."

The default 64-step pattern length generally allows an even number of "measures" of music to fit in each pattern, provided standard duple metres such as 4/4 are used and that the duration of a single step is made to correspond to that of an elementary note, such as a sixteenth-note (as opposed to that of a triplet or other odd tuplet). Triple metres, such as 3/4, are accommodated by inserting a special "End Pattern" parameter at the last step in a pattern that is an even multiple of the number of steps in a measure. Thus, if a measure of 3/4 contains twelve steps (each corresponding to a sixteenth-note), a pattern terminated in this manner at step 60 (Hex 3C) will comprise an even, five-measure section ($5 \times 12 = 60$).

Actual data-entry is very simple. Load a sample into one of the 16 available "slots." Select it, plus any special effects, using the "marker" controls at the right side of the screen. Place Tracker in RECORD mode, scroll to the desired track and step using the cursor and function keys (or the mouse, in "mouse edit" mode), then insert data automatically by pressing one of the ST's main keyboard keys, mapped to correspond to the keys on a 3-octave piano keyboard. Alternatively, an external MIDI keyboard may be used as the data-entry device.

It should be noted that while this process of parameterization sounds laborious, it only becomes so if you wish to change samples or special effects on a step-by-step basis. Simple sequences of notes, using the same sample and effect, can be entered very easily, just by pressing the appropriate pitch keys on the ST or external MIDI keyboard. To further ease the task, Tracker jumps automatically from step to step as data is entered. The length of this automatic jump (or "offset") can even be adjusted to facilitate the entry of data to any regular pattern of steps.

By the same token, if you wish to change sample and effect parameters at every step, you can — and this feature accounts for much of TCB Tracker's musical flexibility. By changing sample and effect selections on a step-by-step basis, for example, data driving an entire drum section, incorporating triggers to bass drum, tom, snare, crash and high-hat samples, can normally be incorporated in a single track.

Other Features

While not nearly as strong as MicroDeal's Quartet in the area of sample-editing (Quartet's DIGITAL utility comprises a real workshop for digital-signal-processing), TCB Tracker offers a

variety of functions for manipulating and importing samples from various sources. A large number of 10 KHz samples are included with the program, ranging from drums to synthesizers. Additionally, Quartet will accept 10 KHz samples in ST Replay format. In the course of composing a module, you may set individual samples to loop, allowing the creation of various echo effects. Loop points may be adjusted in increments of 65,536 steps per sample.

TCB Tracker can read MIDI clock, and will execute the current module in sync with any external MIDI clock source, increasing its flexibility as a general-purpose musical tool. A special "drum edit" mode places the entire bank of 16 samples under simultaneous keyboard control, mapping each onto a particular key and permitting each to be tuned to a particular pitch. This is fun just to play with, and may be used to test out ideas for complex ensembles and sound mixes without the effort of having to program patterns.

Two versions of the master replay routine are included with the program in relocatable object-code form. TRACKER.ROT is a "plain-vanilla" version that works with any ST, while TRACKERE.ROT is optimized to take advantage of the STe's DMA sound capability. The master routine co-opts the ST's Timer B interrupt for sample replay, and the sequencing portion is called in the vertical blank interrupt.

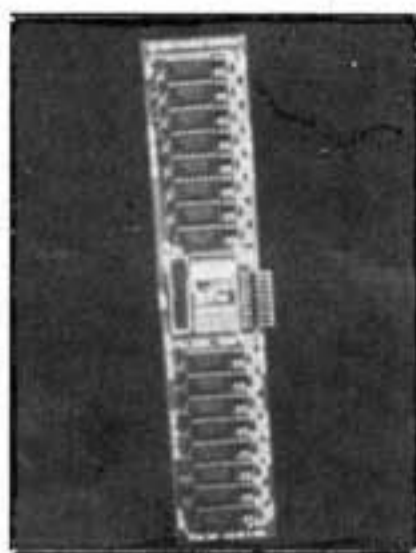
Loading and using the routine with a module will normally be accomplished by employing one of the several envelope routines offered in source-code form for assembly language, GW BASIC, HiSoft BASIC, and STOS. The latter versions demonstrate a simple technique for BLOADing the desired replay routine and module into BASIC arrays, setting pointer variables, then calling the replay routine to play the module.

Unfortunately, the BASIC envelope examples offer no mechanism for multitasking other work during the replay process. This is because the replay routine uses the 68000's D6-D7/A2-A6 registers, and there is no way to prevent BASIC from trying to access these registers while the interrupt-driven replay routine is in operation. The assembly language routine, however, offers the possibility of multitasking with replay, provided the programmer remembers not to employ registers used in replay. According to the manual, Tracker uses just 37% of available CPU time on a standard ST, 29% on an STe; so plenty of CPU time is available for other operations.

Conclusions

TCB Tracker is a flexible and interesting program that should prove useful to almost any ST programmer. It may well also appeal to a limited number of hobbyists with a passion for high-fidelity composition, but budgets that put more standard sampling gear and sequencing software out of reach. ■

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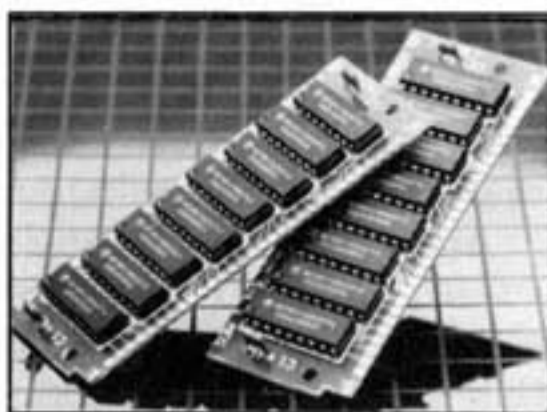
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Incredible Macro Power At Your Service!

Codekeys 1.3

By MEL MOTOGAWA

Like a revolutionary trumpet blast, a new program has burst onto the ST marketplace offering freedom from time-consuming and repetitive keystrokes and mouse presses (you know how time-consuming and repetitive those keystrokes and mouse presses can be). Codekeys 1.3, written by Charles F. Johnson and distributed by Codehead Software, is a powerful macro tool that will allow you to get more out of the software you own and the ST in general. Provided on a single-sided diskette, Codekeys operates in any resolution and on all models of the Atari ST and TT.

Codekeys is essentially a GEM macro recorder/editor/playback rig. "Macros, shm macros," I can hear some muttering to themselves. But before you write off Codekeys as being inconsequential, bear in mind that the Codehead name alone should cause you to sit up and take notice. With a bevy of powerful programs already under their belts, the Codeheads have earned a sterling reputation for producing superb assembly language software. Codekeys has been getting rave reviews online and a little probing here will show you why.

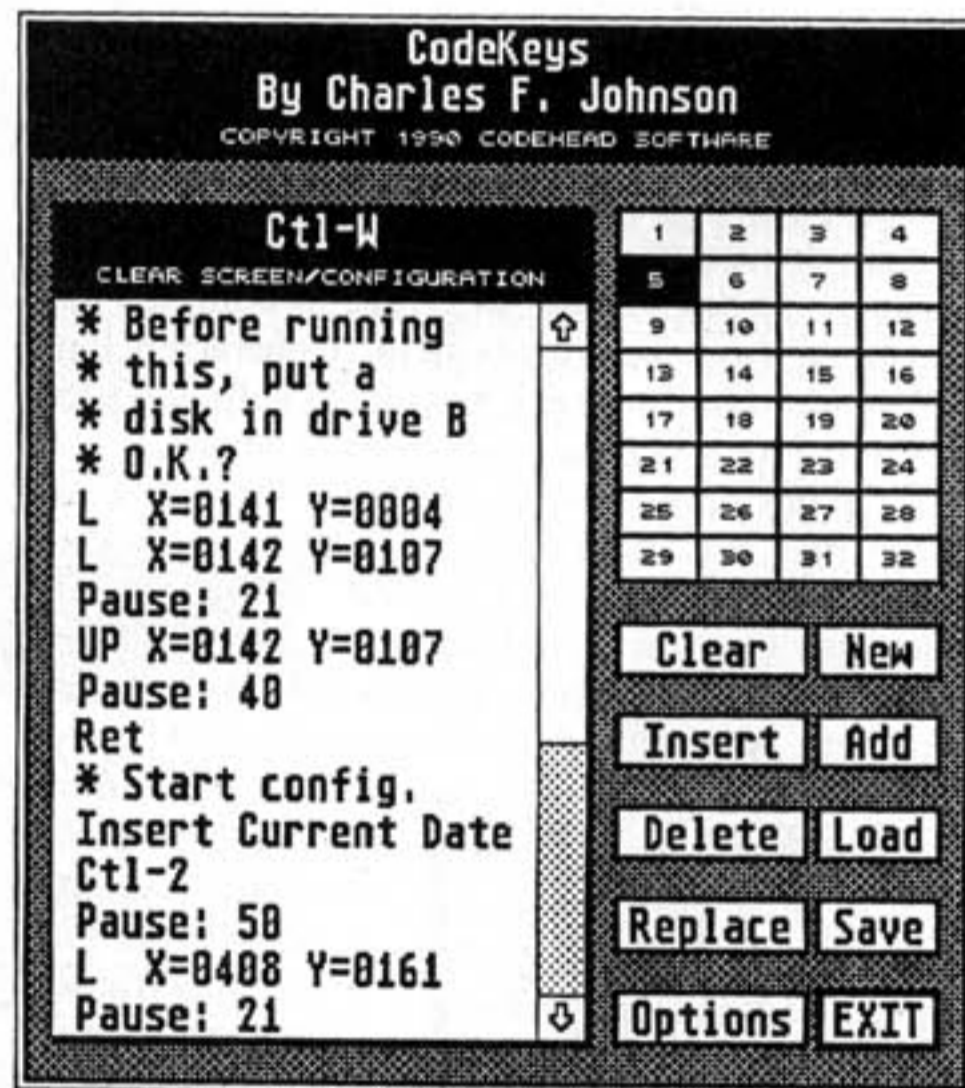


Figure 1. The Codekeys accessory main window. The large scrollable macro display window lists the events in macro slot #5. Up to 32 macros can be installed in each .KEY file. Lines beginning with an asterisk are explanatory comments. The 12th line shows an example of the Insert Date function.

Macro Basics

Installing Codekeys in your system is a snap. Just copy the CODEKEYS.PRG program into your auto folder and the CODEKEYS.ACC desk accessory program into your root directory. Reset your computer and you're on your way to freedom from drudgery. Selecting "Codekeys" from the desk accessory menu brings up the Codekeys main window (see Figure 1) from which you can load, edit and save macros as well as configure Codekeys to your liking.

Codekeys allows you to define 32 different macros, each of which can contain up to 128 "events" (keypresses or mouse-clicks). Imagine pressing a single hotkey, and having 128 characters inserted into a word processor document, just as fast as your software can take them. Not enough, you say? Well, Codekeys will let you chain the first macro to a second, the second to a third and so on, combining its 32 available macro slots in one big macro, fully 4,096 events in length!

Actually, where keypress macros are the issue, I've yet to feel constrained by the 128-event/macro limit. After all, the most useful text macros are composed of only a few common words or phrases. For example, the macro for my name, address, city/state/zip and area code/telephone number occupies only 68 events, total, including the various spaces and carriage returns. The ability to chain macros becomes really useful, however, when you're recording mouseclicks, particularly when you're using Codekeys to automate a software demonstration, or perform some other task that employs the ST user interface in complex and demanding ways. Comments up to 16 characters long can be placed in Codekeys macros, to help you keep track of the logic behind your longer creations.

Groups of macros, assembled in Codekeys and saved with a .KEY extender, can be tailored for your various applications and loaded, unloaded, and printed anytime you want. Codekeys' "export" feature even lets you put together macro groups from different sets. And through the powerful Link File feature,

you can set up a macro group to load automatically when you run a specific application, as well as remove itself silently when you quit. Run your word processor and its .KEY macro file is loaded; exit and your default .KEY file is reinstalled.

The program MAKELINK.PRG is included on the Codekeys distribution disk and links .KEY files to programs, writing out a .LNK file that Codekeys reads

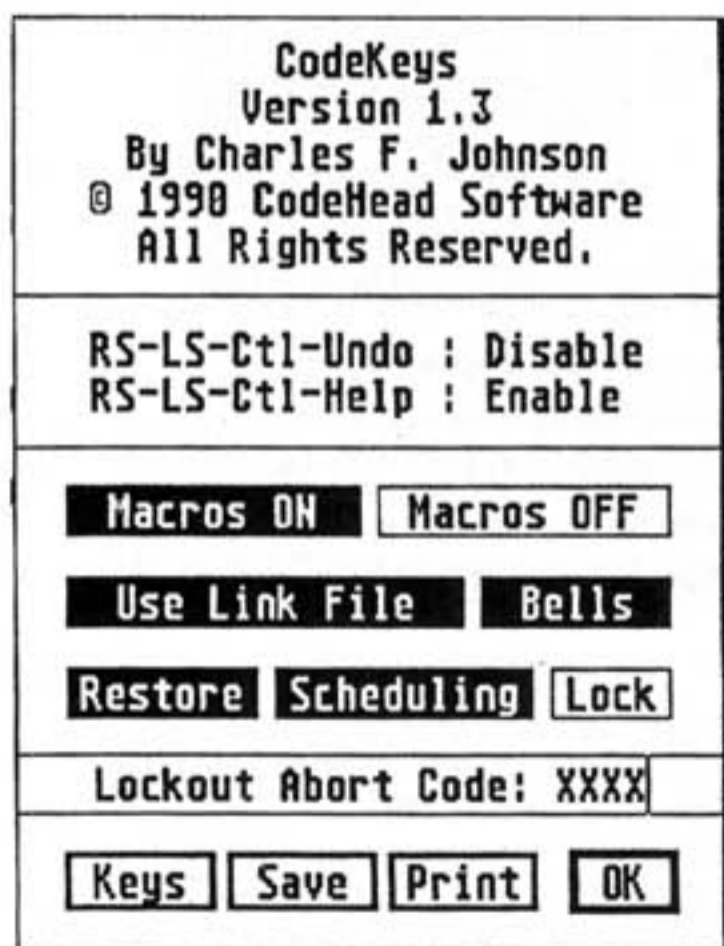


Figure 2. Clicking on the Options button allows you to configure Codekeys to your liking. The "Keys" button allows you to redefine hotkeys to start and stop your macro recordings.

SYSTEM: Atari ST/TT

SUMMARY: Exceptionally versatile and powerful macro recorder/editor that works with .TOS, .TTP, and GEM programs.

MANUFACTURER:

Codehead Software
P.O. Box 74090
Los Angeles, CA 90004
(213) 386-5735
(9:00 AM - 1:00 PM, PST,
Monday through
Friday)

PRICE: \$39.95

at bootup. From then on, if you run an application specified in the .LNK file, the matched .KEY file will be installed into Codekeys right before the application is started. This is one terrific feature, freeing you from the hassle of having to manually load .KEY files every time you change programs.

You can assign macros to any key or key/key combination. Personally, I like assigning my macros to single keys I rarely use, so that I can execute the macro with a single keypress, rather than an esoteric key-combination. The only problem with this approach is that some-

times you make the mistake of assigning a macro to a key that would otherwise have special significance to your application. If you make this mistake, however, Codekeys can easily reassign your hotkey trigger, at any time.

Under normal circumstances, execution of a macro will be aborted when you press a key, move the mouse, or click a mouse button. For special applications, however, Codekeys macros can be "locked" so that nothing short of a reboot will abort them during playback. This feature may be especially useful to product developers, demonstrators, and others who need to "exercise" a piece of software, automatically, without the risk of interruption.

Macro Editing

Still not impressed? Codekeys lets you edit your macros with GEM ease. An editing window, part of CODEKEYS.ACC, provides full cut-and-paste editing capabilities, including global replacement of one event for another. You can record macros inside or outside CODEKEYS.ACC (see Figure 3), even activating the accessory's "record" feature by hotkey, without ever calling up its dialog (see Figure 2).

Once a macro is recorded (or input), a wide

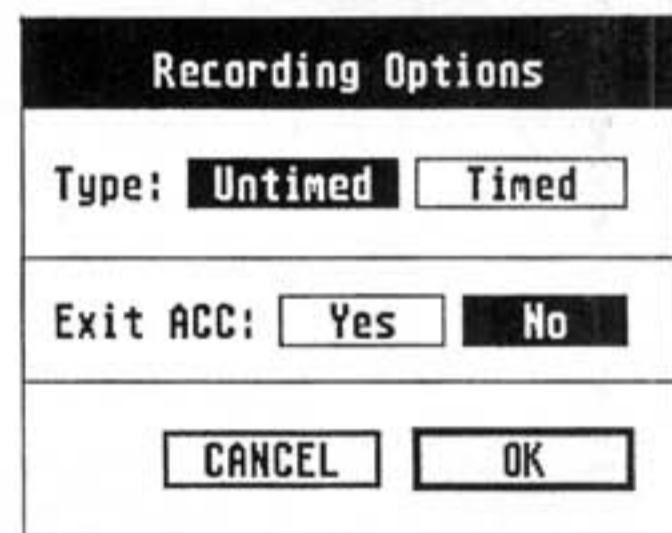


Figure 3. Starting the macro recording process from within the Codekeys accessory. You can choose to exit the accessory before recording begins, and define whether a macro is to be recorded with or without pauses.

variety of looping and timing functions are available to control the pacing of macro execution. You can specify that a macro repeat itself after a specified time (see Figure 5), and that it continue to do so indefinitely or loop only a specified number of times. You can impose an introductory pause that will briefly delay macro execution after you've pressed its hotkey — a smart precaution if you're working with "locked" macros, or macros that automate powerful and potentially dangerous functions, like global file-deletes. And Codekeys macro-control functions don't stop there! Macros can even be set to play themselves automatically at a specific time of day! Imagine having Codekeys perform your repetitive telecommunications tasks, all by itself! There's even means for incorporating the system date and time in macro text, in a wide variety of formats (see Figure 7). Imagine a "date insertion" macro that updates itself, automatically, or a self-executing macro that can tell you what time it went to work.

This ability to specify pauses anywhere in your macro, up to 100 seconds per pause, is a powerful feature of Codekeys that will appeal to advanced users (see Figure 4). Unless you want to control a macro's timing precisely, however, it's not necessary to manually specify pauses. Codekeys offers two basic recording modes: "untimed" and "timed." An "untimed" macro will play back as fast as possible — a speed limit normally dictated by the efficiency with which GEM, or your application, can buffer and process Codekeys' input. A "timed" macro, on the other hand, records the intervals between keystrokes and mouse-clicks as standard Codekeys pause expressions, allowing playback that mimics, precisely, the pacing of the original human operator. Fine-tuning of timed macros can later be done using the Codekeys macro editor.

Only a few caveats are in order. Screen accelerators such as Turbo ST can make a dif-

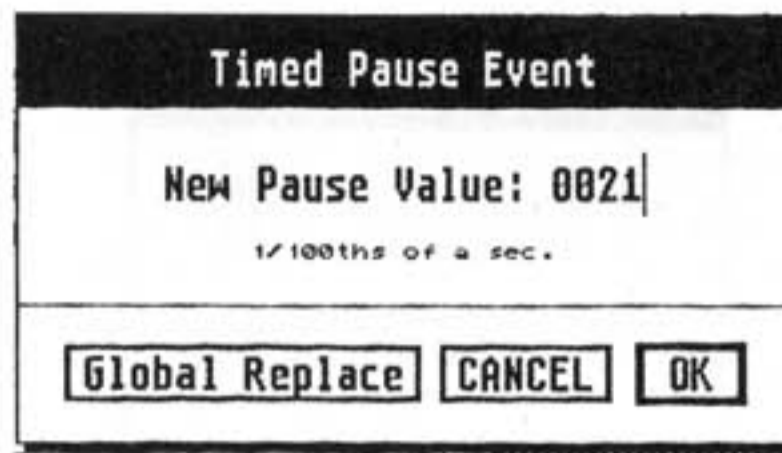


Figure 4. A Pause event being edited. Pauses are essential in many macros and the wide range of pause options afforded allows precise fine-tuning.

ferences in the playback speed of macros, sometimes altering their pacing enough that the operating system can't absorb Codekeys' input. In general, the tighter you tune the timing of your macros, the more you will need to watch their performance with various speedup options. Faster STs such as the Mega STe and TT, or standard STs enhanced with third-party speed-ups such as ICD's AdSpeed ST, can pose the same kind of problems when macros are transported from a slower ST operating environment.

Differences between versions of GEM and TOS can also complicate the business of transporting macros between different generations of STs. For example, the Mega STe's enhanced file-selector has a different format from the selector on a 1040 ST, so a macro designed to run with the original selector may not aim true. Resolution, window position, and other changes can also affect a macro's operation, especially when mouseclicks have been coded. Indeed, because Codekeys only remembers where the mouse

pointer was when a mouse-click occurred, not what object it was over at the time, it has no way of adapting to changes of object position.

In general, a certain amount of fine-tuning may be required to get best performance out of Codekeys macros without overloading the event-intake capacity of GEM. This is particularly true when coding mouseclicks. The advanced user of Codekeys will swiftly recognize that the program actually codes a typical single-click event as two events, a "left-button down" event ('L'), and an "up" event ('UP'), each with its own set of coordinates, denoting the position of the mouse pointer when the event occurred. Inserting a brief pause between 'L' and 'UP' (on my system, a pause of .21 seconds seems about right) will insure that GEM reads the event and responds to it cleanly.

High Quality Code

Codekeys can be turned on or off either manually or by a

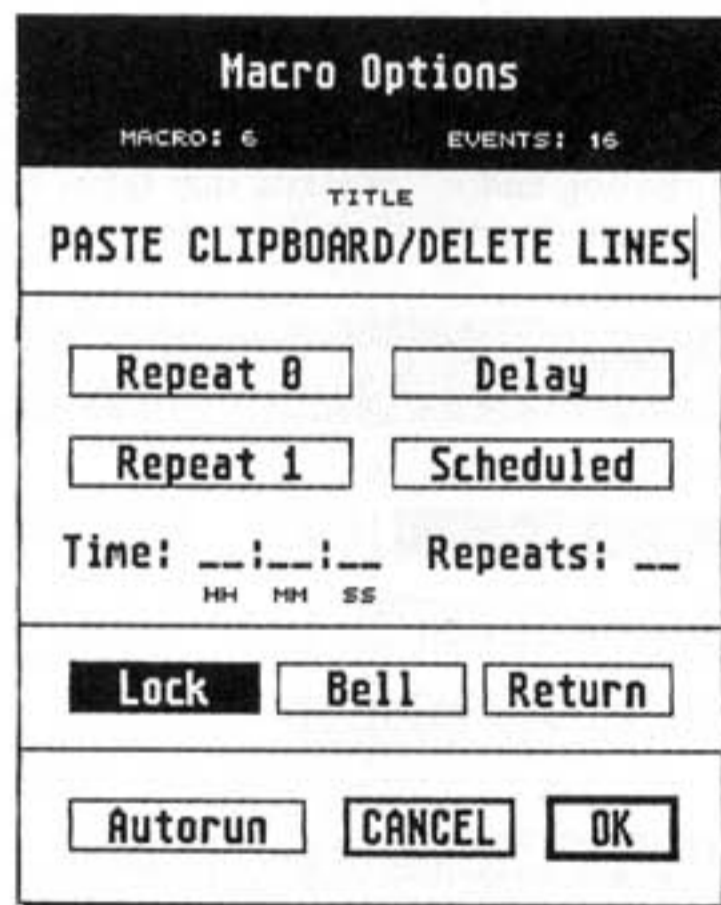


Figure 5. A Macro Options dialog is available for each individual macro. Notice the 28-character descriptive title line. Macros can be set to auto-execute at a specific time, or loop a number of times on execution. "Aautorun" will cause the macro to execute when the Codekeys accessory loads. The total number of events in the current macro is also shown.

user-defined hotkey combination. Over the years, I've seen a few desk accessories that featured hotkey activation; trouble was, most of them also had a tendency to unexpectedly stop working. This is not the case with Codekeys, which has never crashed or failed to "wake up" when issued the appropriate keyboard command. Even on a very "dirty" system, chock full of \AUTO folder programs and desk accessories, Codekeys works as advertised, every time.

Because Codekeys intercepts system events at the hardware level, it is not limited to functioning only within GEM applications, but works with .TOS and .TTP programs as well. In a non-GEM environment, of course, the Codekeys desk accessory cannot readily be accessed, though hotkey-activated macro recording and playback controls work fine.

The manual for Codekeys is very high quality: 40 pages of clear, concise instruction, complete with screenshots and examples, lets you get up to speed with Codekeys in a hurry. Several sample .KEY files are included on the master disk for use with Degas, Timeworks Desktop Publisher, and the GEM desktop, and additional PD .KEY files have been made available on GENie. With John Eidsvoog and Charles F. Johnson actively supporting all their programs via phone, the Codehead BBS, and the online services, you will never want for customer support of the highest caliber when purchasing a Codehead product.

Some Applications

If you're still not convinced that you need Codekeys, here are some macro applications I've devised, to whet your appetite. Having used Codekeys for a while, I've come to rely on the program as a necessary extension to the ST's GEM user-interface; an extension capable of smoothing over the rough spots in application software.

Some telecommunication programs do not have auto-redial capabilities. Or they redial right away after getting a busy signal. The answer: I have a

Figure 6. Editing a mouse event. The cursor's X and Y coordinates can be altered at will. For automating complex application-control scenarios, mouse events can be combined with pressure on Left/Right Shift, Control, and/or Alt keys.

could set up a macro that would open the file selector when you boot your word processor, type in a filename, open the file, full-screen the window, set up the font and attributes you want, and type in the introductory heading — all in one fell swoop.

You can even use Codekeys' date/time and auto-execute functions to post reminders to yourself. Try including a macro in your word processing .KEY file that types something like, "Time to go to bed!" When you record it, include a short pause and then

backspace over it. Set the macro to auto-execute at your curfew hour and then lock it, insuring that it will execute without any chance of interruption. At the appointed time the macro will execute itself, and your message will blithely appear in the middle of your word processing screen. The pause will give you time to register the interruption, then the macro will conclude by erasing the message it entered on your screen, a moment before, leaving your document unharmed.

All in all, Codekeys is a simple, well-executed, and efficient product that may do more to improve your basic productivity than many more esoteric tools. If you want to get the most out of your Atari ST with less effort, you definitely need Codekeys! ■

Figure 7. Editing a Date Event. Note the wide latitude offered in how the date will be inserted. A similar wide range of options is available when editing Time Events.

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By EDMUND D. MANN

The Businesslike ST

When switching from one business software package to another, the amount of time and effort that will be required to train personnel and convert data must be considered. For this reason, I carefully weighed my options before deciding to change my Atari ST-based building inspection business over from 1st Word Plus to the formidable WordPerfect.

Most of the work of my business revolves around the creation of building inspection reports, pulled together from several thousand paragraphs of stored boilerplate text, keyed to questions that must be answered when an inspector goes through a building. To accommodate the variable information, the system had to have a way of facilitating the search for locations where information was to be filled in.

Under 1st Word Plus, we had arranged to type a backslash (\) to mark each fill-in position in the standard form. Every place a paragraph had to be numbered was identified with a ">" symbol. To type a report, the typist began by assembling the required paragraphs, searching for each ">", backspacing over it, and replacing the ">" with a sequential number. Occasionally, the typist made a mistake when numbering the paragraphs, and those mistakes were time-consuming to correct.

On the second pass, the typist had to go back to the top of the multi-page document, search for every "\", backspace to erase it, and type the variable data that was required. A typical fill-in might involve adding to existing boilerplate text a list of

A series of first-person reports on using the ST in business: what works, what doesn't, plus tips and techniques to help you get the most out of your ST. This issue, contributing editor Edmund D. Mann tells why he switched his ST-based business over to WordPerfect text-processing, and tells what he's learned about moving data from STs to PCs and back.

places in a structure where the inspector found termites. Later in the same paragraph would be a second "\", where we'd include the estimated cost of repairs. The system was clumsy, requiring a considerable amount of human intervention to control each step in the report-generation process. But it worked, and when something works in business, you hesitate to make changes.

The WordPerfect Temptation

Several of WordPerfect's special features, however, eventually won me over. First was the fact that WP's automatic paragraph-numbering facility offered me a way to eliminate a constant source of error in our 1st Word-based system: hand-numbering of boilerplate paragraph insertions. Building inspection reports are legal documents, unacceptable if they do not

ILLUSTRATION BY JOHN BOPP



properly adhere to strict rules of form. Errors in paragraph-numbering were both difficult to detect and time-consuming to fix, most often requiring manually renumbering paragraphs throughout the document.

But WordPerfect offered an elegant way around this problem. While some word processors offer paragraph numbering schemes based on paragraph formatting, WordPerfect's system involves the insertion of a paragraph-numbering code at the beginning of each paragraph you wish numbered.

The system was thus readily adaptable to our 1st Word approach of beginning each boilerplate paragraph with a "number insertion" symbol (">"). By simply changing each ">" in my 1st Word files to an Alt F5 - 2,1 keypress sequence, WordPerfect could number our paragraphs for us. Nor is it necessary for the operator to now make the changes manually; macros were created to insert the required codes.

As if that weren't enough, WordPerfect also offered a sophisticated way of reducing the number of keystrokes required to make insertions in boilerplate. The answer was simply to replace every "\" (insertion point) symbol in my documents with an "invisible" code called Merge from Keyboard (Ctrl-C). WordPerfect's Merge feature permits the typist to run through the document, entering text at each merge point, without having to erase the marker characters in the process. An entire report is completed in about one hour.

WordPerfect's macro facilities are also very helpful. To standardize the way we publish building inspection reports, I had originally created a list of words that permits almost 90% of the variable information to use "standard" variable words. Under 1st Word Plus, typists had to refer to a thick book to read what each abbreviation meant and then had to manually type the variable information.

After switching to WordPerfect, I created

ST WordPerfect Resources

If you need help learning to use WordPerfect with your Atari ST, try to find a copy of *Mastering WordPerfect* written for version 4.2 by Susan Baake Kelly. That book was published by Sybex. I was told that it now is "out of print" because Sybex now publishes textbooks only for versions 5.0 and 5.1. However, a few copies of the 4.2 book are still around. You might be able to buy a new or used copy at a Barnes & Noble college book store where the college teaches or taught WordPerfect 4.2.

I found two major differences between WordPerfect version 4.2 for MS/DOS computers and the April 18, 1991 Atari version of WordPerfect. One is that on MS/DOS computers the F3 key causes Help screens to appear — and to change to an italics font requires making

changes through the Printer Control menu. On the Atari ST, the F3 key toggles italics on and off, and the ST's "Help" key accesses WordPerfect's Help screens. Also, the ST version lacks the PC version's capability to bury comments in the document, often used to prompt during "Merge from Keyboard" sequences.

WordPerfect Discount

WordPerfect Corporation has not adequately publicized the fact that it makes available the Atari ST version of WordPerfect to full-time educators and full-time students for a greatly discounted price. If you want to buy the Atari ST version of WordPerfect and are a full-time educator or full-time student, write to WordPerfect Corporation,

Education Department, 288 West Center Street, Orem, Utah 84057. Ask for a full-time educator's or full-time student's discount form.

When you receive the form, fill it out. Include the identification WordPerfect Corporation requires and a check or money order for \$135.00 — that is the full-time educator's and full-time student's price to buy the Atari ST version of WordPerfect! The copy of the manual you receive will be stamped "Not For Resale," but the package will contain the same disks and manual as the full-price package.

If, like me, you bought the Atari ST version of WordPerfect for list price or a discounted price, you're out of luck. WordPerfect will not refund the difference if you later discover you were eligible for a discount. Sorry!

macros with those same abbreviations. Thus, rather than manually typing "standard" words, the typist is now simply required to invoke a macro or two to spell out the words to fill in the variable information. For example, to fill in a boilerplate sentence describing the location of a residence, the typist uses the macros "sw" and "ptlrs" so a typical finished sentence which combines boilerplate with merged variables reads: "This one-family ranch-style home is located on the southwest side of a pleasant, tree-lined residential street." If the house is located on a busy commercial street the macro that would be invoked is "bcs." (Every macro is identified by check-off boxes on the sheet the inspector marks up when inspecting the property.)

Furthermore, by switching from 1st Word Plus to WordPerfect, key words can now be marked to automatically generate the Table of Contents and an index. The original document assembly method required searching for key words, writing page numbers on a "blank" Table of Contents, and then manually typing page numbers into the on-screen Table of Contents. It was too time-consuming to generate an index. Now, WordPerfect creates an index by typing a few keystrokes.

It took me only about a week, using the WordPerfect conversion program, to convert all the 1st Word Plus files to WordPerfect format. It then took me almost five months to incorporate the WordPerfect features into the converted boilerplate text. The major portion of this time was not spent in merely bringing the old system up to speed under the new software. Instead, it was largely spent marking text to identify it so that WordPerfect could automatically generate tables-of-contents and indexes. In other words, to take advantage of new features rather than replicate old functions in new ways.

ST to PC WP

In addition to several Atari 1040STs, my business also uses a 286 PC clone with a 40-megabyte hard drive. My goal was to also to bring that machine on-line with the new system, using it alongside the STs to create building inspection reports. Under no circumstances, however, was I willing to invest the time and money to re-key all the boilerplate text on the PC. I set about, therefore, to learn how to transfer ST 1st Word Plus and WordPerfect documents to a PC-based system.

The first step was to find a way to import 1st Word Plus and WordPerfect files from my 1040ST to disks that could be read and utilized by the MS/DOS

286 computer's 1.44 megabyte 3.5" disk drive. This is not as simple as it appears, even though the ST disk drive works in a format closely compatible with that of MS/DOS. While an ST can read disks formatted to 720K on a standard PC 3.5" drive, the reverse is not true, since 1040 STs don't include MS/DOS-compatible boot-sector information when they format

a disk (Editor's note: The problem has been solved with the current Rainbow TOS. Disks formatted on the ST under Rainbow and later versions of TOS are fully MS/DOS compatible.) Even more unnerving, the PC drives couldn't make head or tail out of supposedly MS/DOS compatible disks formatted on the ST under the control of IB Computer's special DOS format utility, or PC Ditto.

The ST, in turn, couldn't read high-density diskettes formatted on the 1.44 Mb drive, even when the PC was instructed to format these disks to the ST regulation 720K — this because the medium used in high-density diskettes differs radically from that used in standard DSDDs. The answer, as I later discovered, was to use regular DSDD disks in the 1.44 Mb

drive, formatting them to 720K with the command: "FORMAT A: /F:720K". Disks formatted in this way can be read from and written to equally well by any PC or ST.

For the moment, however, I was reduced to formatting fifty 3.5" disks using a borrowed IBM Model 50Z with a 720K disk drive. Then I put the MS/DOS formatted disks into the auxiliary SF314 disk drive that is attached to the 1040ST in my home office. I then highlighted up to 15 paragraphs at a time using the GEM desktop and dragged those in groups from the 1040ST's drive A to drive B. The MS/DOS formatted disk was then put into drive A on my 2286's 1.44 meg disk drive. I then created directories labeled for groups of up to 100 paragraphs on my hard drive's E partition. Then I used the XCOPY A:*. * E:\(directory) command to copy the boilerplate onto that computer's 40 megabyte hard disk. The final step was to copy all the paragraphs from the hard disk

Edmund D. Mann has been active in word processing and personal computing since its inception. Formerly an industrial engineer with such firms as Westinghouse, he presently owns and operates several businesses, including a building- inspection consultancy. He also teaches word processing and computer literacy at both the university and high-school level in Long Island.



onto 1.44 meg MS/DOS formatted floppy disks for backup purposes and to make two extra copies of the backup 1.44 megabyte floppy disks.

One set of backup disks was put into a bank's safety deposit box to join my now antiquated set of Atari ST 1st Word Plus boilerplate disks.

To complete the conversion, I bought the MS/DOS version of 1st Word Plus and versions 4.2, 5.0 and 5.1 of WordPerfect for the PC. While the Atari version of WordPerfect is almost a mirror image of the MS/DOS version 4.2, every paragraph of text that was imported onto my 286 which is retrieved into a 5.0 or 5.1 screen is automatically converted to that version. Thus, I can now publish building inspection reports using either my Atari 1040STs or the 286 MS/DOS computer. (When I can find some spare time I'll utilize some of WordPerfect's 5.1 advanced merge features to create comment boxes to help the typists do the fill-ins — and I'm waiting for the update of the Atari version of WordPerfect that I was told probably will incorporate some or all of the version 5.1 MS/DOS features.)

Recently, I've also begun experimenting with other ST/PC file conversions, where the same software was available on both machines. For example, I've been using Timeworks' Desktop Publisher on the ST for some time, and have many DTP files stored on Atari ST DSDD disks. Since I also own the PC version of Timeworks' Desktop Publisher, Publish It!, I tried the same technique described above to move some of the ST files over to the PC and tried working with them in that environment. The result? Full compatibility! Every .DTP and .IMG file I bought as clip art or created for use with my Atari 1040ST (both text and graphics) can now be shared with my 286 computer using the Timeworks' MS/DOS version of Publish It — without any problems.

The disk-based data-transfer method described above works considerably faster than using a null modem cable — and I found it is 100% accurate. The sidebar contains some other suggestions that will help you if you consider a similar conversion, or are now tempted enough to give ST WordPerfect a try. ■

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Lynx Games



SYSTEM: Atari Lynx

SUMMARY:

Well-executed martial-arts game, easy enough for younger Ninja Turtles.

MANUFACTURER:

Atari Corp.
1196 Borregas Ave.
Sunnyvale, CA 94087

Price: **\$39.95**

cade original, as we see the ninja silhouetted in a rainstorm, illuminated only by brief flares of lightning. You begin at the edge of Silent City, facing a group of dark ninjas right away. You must move through the five stages of the game, defeating the dark ninjas and the extra-large economy-sized bad dudes at the end of each level. All you have on your side are

your hip ninja tricks and a few goodies that you can find by hurling enemies through telephone booths and other objects. You can use any of your special moves to vanquish the creeps: the kick-punch combo that is your standard weapon, the backflip-and-throw, and the hanging kick. If you get lucky, you may find a set of swords that will make your life much easier.

The Lynx version of Ninja Gai Den is similar to the arcade game in appearance. The scrolling backdrops, the final level guardians, and all the moves and techniques of the original are present and accounted for. If your mission ends prematurely due to unpleasant numbers of enemy fists, you can continue a game from the level at which you died.

The arcade version of Ninja Gai Den, however, was almost impossible to master — a real quarter-eater. The Lynx version, while still challenging for the advanced player, is fundamentally less tricky; a well-coordinated adult will be able to finish the game handily after several hours of practice. Kids will find the game more challenging, but not totally overwhelming — a good thing, when you consider that many players of Ninja Gai Den will be young Teenage Mutant Ninja Turtles fans. ■

NINJA GAI DEN

Sure, you learned a lot in Ninja School. But even you, still a rank novice, know that there is more to be learned from real life than behind the sheltered walls of academia.

So when you discover that the Powers of Darkness have taken over Silent City, you decide that *you* must be the one to defeat them. Your Ninja advisors disapprove, of course, but you slip away during a storm to the outskirts of the plagued city. Can you defeat the evil Dark Ninjas, the unpredictable, even supernatural guardians, and earn your title as Ninja Gai Den?

The opening scene in Atari's Lynx version of Ninja Gai Den captures a few moments from the ar-



WARBIRDS

SYSTEM: Atari Lynx

SUMMARY:
High-flying WWI
combat flight
simulator, with
options galore!

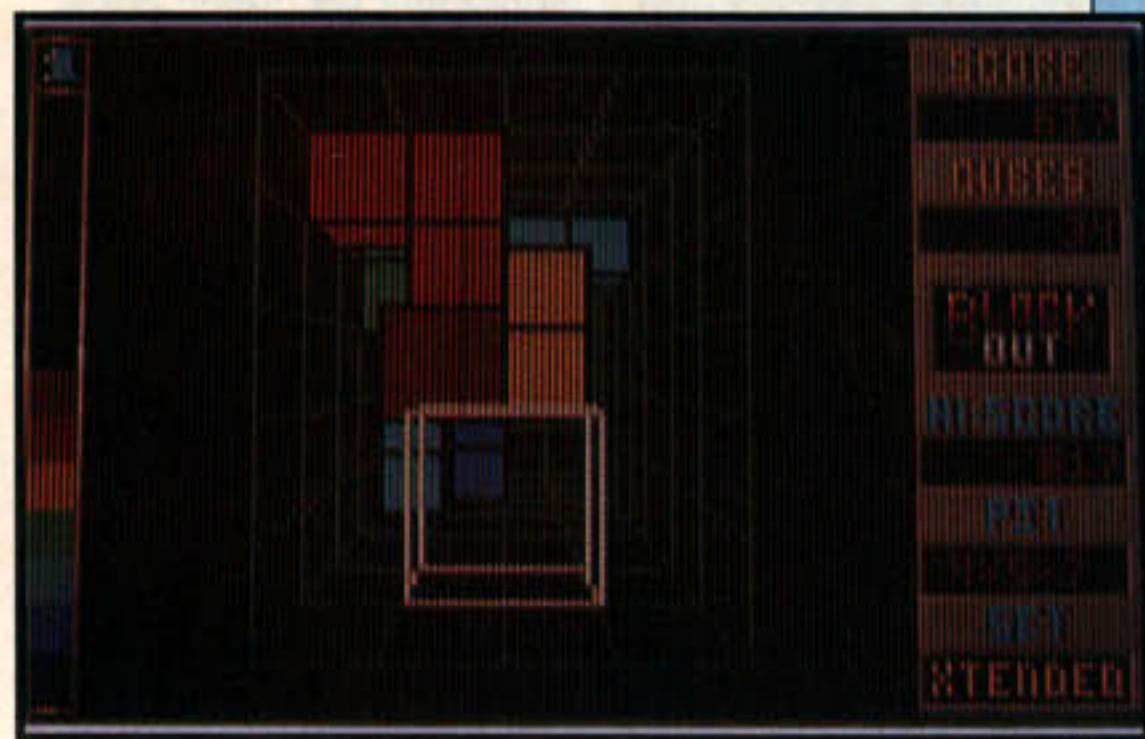
MANUFACTURER:
Atari Corp.
1196 Borregas
Avenue
Sunnyvale, CA
94087

PRICE: \$34.95

The power of Lynx never fails to amaze me; and that power is being better and better exploited with each new release.

Last year, Blue Lightning put Lynx owners in the cockpit of an advanced, computerized jet fighter whose multiple weapons systems could take on anything from tanks to cruise missiles. Now, Warbirds can put you in a different kind of cockpit, where the only things between you and the enemy are spruce, canvas, and the reflexes of a flying ace.

In Warbirds, you're at the stick of a World War I biplane, a sleek fighting machine capable of speeds in excess of 120 knots with a stiff tail-wind. Your high-tech weapons systems comprise two prop-synchronized Webley-Vickers machine guns, capable



BLOCKOUT

SYSTEM: Atari Lynx

SUMMARY:
Razor-sharp, 3-D
Tetris descendant
that will foozle
even the most
finicky of fast
finger-flickers.

MANUFACTURER:
Atari Corp.
1196 Borregas
Avenue
Sunnyvale, CA
94087

PRICE: \$34.95

For a few years now, the biggest successes in the "super-addictive games" department have been action-puzzle games: games that combine quick finger-action with solid grey-matter stimulation.

One of the most successful of this genre has been Tetris, a simple but challenging game that involves fitting oddly-shaped groups of squares together into solid two-dimensional fields. Over the past two years, the success of Tetris, both in the arcades and on home video-game screens, has encouraged the development of various "sequels," each of which takes the fundamental idea of Tetris into new terrain.

Blockout is the next generation, taking the

of dropping any bogie with only five or six harrowing passes (call it a couple hundred rounds, max). Multiple target-acquisition is supported (i.e., you can look left, right, and back, as well as down over the lip of your cockpit). And your plane comes equipped with the most advanced stealth technology (i.e., the ability to hide in heavy cloud cover).

Yes, folks, air war wasn't always like a Tom Cruise video game, played out in hundredths of a second on afterburner. Warbirds' "simulation" mode exploits the power of the Lynx to recreate all the mechanics of first-generation flight. Your plane moves at a stately pace and suffers the ravages of physics exactly as a real plane would. Strenuous climbs and banks can stall your engine. Gliding is difficult, due to that pesky gravity. And left turns are harder to make than right turns because of your propeller torque.

The controls of the plane are mapped neatly to the Lynx joystick and option buttons, and, unlike simulations of more recent aircraft, the few essential controls are quickly memorized. With practice, you'll quickly get the hang of driving this little air-jalopy, nursing it through stalls, learning to cut your engines

and glide, poking your nose in and out of cloud banks, and mastering the moves you'll need to survive your first series of dogfights.

Warbirds' default play mode runs you through a graduated series of dogfights, letting you pit your flying skills against increasingly sophisticated and numerous opponents. Or, if you prefer, you can select any scenario and customize its various parameters at will, providing a virtually unlimited range of challenges. Each scenario pits you against from one to several enemies of varying intelligence and strategic capability. And customizing options include the ability to select whether or not mid-air collisions can take place, whether combat commences head-to-head or enemies are positioned randomly, and numerous other variables. You can even choose to play the game in "arcade mode," turning your tame and rickety biplane into a rocket-powered, gravity-defying aeronautic phenomenon, invulnerable to enemy fire.

As if this weren't enough, ComLynx makes it possible for two Lynx owners to fly against each other, adding a whole new dimension to the game. Any way you look at it, Warbirds is a very solid simulation that is a lot of fun to play. ■

basic premise of Tetris into the arena of full 3-D play. In Blockout, you're looking down into a rectangular shaft, the bottom and sides of which are marked off in unit squares. 3-dimensional pieces, composed of unit blocks arranged in various configurations, appear one by one at the top of the shaft (near you), then drop slowly down (away from you), step-by-step, towards the bottom. Your job is to rotate the pieces (on any of three axes) as they drop, making them fit together neatly with other pieces that have already fallen. As pieces reach the bottom, they begin piling up; when no more space is left for falling pieces, the game is over. The only way to forestall this is to fit the pieces together seamlessly, so that entire layers of unit blocks are filled. Filled layers disappear, leaving more room for pieces, and extending the game.

The job of rotating pieces into nesting configurations is extremely challenging, and somewhat counter-intuitive. Once basic play is mastered, moreover, Blockout extends its challenge by providing numerous play options. The bottom of the shaft can be 3 x 3 or 5 x 5; and the shaft can be up to 12 levels deep. Three different blocksets are available: flat (pieces composed of a single layer of unit blocks), standard (pieces composed of up to two layers of unit blocks), and extended (all manner of bizarre shapes). Rotation speed can be changed, and you can begin at any speed from lobotomized to

Sonic Boom. Combined with demo and practice modes, the varied options keep the game interesting and provide a range of challenges appropriate to any skill level.

The graphics are nice and the displays are well organized. The main portion of the screen is devoted to the Pit, where where you manipulate pieces before dropping them to their uncertain fates. The pieces themselves are displayed as transparent "wire-frame" images until they reach the bottom of the pit, letting you see past them to best formulate your strategy for fitting them into the emerging patterns, below. A color-coded level meter shows you where the current block is in relation to the pieces in the pit, and the scoreboard constantly displays the vital statistics of your game.

When I first sat down with Blockout, I thought that I was about to experience total and humiliating defeat by a program smaller than my credit card. The lower levels of the game, however, are quite forgiving (though the fastest level will send home whimpering even those who laughed derisively at Tetris' level nine). While Blockout is more strategy-oriented than Tetris, requiring more forethought before placing each block, the advanced player will still benefit from a fast forefinger. The final word: Blockout is a real winner for blockheads from all walks of life! ■



PAC LAND

Based on a “run and hide” premise quite distinct from the violent confrontationalism driving the majority of action gaming, the Pac-Man games (Pac-Man, Ms. Pac-Man, etc.) have for years been superstars of the arcade scene.

Until now, succeeding versions of Pac-Man have done no more than to enhance the mechanics of the original version, adding new Pac-People, special “prizes,” new and more complex levels, and other cosmetic pick-me-ups to the classic maze-running/dot-eating scenario.

PacLand, new from Atari for the Lynx Portable Entertainment System, puts Pac-Man in entirely new terrain: a graphically-detailed, horizontally-scrolling, multi-level world peopled with fully-animated obstacles and monsters. Pac-Man, too, has been “souped up” to deal with the demands of this new environment. No longer just a smily face with ever-working mouth, the new-and-improved Pac-Man has arms and legs, and can walk, jump, and generally boogie down!

Other aspects of the game, however, are only slightly changed. As always, the general idea is to chow down on as much point-getting prize fruit as possible, while avoiding contact with roving monsters. In PacLand, however, grabbing prize fruit

SYSTEM: Atari Lynx

SUMMARY: Pac-Man's first scrolling adventure.

MANUFACTURER:
Atari Corp.
1196 Borregas Ave.
Sunnyvale, CA 94087

PRICE: \$34.95

isn't as simple as just running over it in a two-dimensional maze. Pac-Man must jump to catch the fruit, often employing objects as jump-off points, to get extra loft.

In similar — but different — fashion, avoiding monsters is no longer a matter of luring them into cul-de sacs and back alleys. The monsters in PacLand have much more freedom, come in more shapes and sizes, drive a

variety of vehicles (planes, automobiles, and flying carpets among them) and are more numerous than in any previous Pac-game. And avoiding them involves learning to use terrain and other obstacles to best advantage. One noteworthy new feature: Pac-Man can jump on top of monsters without being injured, and a method for evading groups of monsters involves jumping from one to another, as with stepping-stones.

One favorite aspect of the original scenario has been preserved intact. When Pac-Man eats a yellow “power dot,” he's rendered temporarily immune to monsters, and gets to chase them around for a change. Pac-Man's ability to periodically “turn the tables” on his pursuers gives the game a wholesome balance and prevents the action from being totally one-sided.

Graphics in PacLand are both amusing and surprisingly sophisticated. A technique called “parallax scrolling,” in which background objects move from side-to-side less rapidly than foreground objects, is used to create a real sense of depth in the otherwise two-dimensional, horizontally-scrolling playfield. Figures, including Pac-Man and his monster enemies, are rendered lovingly, in a style reminiscent of Walt Disney animations. The “Disney Quotient” of the game is further enhanced by a Tinkerbell-like figure who lives under Pac-Man's hat, and participates in scoring and half-time scenarios.

The game's user-interface is simple: the joystick is used to direct Pac-Man right or left, and the buttons make him jump. Even very small children should find the first few screens (or “trips,” in PacLand-ish) easy enough to complete, while older fans will find their greatest challenges later in the game. In sum, PacLand is a solid play-value for all ages: a new approach to an old favorite. ■

A.P.B. (All Points Bulletin), new from Atari for the Lynx, is a wild-action police game that will challenge even the most arcade-amped reflexes.

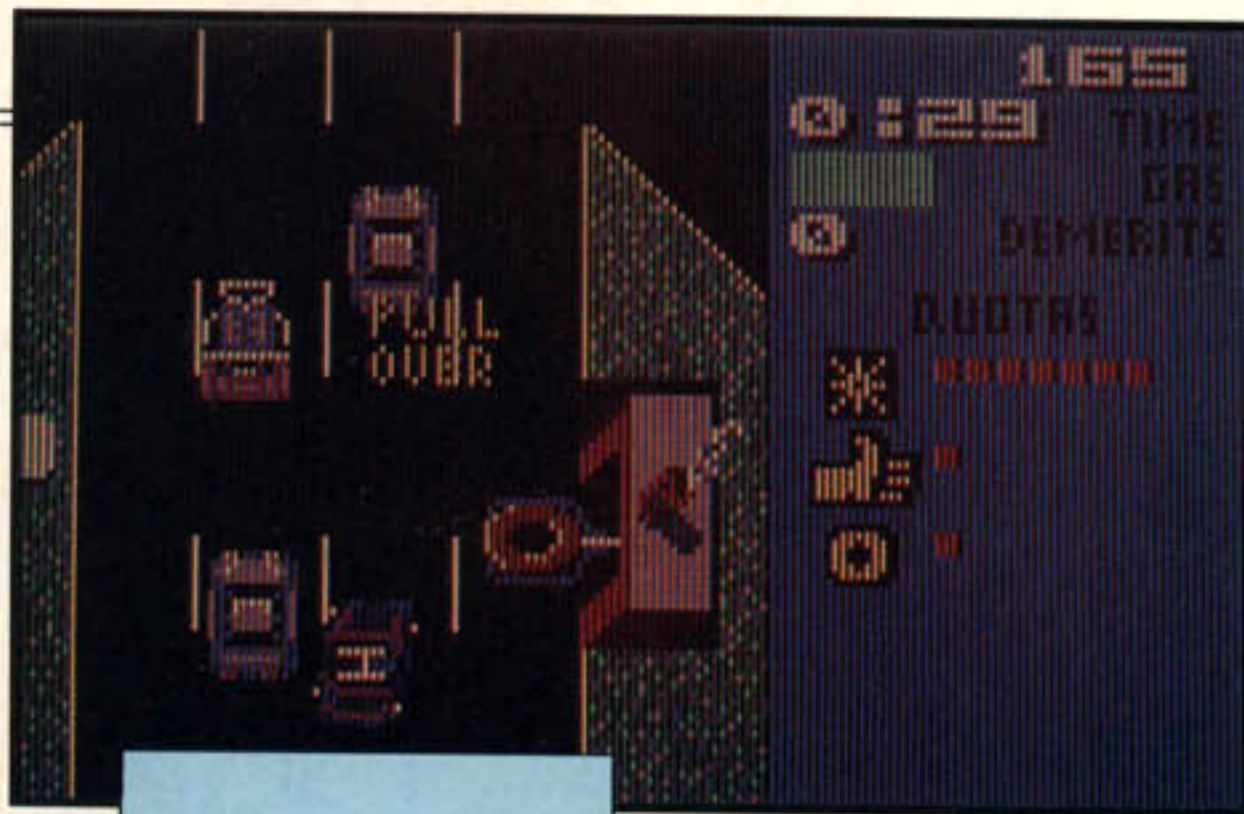
Drawing about equally from action hits such as PaperBoy and complex strategy games such as Chip's Challenge, A.P.B. pits you (as rookie Officer Bob) and your prowl car against criminals and nuisances of every description. Your job: to Serve and Protect. And while you're at it, avoid racking up demerits, beat the clock, book your per-shift quota of violators, and eat enough donuts to keep your blood-sugar stable.

Viewed from above, your prowl car is controlled by an ingenious and challenging user-interface. Pressing the joypad left or right steers the car, while button B acts as both throttle (when pressed) and brake (when released). Direction and degree of acceleration are indicated by a dot that moves further out in front of your car as your speed increases. Learning to track the dot is important, since its distance from the front of the car also indicates how much room you need to stop.

Button A activates your siren, which, when sounding, permits you to perform all sorts of emergency maneuvers (for example, running head-on into other cars) that would normally cost you a demerit point. Besides shielding you from certain types of injury, the siren acts as the "long arm of the law." In siren mode, the directional dot in front of the car becomes a "Pull Over!" icon that can be used to finger certain misdemeanor-doers, such as litterbugs. Since, logically enough, nobody does anything bad while your siren is on, you must use it judiciously when trying to capture your quota of bad guys in a limited amount of time. Nor is the siren sufficient to handle more truculent (not to mention violent) felons. Certain of these must be rammed, sometimes several times, before they trundle off to the pen. In the case of murderers, you have to find a gun and ... well, there's no nice way to say it: blow them away.

Of course, there's also a positive side to police work: old ladies to be helped, money bags and other prizes to be collected. Finally, there's nutrition to think about: donuts are scattered through every quarter of the city (on sidewalks, at "donut huts," etc.), and eating a donut gives you extra time.

And time is of the essence, since your quotas are increased with every shift. Your first few shifts are spent mastering the controls of your car and



SYSTEM: Atari Lynx

SUMMARY: Wild, high-action police/driving game.

MANUFACTURER:
Atari Corp.
1196 Borregas Avenue
Sunnyvale, CA 94087

PRICE: \$39.95

A.P.B.

learning to use your siren to handle less-threatening criminal behavior, and it's fairly easy to make quotas on the first few screens. But then, between screens two and three, the A.P.B.s start coming in, bidding you to seek out and capture specific criminals in the course of your upcoming shift (as well as make your quota). The action quickly becomes fast and furious, as

you strive to meet your quota, nail the particular bad guy, eat enough donuts to max your time so that you can get everything done before the shift ends, and rack up enough bonus points to erase your steadily-increasing number of demerits. Demerits are gained whenever you do something stupid, like running head-on into a traffic cone or car without sounding your siren, or hitting a wall and blowing your car up. Ten demerit points, and you're off the force (read "game over"). A.P.B.'s graphics and sound are terrific. The city's terrain is rendered in considerable detail, and extraneous animated elements are thrown in to spice things up. Digitized sound is used throughout, and constant use is made of digitized voice. For example, your own voice is heard saying "Sure could use a donut!" as time begins to run short.

A full status screen helps you keep track of your quotas, demerits, and the amount of time remaining in the round. As a further aid, hints scroll by periodically at the bottom of the screen, helping you to avoid truly dopey mistakes and better understand the mechanics of game-play. Overall, these elements add to what's already one of the busiest, craziest games around! ■

The easiest way to move files
between the Portfolio and the ST

Transport

By RON LUKS

One statement that really annoys Don Thomas, Atari's marketing manager for the Portfolio, is the complaint that you can't easily transfer files between the Atari ST/MEGA machines and Atari's hot-selling Portfolio palmtop computer. Admittedly, PC owners have the

advantage of using the smart parallel interface with its accompanying file transfer software or the extremely fast and easy PC Card Reader which installs in the desktop system and treats the Portfolio's RAM cards just like an external floppy disk. All other computers, including the Atari ST and Macintosh, depend on the serial interface to connect to the Portfolio.

MS/DOS' COPY command allows for the transfer of text-based files through the Portfolio's serial interface. However, since the Atari ST/MEGA/STe does not have a command prompt, the easiest way to support the transfer at the desktop end is to use a terminal emulator or a special interface program like Transport, from Artisan Software.

The beauty of Transport is that it conceals a number of powerful and useful features behind a clean and simple facade. The first time Transport is booted, the user sees a three-item menu (see Figure

1). He is given the choice either to SEND a text file to the Portfolio, RECEIVE a text file from the Portfolio, or QUIT the Transport program. This "express" menu may be all the novice Portfolio owner ever needs to use.

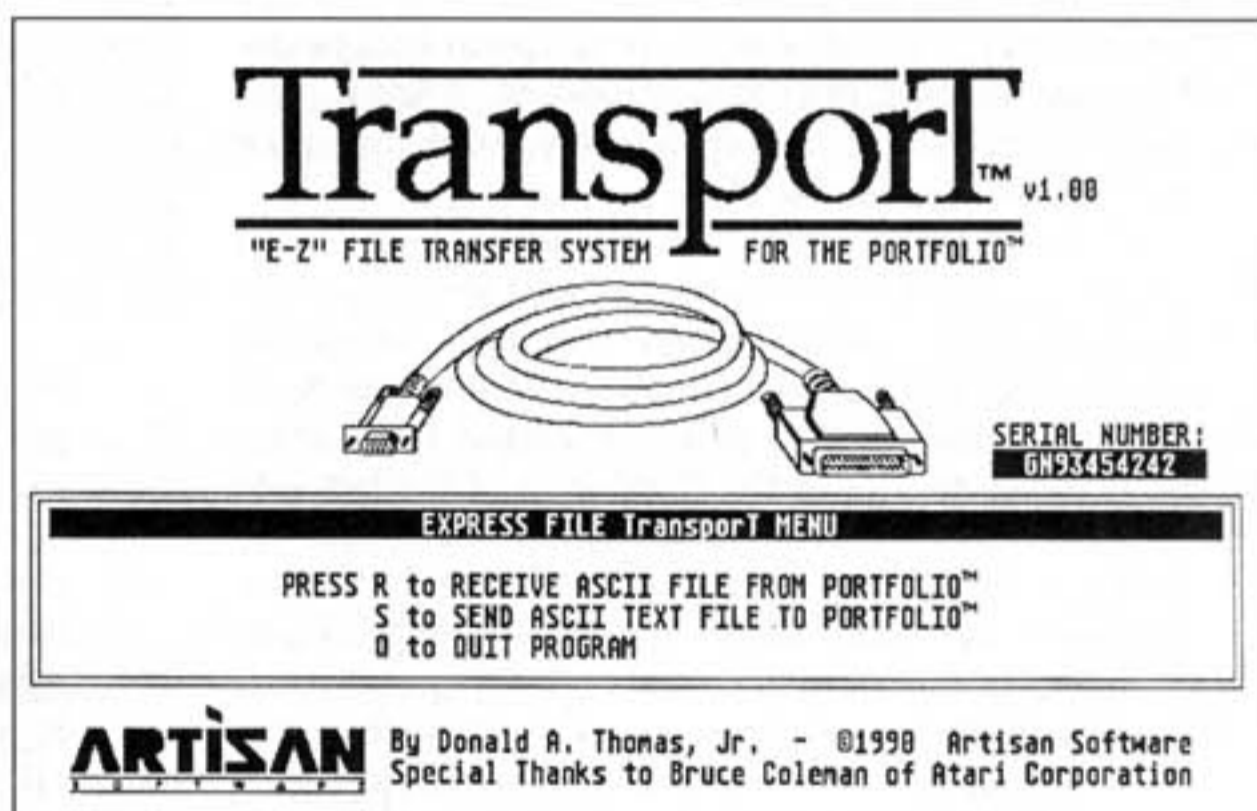


Figure 1. Transport's introductory screen, showing basic menu options. Artisan's philosophy is to "hide" the complexity of advanced features until access to these features is expressly requested.

1). He is given the choice either to SEND a text file to the Portfolio, RECEIVE a text file from the Portfolio, or QUIT the Transport program. This "express" menu may be all the novice Portfolio owner ever needs to use.

Selecting SEND or RECEIVE reveals a sub-menu of file types, allowing the user to select one of the standard data files used by the Portfolio's ROM-based applications or a wildcard choice. This sub-menu passes along the filemask (i.e.- *.TXT) to



Figure 2. The "advanced user" main menu, showing additional file-transfer options and configuration choices.

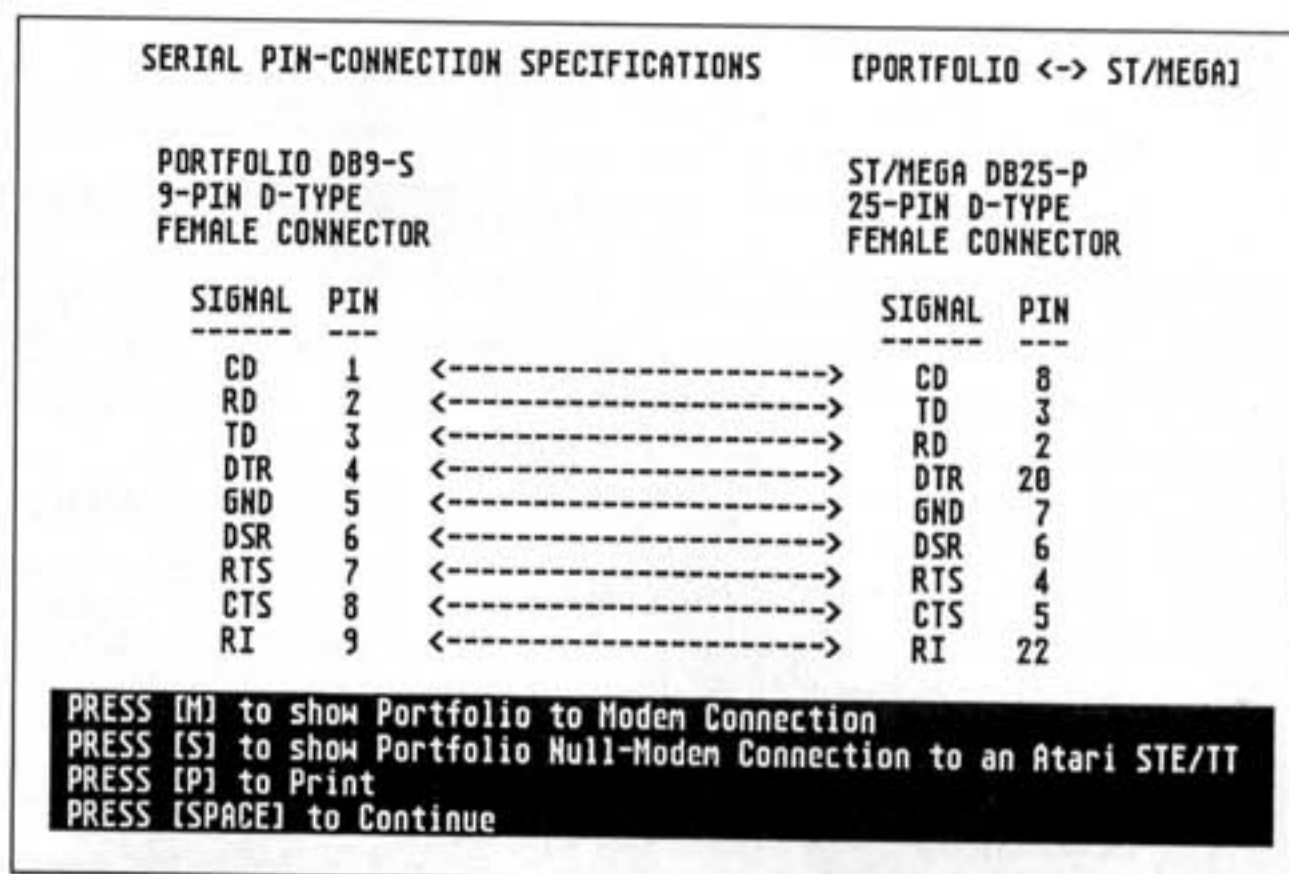


Figure 3. One of Transport's built-in "help" screens, this one showing diagram of null-modem cable required to interface Portfolio to ST. The diagram can even be printed out for reference.

the GEM file selector box, where the user either selects a file by clicking with the mouse or enters a filename in the standard manner. The user is then told to type in a specific command line (including this selected filename) on the Portfolio and the transfer is initiated.

Although the Transport program is not copy protected (and runs quite well from a hard disk) the first time it is run, the user is required to initialize the program by running it from the copy on the original floppy disk from the Atari's A: drive. During the first use, Transport writes configuration information back to disk, allowing the user to immediately start on the advanced user menu and to control such features as the music toggle. (Yes, there's background music ... cute, eh?)

All the documentation for Transport can be viewed from within the running program. Most of the information the typical user will require is available at a single keypress; additional on-disk help files can be viewed through the VIEW FILE option on the advanced user main menu (see Figure 2). The built-in documentation is semi-interactive, and exceptionally complete.

SYSTEM: Atari ST and Atari Portfolio (w/RS-232 Interface)

SUMMARY: Easy-to-use ST to Portfolio file-transfer system

MANUFACTURER:
Artisan Software
P.O. Box 849
Manteca, California 95336

PRICE: \$24.95 (plus \$1.50 Shipping and Handling)

For example, calling up a menu item on null-modem cable pin assignments causes several screens of concisely-written documentation to appear, including a picture of the cable required by Transport, and an interactive diagram that displays pin-to-pin connections for null-modem cables appropriate for interfacing the Portfolio to various ST models (see Figure 3). A truly elegant touch: the diagrams can be printed out so that you can show a technician exactly how to make up the cable you require (alternatively, cables can be assembled from stock components, available at most electronic and computer stores.) Other software developers should follow Artisan's example in providing this level of in-system documentation to the user.

In addition to text transfers, Transport includes an Xmodem send and receive feature, allowing the error-free transfer of binary files. However, you must also have a terminal program on the Portfolio with Xmodem capability. Fortunately, a version of XTERM2, by Jim Straus, which supports this feature, is available on CompuServe and can be transferred in text format to the Portfolio and then converted to runnable form.

In addition to the advanced user main menu,

Transport features an extended options menu (see Figure 4). From this menu, the user can control the transfer rate between the two machines. 9600 baud is the default setting and this reviewer found no need to slow the transfer down. Another interesting feature from this menu is the generation of a Control-Z report. One of the problems with using the Portfolio's own DOS COPY command to transfer binary files is that COPY views a Control-Z character (normally present in binary files, though never encountered in the body of a text file) as an end-of-file marker. This feature allows you to spot the exact locations of Control-Z's in a binary file in order to remove them, transfer the file via the text file procedures previously discussed, and then replace the Control-Z's after the transfer. Using the Xmodem

```

"Transport" v1.00  @1990 Artisan Software
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EXTENDED OPTIONS

A ACTIVATE EZ Transport MENU SYSTEM
B SET TRANSMISSION SPEED (BAUD RATE)
C CHANGE TEXT-RECEIVE BUFFER SIZE
S STRIP FILE OF NON-ASCII CHARACTERS
V DISK WRITE VERIFY TOGGLE IS SET ON
D DELETE FILE

O ON-LINE WITH PORTFOLIO

G GENERATE CONTROL-Z REPORT
R VIEW CONTROL-Z REPORT
L VIEW: "E:\PORTFOLI\TRANSPRT\PRTFOLIO.TIP"

M RETURN TO MAIN MENU
Q QUIT "Transport" (Exit to Desktop)

```

Figure 4. The "extended" menu, giving access to more advanced features.

transfer option is significantly easier but the author wanted to include as much functionality as possible in his program to cover as many future situations as might arise. There is also an online function that allows you to redirect Portfolio functions to the ST/MEGA screen. Whatever is typed on one computer displays on the screen of the other. (This function requires a terminal program to be running on the Portfolio similarly to the Xmodem option.)

Conclusions

Before actually using Transport, I was skeptical about the need for such a program. After all, I could accomplish the same text file transfers using Flash! on my Mega ST without any special software on the Portfolio. Just to verify this, I attempted such a transfer and after a number of tries, managed to get it to work. However, without Transport, the process was slower, much more awkward, and naturally assumed much more than a passing knowledge of computer operations. With Transport, I accomplished the same transfer with ease the very first time I tried.

The design of the Transport program is such that a total novice or an experienced user can configure the program to work with the minimum amount of intervention. Advanced menus and functions do not clutter the screen unless specifically (and easily) called up by the user. The program works exactly as claimed and comes complete with adequate documentation and an extra Portfolio "tips" file that will be of great value to new Portfolio owners as a supplement to the owners' manual.

At the price of \$24.95, Transport is a solid value and I'm hard-pressed to recommend any additional features that should be added to a future version. Until Atari Corp. decides to create a PC Card Reader for the ST/MEGA/STe line of computers, Transport is the easiest way to move files between the Portfolio and the ST. ■

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By JOHN JAINSCHIGG

NeoDesk 3

Now that Atari has premiered its new Mega STe/TT Desktop (for a review, see Atari Explorer, Jan/Feb 1991, page 36) owners of

older STs are looking hard for ways to upgrade to similar levels of functionality. When the original ST GEM Desktop was introduced in 1985, it was considered state-of-the-art. And intervening years have shown little need to modify the ST Desktop's basic premise: that an elegant, mouse-driven, graphic operating system — one that represents abstract computing entities as physical objects — is both easy to learn and efficient to use.

Still, compared to newer offerings, the original ST Desktop is beginning to show its age. While someone accustomed to the crude, command-line-driven operating environment of MS/DOS might find TOS 1.2 or 1.4 exciting, the average long-time ST user can more clearly see the limitations of these older desktop environments.

Unfortunately, upgrading to Atari's new Desk-

SYSTEM: Any ST or TT computer

SUMMARY: Powerful "alternative desktop" that adds numerous new features to the basic GEM user-interface.

MANUFACTURER:
Gribnif Software
P.O. Box 350
Hadley, MA 01035
(413) 584-7887

PRICE: \$69.95

top isn't a likely possibility for owners of older STs. While certain portions of the new Desktop environment, such as the Extended Control Panel, are back-compatible with older versions of TOS and are being made available on disk, the new TOS and desktop itself is ROM-based, and is unlikely to be made available as an upgrade.

Still, the fertile third-party market has seen fit to provide several upgrade paths for the ST owner bent on higher desktop functionality. Of these, one of the most popular has been Gribnif Software's NeoDesk, now available in version 3.02. The product of years of research and painstaking development, NeoDesk 3 can add state-of-the-art desktop features to any ST-class computer.

And We Mean Features!

NeoDesk 3 falls into that rare category of software that should be used with minimal reference to the manual, at least at first. The reason? NeoDesk has so many features that even an advanced user can be intimidated if he's aware of

them at outset. Luckily, the program itself is so simple to install and operate that it can be profitably exploited on a feature-by-feature basis, mastery coming in fits and spurts as users become aware of specific needs NeoDesk can fulfill. NeoDesk fosters

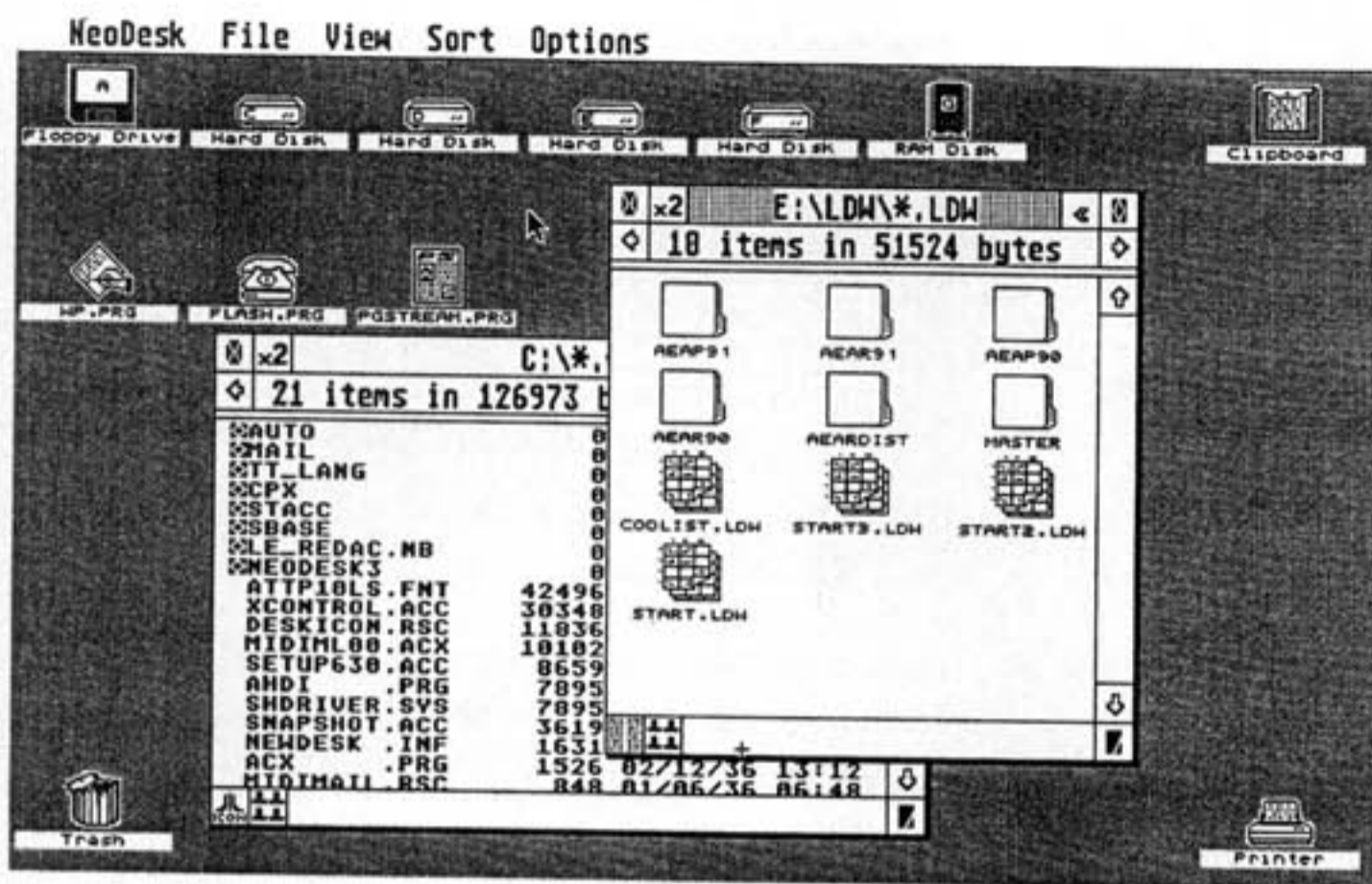


Figure 1. A typical NeoDesk 3 desktop installation. Note application icons on desktop, Clipboard and Printer icons, and windows displaying text and icons, sharing the same display. Also note new control buttons on windows.

this approach by concealing much of its power behind a simple facade that will be immediately useful to anyone with even the barest experience with GEM.

Installing the program could not be simpler. The first step is to run a registration program called REGISTER.PRG that asks you to enter your name and address in the same fashion as you entered it on the enclosed registration card. The program then renders your copy of NeoDesk executable, at the same time writing (I think) your registration information into the body of the code. This is an interesting approach to piracy-prevention — illegal copies of the program will each bear the original owner's registration info, facilitating the prosecution of pirates without bothering the majority of honest users with conventional copy-protection schemes.

Next, you copy the NeoDesk3 folder from the main distribution disk to the root partition of your boot drive. The system can be executed directly from the GEM desktop at this point. Alternatively, you can configure the system to boot NeoDesk automatically, either by setting it as an AUTO application (offered under TOS 1.4) or by installing the enclosed STARTGEM utility in your \AUTO folder. An appropriate command file for STARTGEM (STARTGEM.INF) is included.

For those with such a mind, NeoDesk can also be executed from within another shell or program with a "load and go" facility. The only limitation is that prior to executing the top-level shell or program, the NeoDesk loader (NEOLOAD.PRG) must be executed at least once. The simplest way to insure this

is to place it in your \AUTO folder.

NeoDesk 3 loads as a system of overlays, and can be set to remain fully memory-resident or to unload itself, leaving only a 35K "stub" resident, during client program execution, reloading itself, thereafter. This decision can be overridden in individual cases, when you install an application. For example, you may elect globally to have NeoDesk remain fully resident, but install PageStream in such a way that NeoDesk will unload itself when this particular memory-hungry program runs.

First Looks

Having argued, above, that the average person should start out simply playing with NeoDesk 3, I'm now going to reverse myself and discuss its capabilities in top-down fashion. At first glance, NeoDesk looks much like the ST's built-in desktop, with slightly modified device icons. In the default configuration, two new device icons, labeled Printer and Clipboard, have been added to the desktop's normal set (see Figure 1). The first of these represents a dual-purpose print-queue device, to which files can be dragged for output. Normally, this ties up the system during printing — however, when NeoDesk's optional print queue accessory is installed in tandem, printing occurs in the background, and up to 10 files may be placed on (or removed from) the print queue at any time.

The Clipboard provides a built-in "third hand" for storing files and folders in memory during disk swaps and directory changes, expanding and contracting as required to exploit all available RAM. Because the Clipboard's contents are cleared whenever a program executes or a new desktop configuration is loaded; and because programs cannot be executed from Clipboard storage, it cannot function as a full-service RAMdisk. (A more traditional, general-purpose RAMdisk accessory is included on the NeoDesk Extras Disk, for those who require the real thing).

As with Atari's new Desktop, NeoDesk's icons and desktop background pattern are fully customizable (alternatively, the desktop background can be replaced by a NeoChrome or Degas picture). The NeoDesk Icon Editor (see Figure 3), loaded directly from the Options menu as an overlay, is always close to hand. While the editor is primarily designed for

modifying individual icons, it also has the capacity of saving icon groups in special .NIC files, for exchange with other NeoDesk users. The editor supports both color and black-and-white icons, and can import and export icons between resolutions, though this may be impractical, in certain cases. As part of the process of icon design under NeoDesk, you can assign a wildcard template to an icon that determines to what file or class of files that icon should be attached. A fully-developed NeoDesk system might ultimately assign a unique icon to each major application, and a similar icon to each file-type used and created by that program.

Under NeoDesk 3, file icons may be moved to the desktop for easy access (see Figure 1), and saved in position as part of the current configuration. Icons are "active" even in NeoDesk's default configuration. Dragging file or folder icons to an application icon will cause NeoDesk to launch the application, using the files or folder names as parameters. This is just one aspect of NeoDesk's ability to control program execution environments.

Another convenience feature of the new NeoDesk deserves mention at this point: Desktop Notes (see Figure 4). Just click anywhere on the desktop background and you can enter and edit a line of text — perfect for jotting down phone numbers, "to-do" lists, and other scribbles without having to load a notepad accessory or word processor. Desktop note sets may be saved to disk and loaded, either individually, or automatically as part of NeoDesk's configuration.

New Window Controls

NeoDesk windows (see Figure 1) are more informative and powerful than those of the standard desktop. A status bar, scrollable either by mouse or keyboard, displays information relating to window contents or to selected items. In place of the horizontal scroll bar at the bottom of the window (which NeoDesk doesn't use) a secondary information bar identifies the current NeoDesk volume name, if it exists. The full path of the current directory and the selection template imposed to filter its contents for display are shown in the move bar at the top of the window. This path specification is dynamic. Clicking on any part of the path causes an immediate jump to the referenced subdirectory. In addition to the GEM-standard "closer," "sizer," and "fuller" controls, NeoDesk windows offer four new buttons (see Figure 1). The "backer" button, in the upper right, lets you cycle the active window to the back of the display. The "duplicate" button, at upper left, opens a new window to the path the active window is currently displaying. The toggle button, at lower left, lets you shift the window's display mode to show either icons or text, regardless of default settings. Finally, the "select all" button causes all items in the current

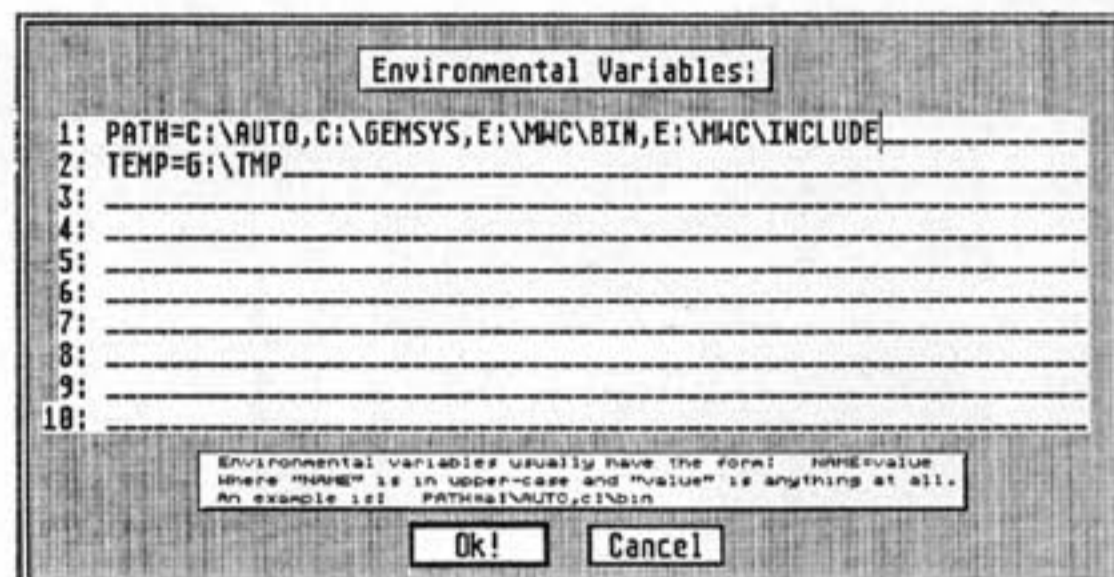


Figure 2. NeoDesk's "Environment" dialog, where path search and other strings can be set to direct the behavior of programs that use them.

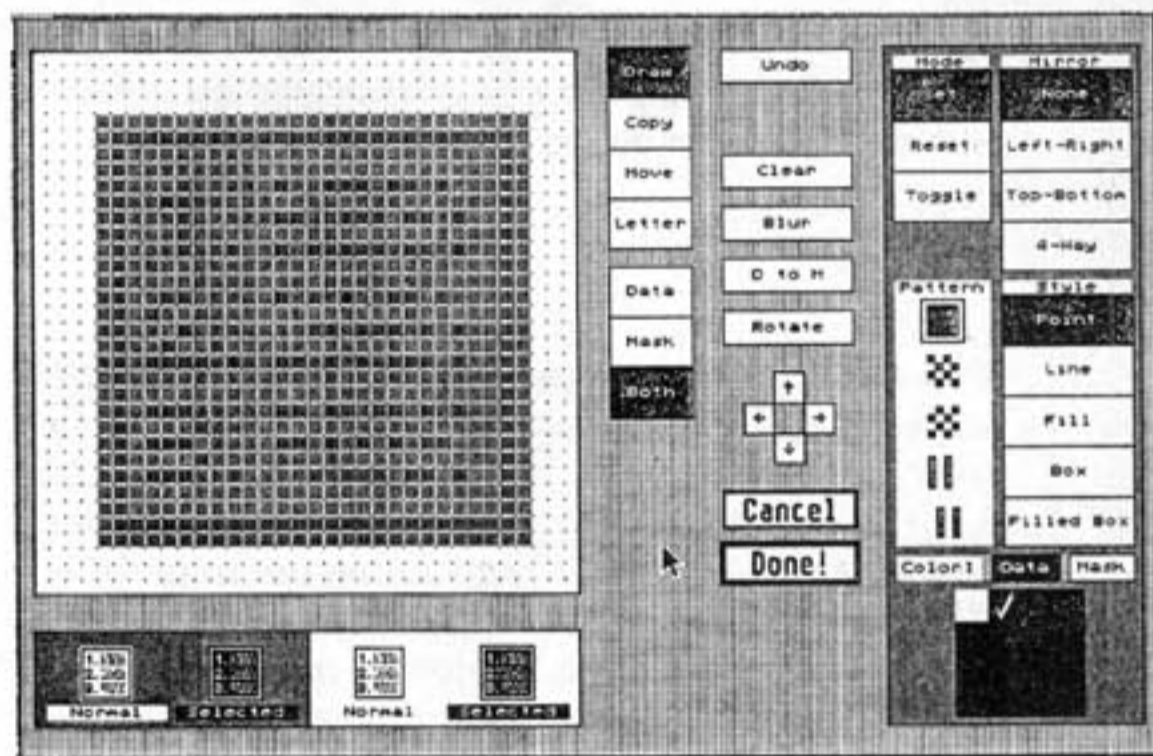


Figure 3. The Icon Editor, always available from the desktop. The icon being edited is one of NeoDesk's many default icons, this one intended to identify batch files.

directory to be selected (even if not currently on display). This vastly simplifies the logistics of mass window-to-window file moves, copies, and deletes. NeoDesk windows also feature a "split window bar," (see Figure 5) that when pulled down, divides the window into two, independently-scrollable views of the current directory.

NeoDesk permits up to seven windows to be open simultaneously, as opposed to the GEM desktop's maximum of four. Whereas the standard desktop imposes display characteristics (i.e., view as icons or text, etc.) on all open windows immediately following selection, NeoDesk's own "view" and "sort" menu items are applied only to the active window and to windows subsequently opened. The characteristics of one window are thus essentially

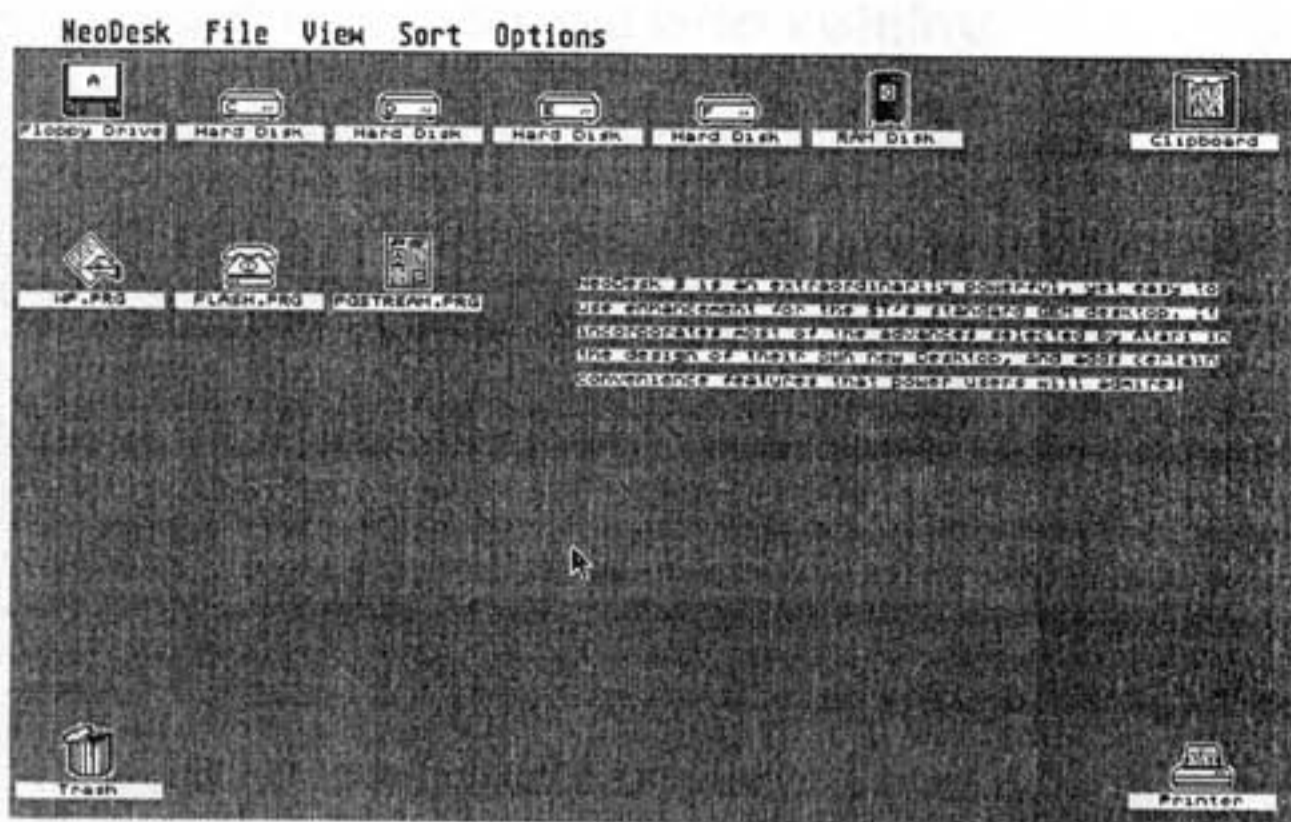


Figure 4. NeoDesk's "Desktop Notes" feature in action. Another step on the road to the paperless office!

separate from those of another. You can arrange to sort two windows in different fashions, mix text and icon windows on the same display, etc.

As noted above, multiple wildcard templates may be edited and assigned to individual windows (see Figure 5), limiting the display of files to certain items or classes. All of the ST's standard sort options may be imposed on window contents (i.e., sort window items by name, date, size, or type) and one additional option, "no sort," is offered, which causes files to be displayed in the order in which they appear in a disk's File Allocation Table (FAT). A related feature, "Reorder," lets you move files around in a directory, without copying out and erasing, first. Together, these features are useful for managing the contents of the \AUTO folder, and similar procedures that work on files in FAT-order.

As on the standard GEM desktop, window items may be viewed either as icons or as text. NeoDesk, however, also supports a space-efficient "small text" option that allows the display of a larger number of items in the same window space, and may be set to automatically display textual window contents in multiple columns, when a window is sufficiently large. When displaying items in text mode, the user may elect to suppress the display of additional file information such as size, date, and time, leaving more room for filenames in multi-column

D:\PAGESTRM\PSFONTS*.FM				
41 items in 34378 bytes				
TYME_B	.FM	1058	12/07/88	01:04
TYME_I	.FM	1042	12/07/88	01:05
PALA	.FM	1006	04/12/91	14:58
PALA_BI	.FM	994	02/24/89	17:04
PALA_I	.FM	986	02/24/89	17:04
HELU	.FM	982	11/20/85	00:22
HLUM	.FM	982	04/18/89	00:49
CHAM	.FM	978	11/20/85	00:20
SYMB	.FM	562	02/24/89	17:05
DEVOLL	.FM	562	03/31/89	13:35
SPOKANE	.FM	562	03/31/89	13:36
THAMES	.FM	562	03/31/89	13:36
ELEGANCE	.FM	562	02/24/89	16:56
RMN_BOOK	.FM	562	02/24/89	16:57
WESTSIDE	.FM	562	02/24/89	16:57
COUR	.FM	562	04/07/89	19:39

Fig 5. NeoDesk's "Split Window" and template features at work. The template has been set to display only files with an .FM extender (PageStream Font Metrics files). Two parts of the same directory can be worked with, simultaneously.

arrangements. This option is more significant under NeoDesk than on the standard desktop, since Neo-Desk's windows do not feature a horizontal scroll bar. Instead, Neo's windows automatically arrange the items they contain for proper display in the horizontal dimension (a command, "Snap Icons to Grid," is offered that lets you alter the default spacing of icons both vertically and horizontally).

Two powerful, recursive file-search commands are offered to ease the task of file-management on systems with big hard drives and complex directory structures. Search Drives lets you select any drive or group of drives for searching, then specify a wildcard template describing the file (or class of files) you want to find. Search at Path lets you perform a more limited search on the contents of the current directory and any subdirectories. When NeoDesk finds a matching file during a search operation, you are offered the choice of using that file, skipping it, or abandoning the search. If you elect to use the file, Neo automatically opens a window on its drive and path, and selects it for you.

NeoDesk can initialize floppy disks — both 5-1/4" and 3-1/2" — in a wide variety of ways: 40 to 82 tracks per side, 9 or 10 sectors per track, in both twisted and untwisted formats (use of Twister format requires TOS 1.2 or later). Disks are formatted from the center out, meaning that the vital FAT information is the last item to be overwritten in the format process. It is thus possible to imagine aborting a disk format and saving at least some of the data the disk originally contained.

A macro recorder/editor and playback facility is built into NeoDesk 3, whereby any sequence of mouse moves, clicks, or keypresses up to 1,024 bytes can be assigned to a combination of Control, Left Shift, Right Shift, or Alt keys, plus one other key. NeoDesk macros function only while on the desktop, and cannot automate certain functions such as user responses to dialog boxes (a NeoDesk macro will pause if a dialog box comes up). However, they should be useful for mechanizing program-launching, backup, and other housekeeping functions. The macro system supports pre-installed keyboard equivalents for all menu items and for common desktop functions such as opening a window on a drive, and these keyboard shortcuts can be reconfigured by the user, as desired.

Additional convenience features include a

menu item that permits automatic printing of the current directory, and a button that sends a "formfeed" code to your printer.

The Neo Environment

NeoDesk was originally designed to correct the fact that GEM does not provide a standard "environment" for program execution. As a result, the program places special emphasis on flexibility in this area. As noted above, NeoDesk offers "Active Icons," a facility by which files can be passed, iconically, to programs that can accept parameters.

In a more general sense, NeoDesk distinguishes four different types of executable file: the normal TOS and GEM program files; BATCH files designed for execution by a command-line interpreter; and NeoDesk files, which exploit "hooks" into NeoDesk. All of these file types may be installed to accept or ignore parameters and to respond to one or multiple file extensions. The installation dialog also permits specification of whether the program's home directory, or the calling document's directory, should be passed to the program on execution.

An additional "parameters" dialog is used to pass parameters to programs installed as requiring them. Though not a command-line interpreter in the truest sense, the parameters dialog does accept a variety of file redirection symbols for use with .TTP applications. Additional environment control is offered by the Edit Environment dialog, which allows you to set values for the system variables used by certain programs designed to function in a DOS or Unix-like environment (e.g., PATH=, SUFF=, etc., see Figure 2).

NeoDesk allows you — rather than the system — to assign significance to program suffixes. You may decide to stick with the system's usual .PRG, .TOS, and .TTP extensions, or invent new systems of classification wherein, for example, files ending in .PRG, .APP, and .UTL are all treated as GEM executable files.

Finally, as noted above, NeoDesk supports batch-file execution capabilities. Clicking on a file with the default .BAT extender (or any other extender you decide to specify), will cause execution of a designated command-line interpreter (CLI), and the passing of that filename to the interpreter as a parameter. Many CLI's are available for Atari systems; some of which are more DOS-like, others more Unix-like. Gribnif itself offers the very powerful NeoDesk CLI (compatible with NeoDesk versions 2.0 and later) which offers the best of both worlds, combining a powerful batch-programming language based on DOS and Unix with extended features that support the batched execution of GEM applications (\$29.95).

Utilities and Extras

NeoDesk's built-in file-viewer, offered as an option whenever you click on a non-executable file that isn't installed so as to launch an application program, offers both vertically-scrollable display of text files and viewing of NEO and Degas files. Any alternative file viewer may, however, be installed to operate instead of the built-in program. Additional NeoDesk utilities offered on the NeoDesk Extras Disk include a font loader, which allows you to replace the three basic system fonts with fonts of your choice; a font converter, to convert Degas and GDOS fonts to desktop format; an .INF file converter, to import .INF files created under earlier versions of NeoDesk; and the wonderful "Recoverable Trashcan."

This last utility is worth special mention. Installed as a NeoDesk accessory, the recoverable trashcan places a new trashcan icon on your desktop, which may be used in tandem or in place of the standard trashcan. Unlike the normal trashcan, which deletes files immediately and cannot be opened into a window, the recoverable trashcan writes "deleted" files into a protected region of your disk. To recover a deleted file, you simply open the new trashcan icon into a window, and drag out the desired files.

There are only two minor problems inherent in this design scheme. First, a disk or hard-drive partition can quickly be filled up with "deleted" files, so periodic "housecleaning" is necessary. Second, since "deleted" files are written onto disk in non-standard fashion, they may be lost or corrupted if the disk or volume is de-fragmented or otherwise modified in a sector-by-sector fashion.

Docs and Final Notes

Given the constraints of a normal review, it's impossible to accurately describe all the features and implications of a program as powerful as NeoDesk. While I've touched on all the major features of the system, many important and powerful subtleties have, by necessity, been given short shrift. Of NeoDesk 3, in general, I can say that it compares favorably with Atari's own recent revisions of the ST Desktop environment. I can think of no higher praise than to note that Atari's Canadian division has elected to distribute NeoDesk 3 as part of its STe package.

NeoDesk's documentation is similarly effective. The 129-page manual is well-written and comprehensive, and explains both the basic system and its ancillary utilities completely. Nevertheless, the typical NeoDesk user will be months tracking down and trying out every feature of this more-than-comprehensive package. Yet, ironically, the \$69.95 price of NeoDesk 3 might rationalize its purchase on the basis of only a few of its many features. ■

By RON LUKS

DC Desktop

v 1.2E

Numerous features make this package a solid value

Every new computer user goes through two distinct phases of adaptation. The first phase is fairly rapid, and involves learning the basic rules of operating the machine. Once these simple functions have been mastered, the second phase begins, when the user starts customizing and personalizing the system to improve the ease and comfort of its use. Some people would claim that this phase never really

ends, since just as one discovers when one buys a home, there's always something that needs sprucing up, or something new to add.

The graphical GEM Desktop interface of the Atari ST/Mega system goes a long way towards simplifying the first, or "learning" phase of computer adaptation; especially when compared with the older generation of command-line interfaces common in the MS/DOS world. However, the relative inflexibility and closed structure of the ROM-based TOS operating system does not lend itself to much in the way of personalization or customization beyond the few basic settings allowed by the SET PREFERENCES menu item, and the Control Panel desk accessory.

Atari has continually enhanced the ST Desktop with each succeeding generation of ST, and has added powerful and flexible new features to coincide with the release of the Mega STe and TT computers.

Unfortunately, this doesn't address the problem faced by owners of older-model STs who wish to upgrade their Desktop environments. While software-based improvements such as the Extended Control Panel may provide sufficient upgrade path for most users, the Desktop itself remains impossible to modify, without exchanging ROMs.

Products such as NeoDesk (reviewed elsewhere in this issue) that replace the STs native Desktop system with a completely redesigned system, will satisfy the needs of certain users. But what about the significant number of ST owners who simply want to upgrade their Desktop environment, without sacrificing the familiarity of the built-in GUI? DC Desktop, from Double Click Software, may be the ideal solution.

Enhance, Don't Replace

Actually, the package sums up the product very well in just two phrases: "Enhance, don't replace," and "The GEM desktop just got better!" The DC Desktop package consists of a master program, installed from the AUTO folder, and a series of additional program modules providing optional features. The user may choose to install certain of these automatically, at boot time, or may execute modules from the desktop, as required.

The main program, DCDSKTOP.PRG, offers a fairly powerful set of enhancements, all by itself. Unique icons may be assigned to files and devices, and program icons may be placed directly on — and executed from — the desktop. Objects placed in



Figure 1. A typical DC Desktop installation. Note unique device and program icons installed on the desktop surface. Also shown is a CABINET window, containing a working suite of desktop-publishing-related programs.

TRASH are now recoverable; and a virtual drive, called CABINET, allows collecting oft-used system resources in one, easy-to-find place. Different desktop setups, CABINETS, and other aspects of configuration may be loaded and saved with single keystrokes. One-touch execution of utilities such as the file selector, DC Installer, and Icon Editor programs is also provided.

Lots of Icons

DC Desktop allows you to create and assign distinctive icons to every file and drive. A very powerful and easy to use Icon Editor program is included in the DC Desktop package at no additional charge. As far as designing your own icons goes, you need not fear if your artistic talents are as minimal as mine. The folks at Double Click Software supply nearly 100 pre-drawn icons along with the Icon Editor. In addition to these, nearly 1,000 more icon shapes are available for downloading from their BBS (see below) or from their vendor-support area on CompuServe (GO ATARIVEN from any CompuServe system prompt).

All icon images pertinent to DC Desktop are stored in the default DCDSKTOP.ICE file, loaded at bootup. DC Desktop allows you to associate a specific icon with any file or device. You can also

specify that a single icon image be associated with a certain class of file, via wildcard expression. Thus, assigning a special icon to all .TOS files, or all .ACCs, is reduced to a single, global operation. When preferred icon assignments are not explicitly specified, DC Desktop employs pattern-matching to assign sensible icons to different things.

You may edit the icons provided with the package, create new icons from scratch, or use the Icon Editor to bring in icon images

from other external sources, including (but not limited to) NeoDesk icon files and icons embedded in standard resource (.RSC) files. The editing tools provided in the Icon Editor are quite flexible and powerful, and the user is urged to study the documentation for a full explanation of their use. For the technically-inclined, the documentation includes very detailed technical specifications for the .ICE file format.

As with the current version of the GEM Desktop, program icons may be installed directly on the desktop itself for easy execution; avoiding the problem of having to look through numerous, deeply-nested folders to find the .PRG you need. As is most efficient, a desktop program icon is not a copy of the program itself, but merely represents the pathname of the executable file. Double-clicking on a desktop .PRG causes the program to execute from the normal context of its

home directory, where its resource and other support files are stored.

An extension of this trick is used by DC Desktop's virtual disk drive, CABINET, to provide "one-stop" access to programs residing in far-flung locations on your system. Dragging a program icon to the CABINET creates a copy of its path there, represented by an icon. Groups of icons can be col-

SYSTEM: Atari ST

SUMMARY: Flexible system for enhancing, rather than replacing, the original GEM Desktop

PRICE: \$39.95

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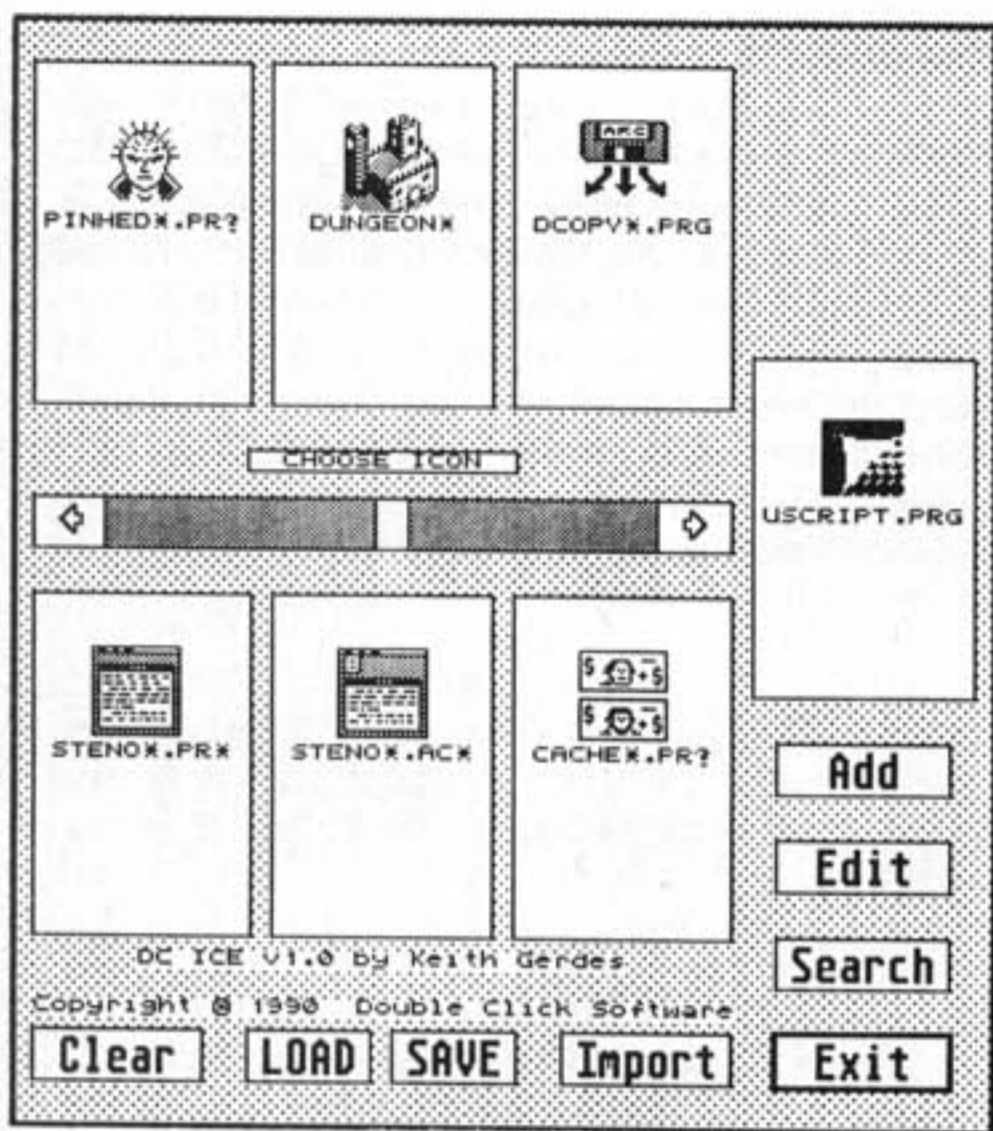


Figure 2. DC's Icon Editor, showing some of the wide variety of "pre-fab" icons offered with the system.

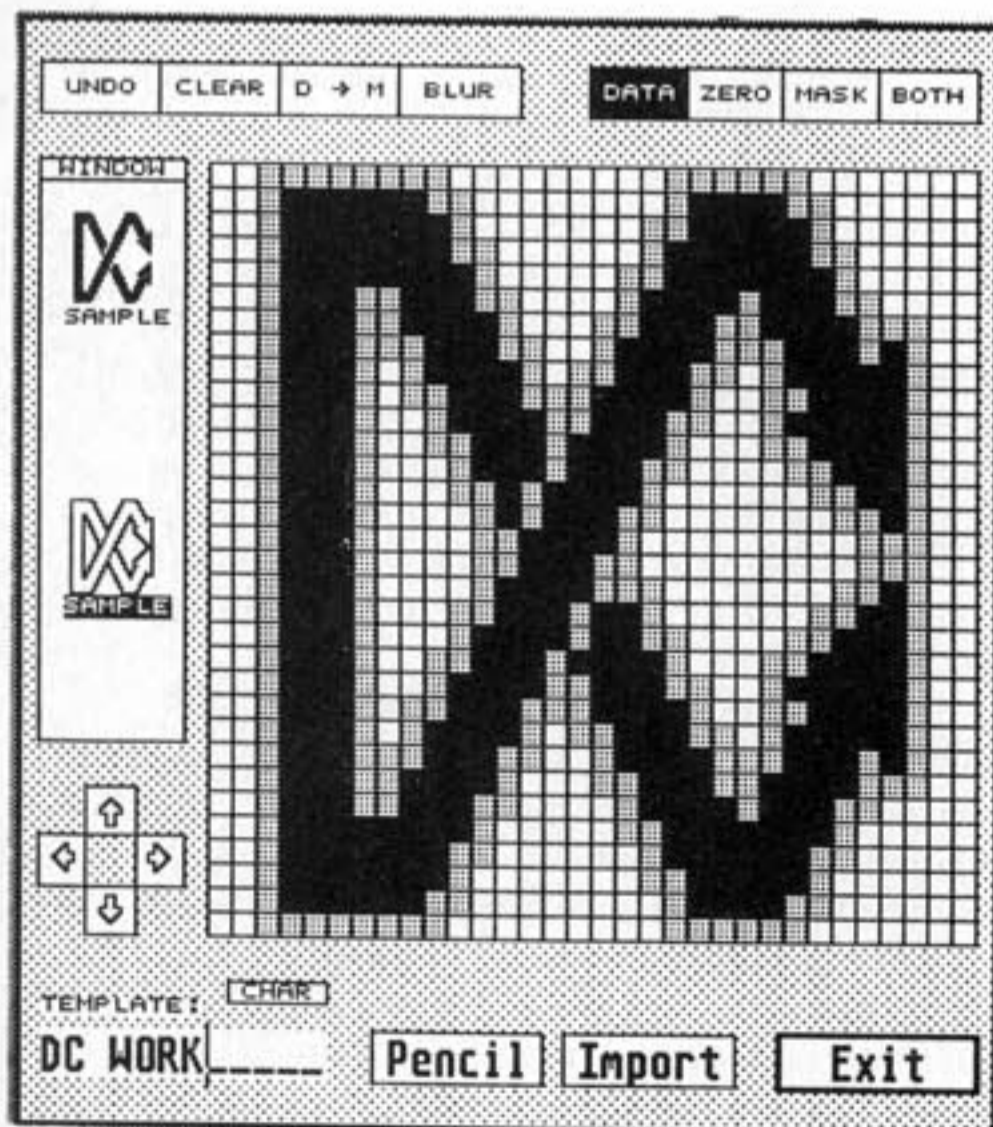


Figure 3. The Icon Editor at work. Both the icon's basic bitmap, and its "mask" may be edited, giving the designer control over how the icon appears normally, and when selected.

lected in the CABINET, providing quick access to a working suite of applications while neatly avoiding the confusion that can result from installing all these programs on the desktop, directly. You can even create multiple CABINETS and load or save them with simple keystrokes at any time. This feature alone is worth the price of the package.

Other Program Modules

Additional enhancements to DC Desktop are provided in the form of function modules. Depending on the functions you wish to add and the amount of memory at your disposal, you may select certain option modules for auto-installation at boot time, or execute them later, as needed.

The module DCSHOW adds full scrolling and global search to the standard Desktop's "Show/Print/Cancel" function, which allows the reviewing of text files on-screen. A second module, DC SHOW PICS, further extends the system's ability to display non-executable files, adding the capacity to view NEOChrome and DEGAS files, directly, by double-clicking. The DC SHOW ARC module is actually an .ARC shell. When SHOW ARC is installed, clicking on an .ARC file prompts several options: contents may be listed or extracted as required. Finally, DC SHOW HEX may be installed, allowing file review in hexadecimal format. This last module will mainly be of interest to programmers.

Additional modules go on to enhance the functionality of DC Desktop in even more striking ways. DC DESK DROP allows you to replace the desktop background with a picture or pattern of your choosing. This module, like the SHOW modules, 'hooks' invisibly into the TOS/GEM routines to enhance standard operations. The three picture formats and available fill patterns are explained in detail in the manual.

DC SPOOLER is a sophisticated print buffer that supports a printer device icon on the DC Desktop. Printer output may be spooled selectively, according to whether it originates via screen dump (ALT-HELP) or via normal text-output channels, as from a word processor. Text files may be dragged directly to the printer icon, in order to place them in the buffer queue. The size of the buffer is neatly set by renaming the spooler module appropriately. (e.g., DCSPL100.PRGM installs a 100K buffer). You can even check spooler status by selecting Show Information after highlighting the printer icon.

The DC TERMINAL module is a simple VT-52 terminal emulator with a capture-buffer feature that allows you to connect to a BBS or an online service such as CompuServe or GENIE. Finally, DC KEYTOP, a bonus desk accessory, offers DC Desktop users one of the most powerful features of Atari's newest GEM Desktop: the ability to assign keystroke equivalents to GEM menu items.

Installation and Caveats

Before using DC Desktop the first time, it is necessary to run a configuration program to register your copy of the software and to set up some initial parameters. Fortunately, the package comes pre-configured with default settings that will allow you to get up and running very quickly. The CONFIG program writes parameters back to the master program disk and various modules, so to prevent any disasters, you are strongly urged to make a backup copy of the original disks immediately upon opening

the package. The software is not copy-protected.

As you would expect, a powerful system enhancement and configuration package such as DC Desktop takes a bit more time and effort to install than a video game. Moreover, my review copy came with a poorly-written manual which forced me to set up the program almost without help. I'm happy to report, however, that the authors have completely rewritten and replaced the documentation I originally received. Based on last-minute copies of the first two chapters, received in the mail as I was finishing up

Double-Click Software: Rising Stars

Double Click Software, publisher of DC Desktop, was formed in the Fall of 1986 when the original partners needed a corporate name to put on their shareware products. Today, those four partners, Mike Vederman, Paul Lee, Keith Gerdes, and Gilbert Callaghan, are one of the most prolific sources of freeware, shareware, and commercial programs for the Atari computer.

DC's first commercial product was Shadow, a background file-transfer utility marketed through Antic Software. Shadow worked alone or in conjunction with a terminal program, allowing file-transfers to proceed concurrently with other applications.

Currently, DC's most successful package is Double Click Utilities ver 2.0, which they market directly. This fantastic collection of programs includes a RAMdisk, a program that converts ARC'ed files into self-extracting packages (compressed files that will uncompress themselves automatically when you double-click on them), and a decompression utility that handles .ARC, .LZH, .ZIP, and .ZOO formats. Another program included in the set, DCSQUISH, lets you compress programs into a more compact form that is still executable, allowing for considerable saving of disk space.

Other current stars of DC's product line include DC Port, a hardware product that adds extra serial ports to the ST, and DC Shower, a stand-alone version of the DC SHOW module from DC Desktop.

Much to their credit, Double Click has not forgotten that its roots lie in shareware and freeware utilities. To reinforce their ties to the Atari community, the partners have made a

commitment to release a new freeware program each week, for a one year period, in addition to their commercial activities. Starting last October, DC has kept its promise, releasing a stream of free product updates and patches for their commercial products as well as stand-alone utility programs and games.

These offerings are far too numerous to mention here, but if you find yourself in need of a program that turns the mouse pointer around for left-handed users, or allows you to simulate text entry with joystick commands instead of the keyboard, chances are the folks from Double Click have thought of it and created a program to meet your needs. You will find these freeware files in library 13 of the Atari Vendors Forum on CompuServe, where Double Click maintains a regular support presence, as well as on other commercial systems and BBS's. In fact, if you have any suggestions for a "program of the week", the folks at Double Click want to hear about it. Drop them a message at UID 75300,577 on CompuServe or mailbox address DOUBLE-CLICK on GENIE.

Thanks to widening sales both in the U.S. and overseas, Double Click Software intends to expand their support of the Atari market. Their product line will eventually include support for the new TT computer as well as the notebook and notepad units previewed at the February CeBit show in Germany. When asked about their next commercial product, Vederman only replies with the cryptic phrase "it involves multi-tasking ..." Considering the versatility and innovation displayed in DC's current products, we're waiting impatiently to see what's in store.

this review, I'd say they've done an excellent job the second time around.

A lot of time and effort has gone into the design and development of this software. The package has been designed with plenty of "hooks" for future enhancements and additions; and wherever possible, the authors have provided technical specifications and documentation necessary for other programmers to exploit DC Desktop's master program and modules. I've only covered the highlights of this sophisticated package here, and purchasers will be delighted to find many additional features at their disposal.

DC Desktop uses several undocumented memory locations to perform some of its magic and for this reason, future changes in TOS may require corresponding changes in the DC Desktop software. The authors have stated this clearly in the manual and have promised in writing to make necessary revisions available gratis or for a minimal shipping cost. Customer support is available over the phone and via company BBS, as well as through CompuServe and

other online networks.

I tested this package on both monochrome and color monitors with good results, though some reconfiguration was required to optimize the system after switching. Obviously, the added resolution of the monochrome monitor shows off the icons to advantage, but with a little artistic skill, icons can be created or edited to look very respectable on color systems. I've been told that future versions of this package will have extra support for those who use both monitors and frequently switch between them.

In conclusion, I give DC Desktop a very high recommendation. Considering the extremely tricky waters it must navigate to perform all that it does, it is very well-written (and by the time you read this, well-documented). During my test period, the software did not conflict with any of my major application programs. Naturally, the way you set up DC Desktop's various modules will relate to the amount of free RAM available on your system. But even on the smallest 512K system, enough features are available to make this package a solid value. ■

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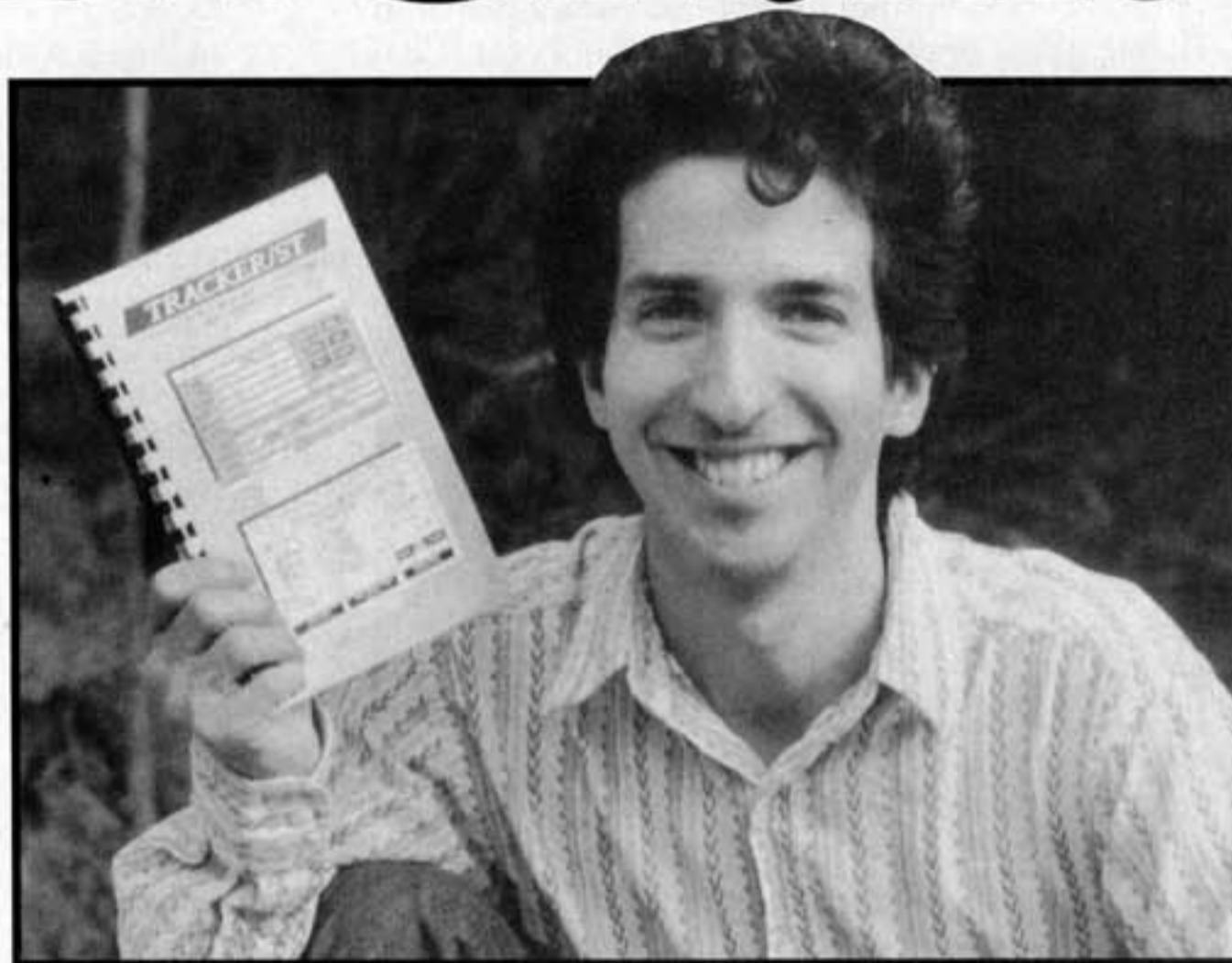
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AtariFest '91 is presented by the Washington Area Atari Computer Enthusiasts

By OSCAR STEELE

Nevin Shalit

Ever wonder what makes the typical Atari software entrepreneur tick? Nevin Shalit, president of Step-Ahead Software and author of the popular and powerful mailing list/mail merge package, Tracker/ST, tells all in an interview with people-watcher, Oscar Steele.



Steele: *Running Step-Ahead Software, programming, and marketing Tracker/ST sound like full-time jobs in themselves, but your involvement in the ST world doesn't stop there, does it?*

Shalit: Actually, I'm very active in a few areas, trying to get the word out on the ST in general, particularly as regards Tracker/ST, of course, but also in the area of desktop publishing. I'm sysop of the SoftLogik Roundtable on GENie (General Electric National Information Exchange), doing on-line product support for PageStream desktop publishing software. And I write a monthly column, Rumor City, as well as product reviews, for ST Informer.

Steele: *Where did you grow up?*

Shalit: I was born on the island of Martha's Vineyard, Massachusetts, and grew up in Leonia, New Jersey. I attended Harvard where I studied Russian, and was photo chairman and executive editor of the Harvard

Crimson. That's where I started writing and taking photographs. Photography was my first career.

Steele: *You were a photojournalist?*

Shalit: Yup. For about five years after college I was a freelance photojournalist, working for clients such as the New York Times and the Village Voice. I did a lot of Travel and Arts photography, and spent some time in Nicaragua and Guatemala doing straight photojournalism. In Nicaragua, I covered the 50th anniversary of the assassination of Sandino; in Guatemala, I did a lot of work up in the mountains, photographing the intense military and political situation that exists there. It's fascinating territory: the indians in many of the small villages don't speak Spanish; their language sounds like a cross between Chinese and certain African dialects. But Guatemala is a violent country. I lost a friend there. He was killed just days after we split up from a joint news trip.

Steele: *How did you get into the ST?*

Shalit: Through photography. I was trying to maintain files of the thousands of stock travel and art photos I had taken, and when folks would call me up for an old photo it would take three hours to find it. I figured a computer would speed up the search process, and I decided on the ST because of their great ad comparing it to the Macintosh, and Atari's "Power Without the Price" slogan. I immediately became an ST freak.

Steele: *How did Tracker/ST come together?*

Shalit: When SuperBase came out, I learned to program in its application language. My girlfriend (now my wife) is a clothing designer, and is a partner in a substantial dressmaking business. They needed a fairly comprehensive system to run all aspects of the business: inventory, bookkeeping, mailing lists, invoicing, etc., and I wrote this application in SuperBase. It worked very well for them. A friend of theirs who was a sweater designer was interested in the program, and as a Norwegian she wasn't the least worried about working with an ST-based system as opposed to the PC standard. In fact, all her Norwegian friends congratulated her on working with the ST. They thought it was the best!

Tracker/ST was originally the mailing-list module from this larger application. Later, I made about a hundred improvements, made the module free-standing, and decided to sell it commercially. I think I'm the only ST developer out here with a product running on SuperBase, and I'd recommend the development system to others. It's robust, easy to work with, and anyone can license the run-time module and distribute it with their applications.

Steele: *How is Tracker/ST doing?*

Shalit: Very well, actually. I'm selling enough units now to keep me in business, though I'm still definitely at the stage where I watch every penny. We're selling nationally through a number of regular Atari dealers — particularly well in Ohio, Texas, and California. We've gone into international distribution with the Australian market. And I'm finding that music stores are a terrific outlet for the product; it's really an ideal tool for musicians.

Steele: *How so?*

"All her Norwegian friends congratulated her on working with the ST. They thought it was the best!"

Shalit: Well, musicians — maybe more than anybody — do a lot of their own publicity through the mail. They frequently do large postcard mailings to promote appearances, and keep a large volume of tapes in transit from one A/R person to another. Tracker/ST is perfect for managing the kind of mailing lists that musicians have to deal with, and since a lot of them are already using the ST for MIDI it just makes sense to use the machine for mailing-lists and keeping track of their jobs as well.

Steele: *What other niche-markets does Tracker/ST appeal to?*

Shalit: Well, Tracker is designed to be a very simple program to use. It comes ready-to-go: there's no lengthy setup or configuration process. And unlike a lot of databases, it can run effectively on any ST with 1 meg of RAM, on a floppy or hard drive system. The program is uniquely flexible in that it works well both for the small user and someone with much greater needs. I have lots of customers who use the program to manage small lists of sixty or a hundred names: Christmas card lists, PTA membership lists, etc. And I have many users who use Tracker/ST for much more comprehensive mailing-list management. Real-estate salespeople, who have to keep track of hundreds of leads; advertising salespeople who need to track contacts; publishers who need to store data on large groups of subscribers; PR firms — Tracker ST works effectively for anyone who needs more than a standard "name and address" database, but who doesn't have the time or ability to create their own system from scratch using SuperBase, dBMAN, or another

Continued on Page 80

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SHALIT

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application-development system. For example, Tracker/ST allows unlimited "long notes" to be appended to any name, so you can maintain extensive contact information in the program. This sort of thing just is not found in normal mailing list software.

To give you an idea of what people are using Tracker/ST for on the high end, I have a registered user in California who runs a national videotape newsletter, teaching subscribers how to build their own airplanes. He manages both his subscriber fulfillment operation, and a promotional mailing list of 17,000 names, all with Tracker/ST.

Steele: *How did you get involved with DTP?*

Shalit: When Publishing Partner came out, I fell in love with it. Right now, I'm really into full-color DTP, using PageStream 2.1 in its beta-test version. While I do some professional DTP work mostly I do it because I just love to do it. I use PageStream every day, run the SoftLogik forum on GENIE, and I've done all the ads and promotional material for Tracker/ST, using the PageStream system. It saves money too. I've been putting together a full color box for the next run of Tracker/ST manuals, and by producing

the 4-color separations with PageStream I'll save nearly \$1,000.00 in color separation costs. I run PageStream on the same ST system I use for most of my development work. It's a Mega 4 ST with color and monochrome monitors, a Seagate 65 MB hard drive, a Syquest removable media drive (which is great!), an SLM804 laser, and Spectre GCR, which I use for making Stuffit! PostScript files to take to the Linotron service.

Steele: *What about writing for ST Informer?*

Shalit: I called them because I felt they had a high level of integrity, and were really current with the news. I love the folks there and am very pleased to write for them. I enjoy doing Rumor City, though my real love is writing full reviews.

Steele: *So where are you now in your life?*

Shalit: Well, I got married in September of last year. Late last year, we moved Step-Ahead into new offices on Hudson Street, in New York. My present goals are to continue to grow the company as best I can, while broadening the market for Tracker/ST by developing versions for the Amiga and IBM under Windows. And I plan to continue writing about and working with the Atari ST and TT, perfecting my desktop publishing skills, and hopefully developing new products for the ST platform. ■

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