

CLASSIC COMPUTERS CLASSIC COMPUTERS CLASSIC COMPUTERS CLASSIC

COMMODORE

GEOSYNCH

by D. Roderick Eamon
The Impossible Just Takes
A Tad Longer!

I'd like to start this month with a confession: I've been writing this column for over a year yet this marks the second time I used GEOS to produce text and graphics, the first in 64 mode.

If you regularly follow this column, you know how much I like geoWrite in its new, more powerful incarnation (2.1). After all, with its 60 page file size, no complex embedded commands to memorize, and ridiculously simple reformatting features, effortless cut and paste, search/replace, powerful footer/header controls, and an "undo" (recover) function, geoWrite is one nice word processor. You also know these versions would produce Near Letter Quality text with compatible printers in addition to the familiar WYSIWYG multi-font with graphics glamor copy that is its forte.

Why then did I wait so long to switch to geoWrite? Simply put, editors, proofreaders, and typesetters have a right to work from professional manuscripts. Although 2.0 and 2.1 produce NLQ-node documents, geoWrite lacks an important feature that prevented me from using it to process final output: underlining.

With the help of NX10NLQ-2.1 print driver (on QLink, as I mentioned in the last "GeoSynch"), I now underline (which tells the typesetter to place text in italics), boldface, and italicize in geoWrite. From now on, GEOS will produce every word (and image) you see in "GeoSynch."

That said, on to the subject of this month's column—using basic GEOS applications to accomplish what many consider impossible. Most of what follows is based on the latest GEOS-64

2.0, but on occasion, I'll include GEOS-128 1.4 graphics files (which you may find on a BBS, online service like QLink or DELPHI, or from a friend), and early GEOS-64 1.3. Finally, because I perform most of these sleights-of-hand on a 1571/1750-REU equipped Commodore 128, a few of these tricks may not work with your 64.

GEOS As REU-based "Native" Operating System?

From the number of letters asking about it, I know many users want to see GEOS as a ROM-based internal operating system or cartridge-based product. This would give users instant access to GEOS on power-up. Sorry, it won't happen.

Both methods are impractical. An internal ROM-based GEOS would replace DOS 2.0. You really don't want to toss out your great games and other software, do you? Of course you don't!

The second method, while more feasible, also has drawbacks: the deskTop, Kernal, drivers, and deskTop accessories take more space not normally found in cartridges. Also consider Berkeley Softworks' penchant for frequent upgrades: this route becomes an economic morass, even with ROMs placed in user-accessible sockets. No, a disk-based operating system is the best upgrade path.

So, how to freely go to and from GEOS? Well, if the user is lucky enough to own an REU, keeping GEOS in memory is easy!

"Ah-ha!—got you!" you gloat. "We know the RBoot accesses the GEOS Kernal in RAMdisk from BASIC, but what about C-64 programs that force a hard reset to return to the start-up screen? With these programs, you can't use RBoot. If you turn off the computer, all contents in the RAMdisk are lost!"

Partly wrong. I've used my 128 for over a month now—running both 64 and 128 programs, switching freely between modes, using hard and soft resets, moving easily between REU-based GEOS and programs with no "Exit to Basic" option—with GEOS in the REU the entire time. With a judicious toggle of the computer's power switch, the contents of the REU are safe. In other words you can hard reset (actually turn the computer off, then on to reset the computer) and not lose REU-resident data.

A quick review of Read Only Memory (RAM) technology explains why. The chips in an REU (Dynamic RAM) differ from those in computer memory (Static RAM). Oddly, SRAMs hold stored data after a computer is turned off; but restore power, and data in main memory is wiped out by a power-up electric surge.

On the other hand, DRAMs require a "trickle" charge to preserve their information; without it, data integrity degrades and memory loss occurs. This is why they are called dynamic: DRAMs need electrical pulses to "refresh" the chips and thus retain the data (this electric, dynamic force maintains the chip's circuitry, and hence the data's dynamic stability).

Fortunately for Commodore users,

data corruption within the REU occurs around 2 seconds after power down—plenty of time for a quick hard-reset. I've experienced no REU power-up surge (which also affects DRAMs) during a hard reset. This is the case with a C-128/1750 combination—it might not work with the 1764 (although it should).

My main concern is the C-64 power supply. While I've heard favorable reports regarding the heavy-duty power supply shipped with the 1764, you proceed at your own risk when leaving your machine on for extended periods.

A final note to keep the System running: after an extended period away from the computer, always perform a GEOS reset (from "options" menu in the Command Bar).

Enlarge Your Graphics!

The new geoPaint in GEOS 2.0 is an excellent tool for resizing graphics: its official name is "object manipulation" tool. This tool shrinks full-size photo scraps, or enlarges small ones.

It's nice, but difficult to produce truly proportional resizing. There are ways around this: good—guess at resizing and "clear" mistakes until it's right; better—to "approximate" (Figure 1); or best—Draw Grid Lines in the "option" pull-down. To get the Icon, I used

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TEXAS INSTRUMENTS

TI FORUM

by Barry Traver and Jonathan Zittrain

First There Was The Red Scare

And now there's the Blue (as in Big Blue) Scare. At least in the minds of some. Sy Siegel of the Long Island TI99 Users Group (LITI, PO Box 544, Deer Park, NY 11729) is the first to come to our attention as someone who thinks 99'ers will eventually go blue—and who wants to prepare for it. Siegel said that he made a motion on the floor of LITI to include an MSDOS SIG that would operate for the last twenty minutes of LITI's monthly meeting.

The motion, as of this printing, has not been disposed of one way or the other, but it does raise some interesting issues for users groups to contend with. For those who feel that the 99 offers unique and special features that remain as valuable (and without par) today as when the computer was first introduced, it may also be quite a debatable proposition.

Would the creation of such a group pave the way for a smooth transition to the inevitable future? Or would an MSDOS special interest group be contrary to the goals of a TI-99 users group to begin with (especially given forward-looking machines such as the Myarc 9640 that retain the 99 essence)? The issue, as decided by LITI, will be reported here, along with further commentary in an upcoming issue.

Hardware Mod Kits by John Guion

A few issues back, we promised you

a review of John Guion's Multi-Mod upgrade kit (available from John Guion, 11923 Quincy Lane, Dallas, TX 75230 for \$22.95 including postage and handling), so here it is! Multi-Mod is an upgrade kit for owners of Triton's Super Extended BASIC module. What it does is give you four modules in one module, viz., Editor/Assembler, TI-Writer, Disk Manager III, and (of course) Super Extended BASIC. No "widgets," cartridge expanders, or swapping of modules is required: a keypress or two is all you need to select the module you want.

Triton's Super Extended BASIC (SEB), you may remember, was discussed in some detail in the September 1988 issue of *Computer Shopper* (see pp. 266, 274). Of the different "Extended Extended BASICs" I use, the Triton SEB is the one I tend to use most. It is available directly from Triton for \$49.95 (PO Box 8123, San Francisco, CA 94128; phone 1-800-227-6900). It does everything TI Extended BASIC does, and a lot more, and John Guion's Multi-Mod will give you still more!

You're already familiar with Editor/Assembler and TI-Writer, but you may not be familiar with Disk Manager III, which provides many enhancements to TI's earlier Disk Manager II. DMIII allows you to access up to DSK9 (single or double-sided, single or double-density), including RAMdisks that use the >1000 CRU base address. The PIO

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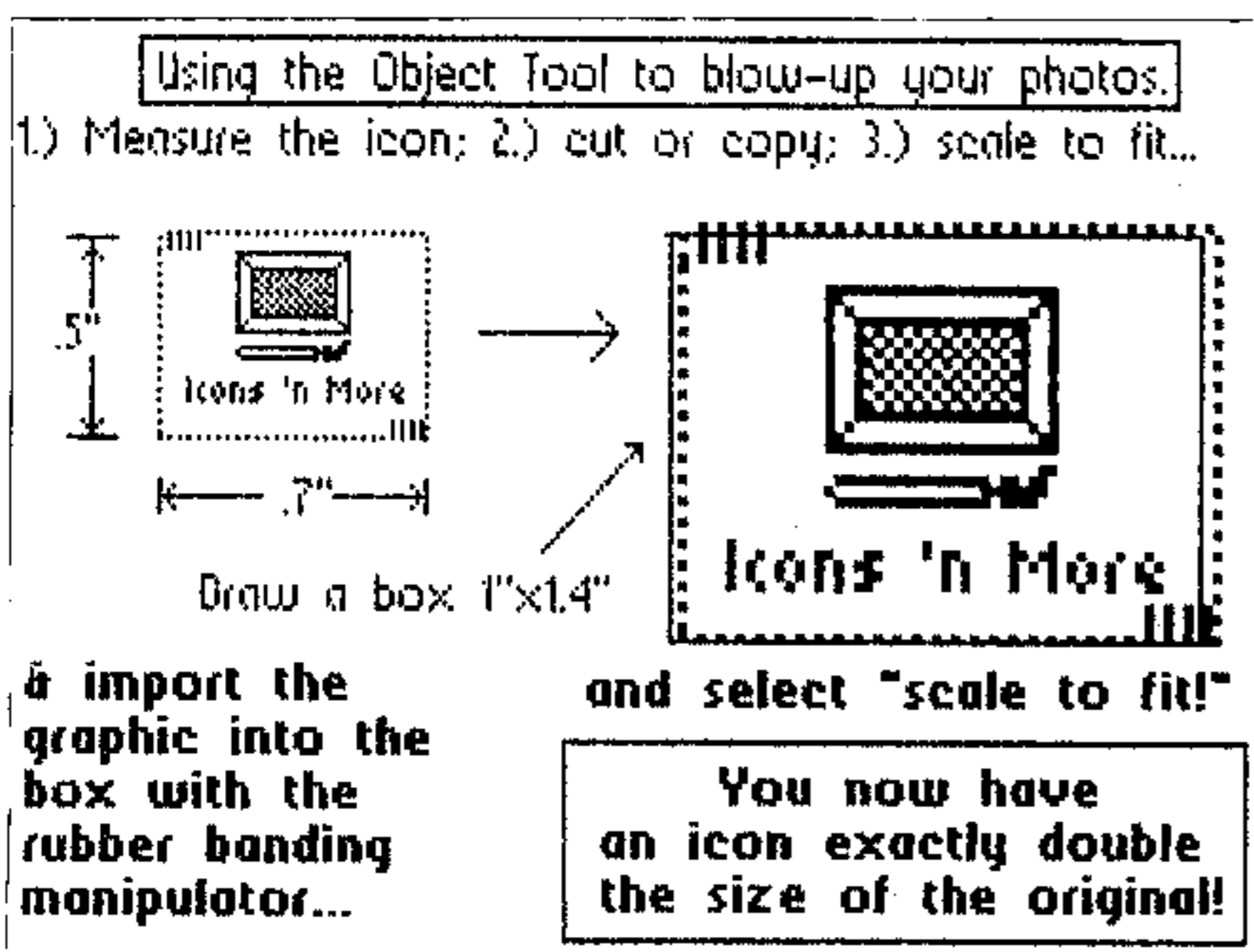


Figure 1

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printer port now appears as a regular menu option. A list of all error codes is now available with a FCTN-7 (AID), and fewer keypresses are needed to run the program. The program is compatible with TI, CorComp, and Myarc disk controllers. (Note, however, that if it is used with a Myarc disk controller, double-density disks initialized with DMIII will assume 16 sectors per track; if you have a Myarc and want 18 sectors per track, you will have to initialize the disk with something other than DMIII.)

How difficult is it to install the upgrade? Well, as many of you know, I am a genuine American super-klutz, so I had a friend, Allan Silverstein, do the installation for me. He reported that it was a "piece of cake" (implying that even I might have been able to do it!); the kit was well-designed, the manual

well-written and illustrated, and complete installation could be done in a few minutes with a flat-blade screwdriver. No soldering is required, unless you want to do the additional work needed to make the Super Extended BASIC module compatible with the widget cartridge expander. (With four modules in one, I'm not sure of the need for that modification, but I have heard people say that that information alone was worth the price of the kit!)

At any rate, here is a way inexpensively to upgrade your Super Extended BASIC module to have the convenience of four modules immediately available to you, a very nice convenience indeed! I understand that it is possible that John may be offering in the future a similar upgrade for the Mechatronic Extended BASIC II Plus cartridge (see *Computer Shopper*, September 1988, for review of original module), something that I

hope will occur, since his Multi-Mod kit is an extremely useful product.

Although I have not tested them myself, John Guion offers several other hardware upgrade kits of which readers should be aware. Rather than spend \$150 to \$175 for a new disk controller, you can upgrade your TI disk controller for \$19.95. True, it won't give you double-density, but it will allow you to add a fourth single or double-sided floppy drive to your system. In addition (if your drives can handle it), it can reduce the head step time from 20 milliseconds to 12 milliseconds (significantly increasing the speed of certain disk operations).

In addition, the disk controller will allow use of a "trick" with which owners of CorComp disk controllers may be familiar: you can access a physical disk drive using lowercase, e.g., "dsk1." What this means is that if you

have a RAMdisk set as drive one and a physical disk drive set as drive one, you can access the former as "DSK1" and the latter as "dsk1" (a feature I found to be very useful with my CorComp controller, until I modified my RAMdisk utilities to run with RAMdisk set as drive five).

For this kit, the ability to solder and desolder components is required, since it involves replacing the two ROM chips on the TI disk controller and stacking a few additional chips. Similar ability is needed for his RS232 upgrade kit, since that involves removing a chip and putting in another, but full instructions are included in the installation manual.

If you can afford a double-density disk controller, my opinion is that you should go for it, but if you can't, John Guion's disk controller upgrade kit is the next best thing. His RS232 upgrade (\$14.95 including shipping), however,

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package)? Can't use them if I can't get into deskTop! Thank you.

Mrs. Betty E. Huttinger
Lovell, Wyoming

A. Apologies, Betty, if I misread your handwriting but there is no Version 4 GEOS. Your description nails it down: V1.2 (the Backup/Restore and making Boot Disk backups were the clues). Your version lags far behind the times and deserves proper retirement!

Yet more bad news: your deskTop may not be the problem. It also may be one of the first three Icons (Figure 2); you've either corrupted or deleted one or more of these Icons. You can—if you've got these files on your collection of backup disks—try to reconstruct your Boot on a friend's GEOS—an iffy proposition. Frankly, it's in your interest to contact Berkeley Softworks and upgrade to the much improved GEOS 2.0. Two features: 1.) BSW made it harder to accidentally "trash" System files (you must drag them to the border before throwing them out); 2.) you can

undelete a file, as long as you act quickly.

Oh yes; all text and graphic files on your present work disks are upwardly compatible! Follow Installation procedures to the letter, place write-protect tabs on your Master disks, and—from here on—NEVER move the first three Icons on the GEOS Master/Backup disks (Figure 2), and you'll be set!

Dear Sir:

I'm writing this letter as I consider you something of an expert on GEOS, and GEOS-type programs. I follow your column in *Computer Shopper*, and expected—or at least hoped—to receive info on a "bug" in GEOS-64 V2.0. Since there is obviously no major "bug," I'm at a loss. I upgraded to V2.0 in early September. After reading the Install section on the manual, I attempted to install, confident I'd followed the directions step by step. I replied "no" when asked if I had other applications to key to this disk.

When I tried Installing geoWrite I received an "Unable to Install on this

Disk" dialog box. I clicked on its "OK" icon, the disk spun, and the whole system crashed. I re-read the manual and tried again—same problem. On the off-chance there was a disk problem, and following procedure, I attempted to Install geoMerge, with the same lack of success and yet another crash.

I tried calling Berkeley Softworks—now there's an exercise in futility! I wrote them in September and, as of this date (Dec. 8) I've received no reply. I also noted these problems and sent them with my registration of V2.0. I'm not on QLink or I would have given that a shot.

So now, I turn to the expert in hopes that you can shed light on my dilemma. My major beef at this point: is this part of Berkeley's "protection scheme?" I have no problem with companies protecting their interests, provided I'm still able to use the program I paid for. Thank you for any thoughts you may have.

Victor J. Ruth III

A. Thanks for the kind words, Victor. To your questions: while I've heard of no true "bug" in V2.0. A "bug" is a problem endemic to an entire version number or major production run of software: a programmer's mistake or shortcoming in the program itself. There have been a fair share of unrelated production quality control problems which I've been assured by Berksoft are now licked. And no, Berksoft didn't design V2.0 to prevent you from using it! Finally, I usually get through on BSW's lines—although there were several times early last year when it took a week! Then again, maybe I'm lucky.

If you followed instructions properly, Validated your Master disk after Installation (I would also Install my early GEOS to key them to run with 2.0 by inserting the 1.X Applications side—but that's not causing your problem),

and generally did nothing wrong, then two possibilities remain: a bad Kernal, or you neglected to insert your Backup System disk (disk 2, Side A) during Install, thoroughly confounding the Kernal. Also, a write-protect tab on the geoWrite Master disk will stop an Install—don't apply them until you've fully Installed and configured the disk.

I suspect the Kernal is a bit (or a byte) shy of a full system—it takes only one missing bit to cripple GEOS, or any operating system. The crashes indicate this.

Don't send notes with registration: it isn't the best way to reach BSW's Consumer Service Department. You didn't state if you were trying to Install your earlier GEOS serial number after the fact. Answer "yes" to tie old version to new.

I suggest you send Berkeley the bad System disks, a copy of the letter you sent me, and new cover letter explaining all—they should send you replacements. I wish you better luck in the future.

If all goes according to plan next month, I will prove that geoPublish (or any good deskTop publishing system, does more than newsletters. I'll answer more reader questions, perhaps a review of James McKnight's SuperSort template for geoFile, including one that somehow got lost in the shuffle. I always like seeing samples from creative geoUsers. Send me any newsletters, art, ideas or other GEOS creations you want to share, and I'll mention the best ones here!

Suggested list prices and ordering information for products mentioned in this column:

GEOS 2.0, \$59.95; Berkeley Softworks, 2150 Shattuck Avenue, Berkeley CA 94704. RAM Expansion Unit, \$149.95 (1764), \$199.95 (1750); Commodore Business Machines, 1200 Wilson Drive, West Chester, PA 19380; 215-431-9263. ●

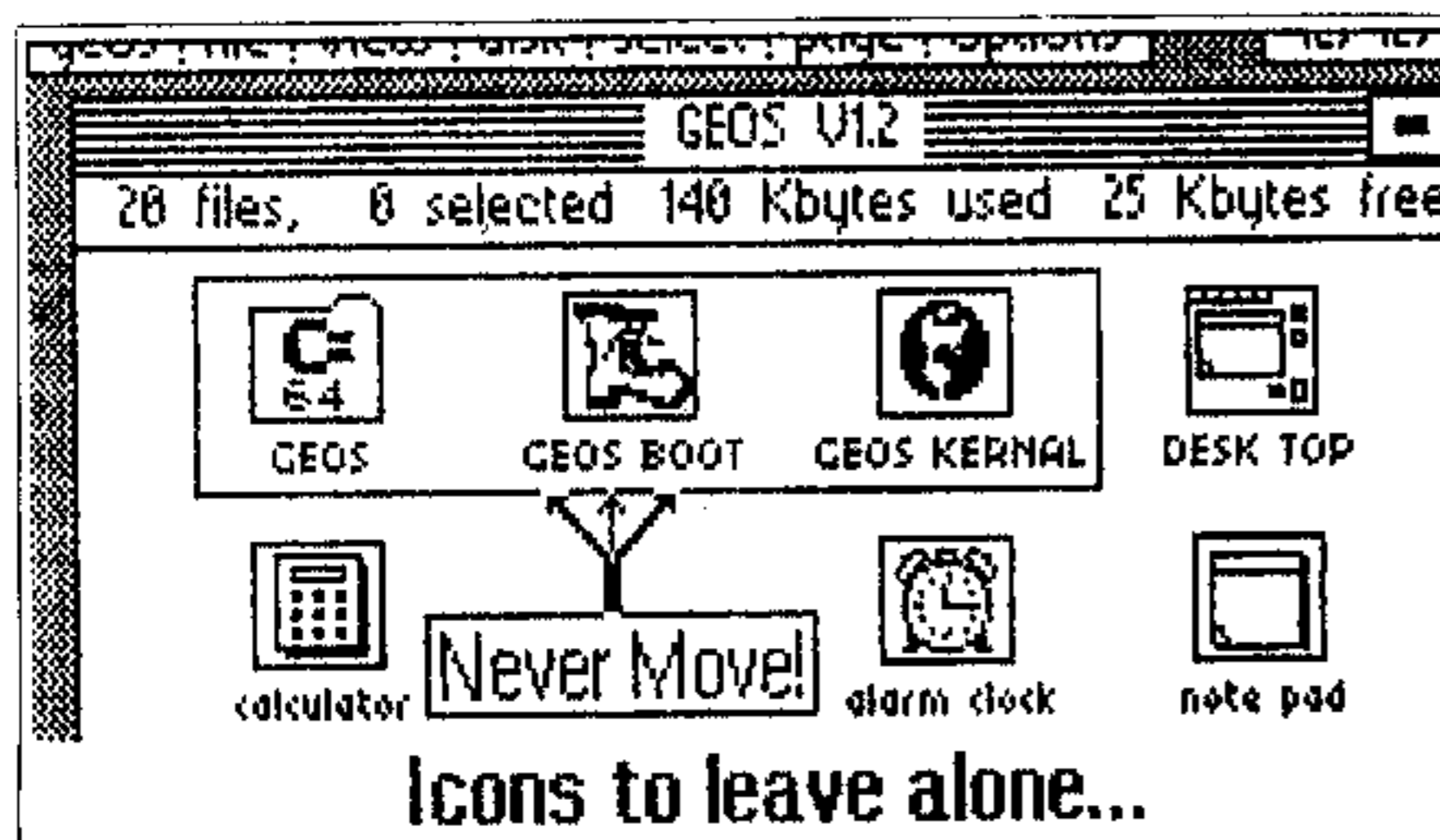


Figure 2

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is not a "next-best," but the best option available in that it offers many exciting options not available as far as I know anywhere else.

What do I mean by that? Well, in addition to being able to access the usual "PIO" and "RS232" devices, a modified TI RS232 card with his enhancements can access "TP" and "SIO." The "TP" refers to the "Thermal Printer" produced earlier by Texas Instruments (and the only printer recognized by some earlier TI modules). Any option available to the original "TP" may be used with this "TP" feature, e.g., an XB program can contain a one-line screen dump complete with user-defined graphics! In addition, you can do even more than could be done with the original "TP." For instance, rather than a 32-column program listing, you can have a 28-column listing (the printout corresponding exactly to what the listing would look like on the screen) or a 60-column listing.

If you have a serial printer, you will especially appreciate the "SIO" feature. (Just as "PIO" stands for "Parallel Input/Output," in the same way "SIO" stands for "Serial Input/Output.") Do you get tired of typing in "RS232/2.-BA = 4800.DA = 8.PA = 0" each time you have to provide printer specifications? Do you get frustrated when many programs do not even allow you a large enough field to provide the data needed for your serial printer? Well, supply the appropriate parameters when you order your upgrade kit, and instead of that long string, you will be able to simply type "SIO." (You will still be able, of course, to add software switches like ".LF" and ".CR" to "SIO" if required by a particular program, such as the TI-Writer Formatter.)

One more nice feature of the RS232 upgrade: the "TP," "SIO," and "PIO" device names may be entered in lower-case (unlike other cards which require these to be in upper case). It should be noted, by the way, that this kit is only for use with the RS232 card produced by Texas Instruments.

John Guion is also the designer (along with Robert Jones) of the P-GRAM grom emulator and real-time clock card, but that's a topic for another issue. His products thus far seem characterized by usefulness, quality, and reasonable price, so we hope we will see much more from him in the future!

Ma Bell Gets Tough

Southwestern Bell seems to be finally doing what local phone companies have threatened to do for a long time: exact a surcharge for line usage by local bulletin board operators.

Bill Rister, Sysop of the Phoenix bulletin board in Houston, Texas, has stated that his board might need to go down in the event of such a surcharge. There are many like him.

Introducing a "bulletin board service charge," under the pretext that the number and duration of calls placed to bulletin boards unduly load down Bell's trunk lines, might set a precedent

for other local telephone companies across the country.

For the TI world, this is an especially pressing problem. The free bulletin board has been the paradigm for information exchange since TI itself left the market. Whether run by dedicated individual Sysops or sponsored by users

groups who, through them, can "meet" every day of the month to trade news, views, and data, electronic bulletin boards provide a vital service.

If you would like to register your opinion on the public record in the Southwestern Bell matter, you may write to the listed address of the public

utilities commission, which has the power to demand rate changes of phone companies like SW Bell:

Public Utilities Commission
7800 Shoal Creek Blvd.
Suite 400-N
Austin, TX 75787

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MICRO SENSE: The 3.5" & 5.25" Pro's in Laptop to PC Compatible Systems

Compacard Floppy Controller

- ◆ Supports up to 4 drives of any combination 5.25" or 3.5" including the 1.44Mb
- ◆ Can be used as a direct replacement for standard XT floppy disk controllers in a PC or XT, or be jumpered as a secondary controller for 286 and 386's and floppy controllers on the mother board
- ◆ Made in the USA with a 1 year warranty 4 floppy version, 2 internal/2 external or 4 internal

\$150

(#10 HDC)

3.5" 1.44Mb/720K External & Internal Drives

Requires Compacard, BIOS support, device driver

- ◆ Teac 1.44Mb Internal (#19IHD) **\$125**
- ◆ External Teac 1.44Mb w/ cabinet, PS, cables (#20EHD) **\$260**
- ◆ Toshiba 720K Internal (#1ND352) **\$109**
- ◆ External 720K w/ cabinet, PS, cables **\$235**
- ◆ Data Disk Device Driver formats your 720K & 1.44Mb drives for DOS 2.0-3.1 (#6MSS) **\$29**

5.25" External 360K for Laptops

- ◆ Welltek 360K drive, cabinet, power supply and cable, FCC Approved
- \$225** All Toshiba models & Zenith 181-92, 183, 184 Supersport, NEC Multispeed HD, Tandy 1400 Lt, Sharp, Epson Equity Lt & Datavue
- \$275** 1.2Mb 5.25" External for Toshiba 3100, 3200, 5100, and Zenith 286 Supersport (#52TSB)

External 1.44Mb
◆ With controller for PC, XT, AT, 386 **\$345**

PS/2 5.25" External 360K/1.2Mb Pacific Rim

- ◆ For models 25, 30, 50, 60, 80
 - ◆ Allows for media transfer between PS/2 and 5.25"
- 360K (#28 EXPS) **\$230**
- 1.2Mb (#27 EXPS) **\$270**

Perstor PS180 ARLL Controller

- ◆ 90% increase in storage capacity of either MFM or RLL rated drives
- ◆ Compatible with PC/XT, 286, 386 machines

\$225

(#26PER)

Perstor PS 180-16F ARLL Controller

- ◆ 2 floppy/2 hard 16 bit for either MFM or RLL rated drives. Adds 90% capacity with faster transfer rate.
- ◆ Compatible with 286 and 386 machines

\$325

(#53PER)

Adaptec 2372 2 Floppy/2 Hard RLL Controller

- ◆ Sustained 1:1 interleave, 7.5 Mbit/sec data transfer rate
- ◆ ST412/506 2,7 RLL technology for 50% storage increase

\$189

(#30ADP)

Hard Drive for Laptops

- ◆ Internal 20Mb hard drive replaces one of the floppy disk drives. Comes with power-saving software.
- ◆ Fits Tandy 1400 LT, Toshiba 1100+, other models becoming available.
- ◆ NEC Multispeed & Sharp 4502 20Mb external hard drive **\$934**

\$795

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► APPLYING THE ATARI

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prevent any device from drawing power from the serial port. Devices which do this are the P:R: Connection, the XM301 modem and the MPP1150.

Keep up the fine column.

Eric Andersen
Dover, Delaware

Dear Jeff:

This is in response to the letter concerning a modification requirement for the 1200XL computer for the MPP1150 interface to work. This letter was printed through a P:R: Connection using a 1200XL system. I am assuming that the modification for the MPP1150 is the same one that is required for the P:R: Connection. The 1200XL uses a current limit resistor to limit current going out the I/O port in the rear of the computer. This resistor prevents the 1200XL from using any peripheral which draws power from the computer. To alleviate this problem you must remove the resistor (R63) and replace it with a jumper wire. A small piece of 24-30 gauge wire should do the trick. Most peripherals that require power from the computer will now work. With the comment about buying a

65XE or 130XE to eliminate the "problems" of the 1200XL, I have yet to have any problems with my system. I'm really happy with my 1200XL. So happy that I've decided to NOT purchase an MSDOS clone. The Atari (with the software that I have) will do everything those clones will do, and with the memory upgrade that I have installed. I can run the 130XE software, like the 130XE version of PaperClip that I'm using to write this letter. So all I have to say is that the 1200XL is a great computer. Now if we could only get Atari Corp. to acknowledge that the 8-bit is not dead, we'll be in great shape. P.S. This letter was printed using Daisy Dot II.

Robert A. Baczek
Egling AFB, Florida

Thanks for writing. My comment about replacing one's 1200XL with a 65XE or 130XE was perhaps a bit premature, and should apply only to those experiencing substantial software and/or hardware incompatibilities, although this modification and other fixes may correct any problems. Let me also thank readers Walter Korzyk, of Albany, New York, Paul Siu of Dar-

by, Pennsylvania, Edward Liao of Brooklyn, New York, and an anonymous reader from Brighton, Colorado for providing additional detailed information, as well as readers who wrote in to help. Mr. Siu sent along information from the booklet, "Mods, Fixes and Upgrades." 1200XL owners will be interested in the booklet's "Souping Up the 1200XL" article by Paul Smith. The article describes the modification discussed above for printer interfaces and also discusses fixing the Serial I/O Connector, adding chroma output and adding an XE-compatible 256K upgrade. The "Mods, Fixes and Upgrades" booklet also contains articles on expanding the memory of the 800, 800XL and 130XE, fixing the XE console keys, hardwiring the CX-85 keypad, adding a 1050 write-enable switch, using four joysticks with the XL/XE and more. The booklet was compiled by the Midwest Atari Group—Iowa Chapter (MAGIC), PO Box 1982, Ames, IA 50010-1982.

Dear Jeff:

I've been trying to locate where I can get my 800XL repaired, with no luck.

Do you know of any repair centers where I can get service?

Stephen Mattick
Tacoma, Washington

Atari Corp. will repair or replace your 8-bit computer (at its option) for a flat rate of \$50 (or \$65 for an Atari 130XE). The flat rate for repair/replacement of an 810, 1050 or XF551 disk drive is \$75. A unit sent for repair should be securely packaged and insured for its value. For additional information, contact: Atari Corp., Customer Service, 390 Caribbean Dr., Sunnyvale, CA 94089.

A number of independent companies also provide 8-bit repair service, such as American Techna-Vision (15338 Inverness St., San Leandro, CA 94579) and Innovative Concepts (31772 Shawn Dr., Warren, MI 48093.) Other companies providing repair service or parts for the 8-bit Atari's can write in to be listed.

Recently, I've printed several letters from satisfied ATR-8000 users. In fairness, here's one with another point of view:

Dear Jeff:

I see the ATR-8000 is surfacing in

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modem by appt. Calls only accepted until midnight Pacific time.

Finally, Amstrad PCW users have a lower cost alternative to hardware and software purchases than costly stateside or foreign mail order purchases.

A new newsletter entitled PCW NET touts Midwest Micro-peripherals, 6910 US RT 36, Fletcher, Ohio. 45326 (800) 423-8215 as very reliable. They say that going there, is like a happy hunting ground for the Amstrad PCW owner. From the price list attached, I found them to be very competitive.

A few final goodies for PCW owners. Modem interfaces are available for \$45

from Sinotech, Ltd. 25975 Diamond Lake Rd. Mundelein, IL. 60060 (312) 566-0504

Communications software available from PCW NET for \$9. PO Box 1694, Huntington Beach, CA. 92649. Also membership to PCW NET at this address, is free.

External modems 300/1200 baud with RS232 cable connecting cable (at each end) from Midwest Micro-peripherals, \$75-\$150; (800) 423-8215. Or scan the pages on *Computer Shopper* for best prices.

CompuServe starter kits are now available for the unheard of price of \$19.95. I recently paid over \$30 this past Christmas elsewhere. Call Tussey Computer Products, (800) 468-9044.

If you are disgusted with the poor quality of new ribbons, or simply are tired of paying too much for them, send your old ribbon and \$5 to R.E. Dingwall & Associates. PO Box 1694, Huntington Beach, CA. 92649. They will re-ink your tired ribbon, and they swear it'll look better than new ribbons. If you are unhappy with the results, return the ribbon for a full refund.

Surprisingly, I am seeing and hearing more about Amstrads and Timex/Sinclair computers than ever before. My daily television directing position takes me into many offices. Often I'll find these computers sitting on their desks, and there isn't a dealer within 100 miles. When asked why they purchased it, generally it has been recom-

mended by an acquaintance, or they have read about them here in *Computer Shopper*. Amazing but true! It appears we are in another stage of a growth period.

Becoming active is my recommendation to sustain this resurgence. Join a users group, buy a modem and telecommunicate, write letters, read newsletters, and subscribe to *Computer Shopper*. There is a wealth of information in this publication. From BBSs with Timex/Amstrad SIGs, to inexpensive prices on leading products, to informative articles on CP/M, basic, hardware/software reviews and more. Now more than ever, especially with the forum for these articles, *Computer Shopper* leads the way. ●

► TI FORUM

from page 267

Attn: Mr. Phillip Holder
Chief Hearings Examiner

Re: Reginald Hirsch vs.
Southwestern Bell Telephone

Tom Auleta on CompuServe's TI Forum has served as a point man on much of the exchange, and is willing to answer any questions that may come up. We at TI Forum will also provide updates on the situation as they become available.

The FCC proposal for the surcharge of commercial data lines was effectively defeated; the next battle is now at hand.

Texas Instruments continues to replace non-functioning TI-99/4A units

with reconditioned ones for \$37.50 + shipping and handling. The old 1-800-TI-CARES number is finally to be put to rest, but the following numbers, courtesy of Jean Wilcox of the Suncoast 99'ers TI Users Group (8421 Westridge Drive, Tampa, FL 33615) in St. Petersburg, can still be used to reach TI for 99-specific information:

General Information: (806) 747-1882
Technical Assistance: (806) 741-2663

TI Writer File Fixing

Jim Peterson (Tigercub Software, 156 Collingwood Avenue, Columbus, OH 43213) offers the following fix to a bug in the TI-Wrtier editor, quoted in the

"Spirit of 99," newsletter of the Central Ohio Ninety-Ninters, Inc. (CONNI, 181 Heischman Ave., Worthington, OH 43085).

The PrintF command of the editor can, among other things, have a letter placed in front of the output device to indicate that some sort of filter should be applied to the output text. In the case of "C" (as in C MYFILE.TXT), any control characters (characters less than ASCII 32) should be ignored.

For carriage returns (ASCII 13) and line feeds (ASCII 10), however, TI-Wrtier actually substitutes an extra space while stripping the characters at the end of the line. This can cause prob-

lems for formatting and justification, as well as for database programs such as PR-BASE that use DISPLAY/ VARI-ABLE 80 files for data storage.

```
100 DATA INPUT.OUTPUT
110 FOR J=1 TO 2::READ JS::DISPLAY AT
(12,1)ERASE ALL:JS:
FILENAME?"::"DSK"::ACCEPT AT (13,4):FS(J)::
OPEN
#::"DSK"&FS(J).UPDATE::NEXT J
120 LINPUT #1:MS::IF ASC(SEGS(MS,LEN(MS),1))
<33 THEN
```

The above Extended BASIC program serves as a "filter," substituting for the C function to strip out any ASCII characters below 33 (that includes a space) at the end of each line of a text file. ●