

ON THREE

The Magazine For Apple III Owners and Users

®

Volume 4, Number 1

January 1987
\$4.00

Desktop Manager Installation Program
(c) ON THREE Inc. 1986

Version 1.0
All Rights Reserved

- (1) Install Desktop Manager
- (2) Add Desktop Manager Driver
- (3) Remove Desktop Manager Driver
- (4) Quit

Use Up and Down Arrows to Make Selection. press RETURN to accept.

Note Pad
Calendar
Disk Manager
Macro Manager
Calculator
Ascii Table
Graphics Mgr.
Mr. Sandman
Blank Screen
Screen Dump
Subdirectory01
AsciiCharacter
Desktop Setup

The Desktop Manager

Appointment Calendar

17 Jan 87 6:13:01 PM

You have 2 appointments
scheduled for today.

12:00 AM 9:04 PM

SUN MON TUE WED THU FRI SAT

				1	2	3
				*		
4	5	6	7	8	9	10
	*					
11	12	13	14	15	16	17
						*
18	19	20	21	22	23	24
					*	
25	26	27	28	29	30	31
		*				

Open Apple ? Key For Help.

JANUARY 1987

ON THREE Presents...

The Lowest Price Ever On The 512K Memory Upgrade

Now Specially Priced **\$289***
At Only

The 512K Memory Upgrade from *ON THREE* has been the ///'s best selling add-on hardware item for the last two years. And now it's even better. With the lowest price ever and a full six month warranty, *now* is the time to order your 512K Memory Upgrade.

Have you ever run out of memory in /// E-Z Pieces? Do your VisiCalc programs yearn for more memory? Have you ever had stack overflow problems with certain large programs? Do you want to use the new accessories to the Desktop Manager but can't spare the 32K of memory those utilities require?

Worry no more, because with a 512K-equipped Apple ///, all of your problems are over. Enjoy a full 414K of desktop space in /// E-Z Pieces, 442K in Advanced Visicalc, 455K in Visicalc, 456K in Apple Writer ///, 456K in Business Basic—the list goes on. Almost all** programs running under the Apple /// SOS work with the 512K Memory Upgrade.

Do you use Catalyst or Selector ///? Have you ever had problems running large programs such as State Of The Art Accounting, BPI, Omnis 3, Keystroke and Draw ON ///? These programs use all available memory in a 256K Apple ///. Since Catalyst and Selector each occupy some memory

as well, certain large programs will not work on a 256K Apple ///.

A 512K Apple /// has enough memory and room to run the largest programs available today with some to spare. You can create larger spread sheets, data bases and word processing documents. Your 512K Apple /// will be able to do things few other personal computers can.

Included free with the 512K Memory Upgrade is an ultra-fast RAMDisk. This is an optional enhancement to the 512K Memory Upgrade which allows you to use a portion of your ///'s memory as a fast RAMDisk drive. One noticeable benefit is faster program utilization, but there are many more.

The 512K Memory Upgrade is easy to install and even easier to use. It is a *replacement* memory board and, therefore, doesn't need a precious expansion slot. Hidden inside your Apple /// is a 128K or 256K memory board. Simply take out the old board and put in the new one.

Using state-of-the-art 256K memory chips, the 512K Memory Upgrade is the single most exciting add-on produced for the /// in a long, long time. Even though we have many 512K Memory Upgrades in stock, at this unbelievably low price, we're expecting temporary shortages. Order yours today.

LOOK!

The 512K Memory Upgrade includes:

- Complete 24-page instruction manual.
- Ultra-fast RAMDisk Drive with demonstration programs.
- The 512K Upgrade disk which automatically adjusts your disks to utilize the 512K of memory and contains the updated version (1.2) of the System Utilities program permitting larger SOS.DRIVER files.
- The 512K Confidence Memory Program which tests all memory and ensures your 512K Memory Board is working correctly.
- *ON THREE*'s new and improved 180 day (six month) warranty.
- And of course, an Apple /// 512K memory board with state-of-the-art, 256K memory chips.

Place your order today for the exciting, low-priced 512K Memory Upgrade.

Call toll-free: (800) 443-8877

California residents: (800) 331-1418

* The purchase price is \$324 plus \$10 shipping and handling. After installing the *ON THREE* 512K Memory Upgrade, return your old 256K memory board for a \$25 cash rebate or a \$35 software credit.

If you have a 128K Apple ///, the cost is \$324 plus \$10 shipping and handling with no rebate. If you order a 512K upgrade for your 128K machine, please ask for the free 128K to 512K instructions. We recommend that a 128K to 512K upgrade be done by *ON THREE* or a registered Apple Dealer.

ON THREE will install any memory upgrade for just \$50. We offer a one day turnaround on 128K or 256K to 512K upgrades. Call for more information.

** The regular Word Juggler program works with the 512K Memory Upgrade but does not offer additional lines for your documents. An upgraded version is available which allows twice as many lines in your documents. To obtain it, please send a disk with return postage to *ON THREE*. However, there is one known problem with the updated Word Juggler package. It does not work with the LexiCheck spell checker option. To check the spelling of a very large Word Juggler document, you must divide it into two smaller sections.

** The program Multiplan from Microsoft does not recognize the 512K Memory Upgrade.

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The Magazine For Apple III Owners and Users

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ON: The Cover

ON THREE Magazine's feature article this month is the first of a two-part comprehensive review of The Desktop Manager written by Edward N. Gooding, Sr. The cover design is a collage of several Desktop Manager menus.

PRODUCTS FOR APPLE /// OWNERS AND USERS...

The UnCopyProtect Driver

Do you have Apple Writer, Visicalc or Advanced Visicalc? Who do you call when your disks go bad? Apple? Guess again. Why not call *ON THREE* before they go bad and order the UnCopyProtect driver? This little gem allows you to use the regular System Utilities program to make back-up copies of these programs.

After making the copies, they will look and work exactly like your original, master copy-protected disks. There is no need to fuss with expensive bit-copiers on an Apple //e when you can do it faster, better, more reliably and less expensively on your Apple ///.

Lazarus /// File Restoration

It's been a long day and you're tired. Just a few more sentences and you'll be finished with that mammoth report your boss wants on his desk tomorrow morning. You lift your weary fingers to execute the save command. But you accidentally press the wrong key and your last 10 hours of work are erased from the disk! What do you do?

If you have Lazarus /// there is no need to worry. Just press a few more keys and *presto*, your file is restored to its original condition. If you have ever mistakenly erased a file and wished for a little magic to bring it back, Lazarus is your fairy godmother.

The type of disk you use is irrelevant. Lazarus works with all Apple /// disks, including ProFile, A143, Sider and UniDisk. If you can delete a file from it, Lazarus can restore it. Order now and save yourself overnight delivery charges later.

Selector /// Program Switcher

Are you doing the floppy disk shuffle? Do you have a large capacity disk drive such as ProFile, Sider, UniDisk or A143? Are you still spending your time booting each disk separately, then waiting what seems like an eternity to start a new application? As the disk spins, think for a few minutes about the time you could be saving using Selector ///.

Selector /// lets you place all of your programs on your large capacity drive. What's even better is that you only need to start your Apple /// once each morning. From the Selector Menu you can select and run any of over two dozen programs, such as Apple Writer, /// E-Z Pieces, Basic, Visicalc, System Utilities and even your own. Quit a program and you return to the Selector Menu. Select another program, sit back and appreciate the time, effort and disk wear you are saving. At only \$99, Selector is a must for all /// owners.

Special Limited Offer: After purchasing Selector, trade in your Catalyst disks with manual and get a \$15 rebate. Smart users are switching to Selector ///.

Fortran Compiler

Those of you who are engineers may wish that your Apple /// could utilize those powerful Fortran programs you've successfully used on much larger computers. Well, wish no more. Here's the original, unreleased Apple version of Apple /// Fortran, a very good subset of ANSI Fortran 77.

This program is accompanied by a three-ring binder containing complete documentation. Operation requires a 256K Apple /// with the Pascal language system.

Draw ON /// Graphics Tool

A powerful and versatile graphics tool designed exclusively for the Apple /// and /// plus. This best-seller transforms your Apple /// into a combination drafting table, easel and sketch pad. Color and black and white graphics can easily be created with a //e mouse, joystick or the keyboard.

Adjustable grids, built-in help screens, rubber banding of lines and easy-to-follow menus make Draw ON easy to learn. An excellent instructional/tutorial manual compliments this fantastic program.

Use Draw ON to enhance or create bar, pie or scatter charts. Add colors, fill areas with a textured pattern and even add text in a variety of fonts and sizes directly to your image. Powerful cut and paste facilities allow you to pick up a piece of your drawing and move it to a new position. You can expand, shrink, rotate and invert images you've picked up. If you need to do detailed work on one part of the image, simply zoom in, change a few dots and your creation is complete.

And if you don't like any of the fonts that come with Draw ON, you can design your own. Complete font templates and samples are provided with Draw ON /// - The Apple /// Graphics Tool. After creating your masterpiece you can print it to an Apple DMP, ProWriter or ImageWriter. All Epson printers (MX, RX and FX) are supported as well. If you have the Pkaso or Pkaso/U interface card, Draw ON will print to your Centronics, NEC, OkiData, IDS Prism and all others.

Draw ON requires a 256K Apple ///, may be installed under both Selector /// and Catalyst, and as with all other *ON THREE* products, is not copy protected. When ordering, please note the type of printer and interface card, if any, you are using.

The Graphics Manager™

This remarkable utility allows you to send graphic images you create with any Apple /// or Apple //e program to your printer and will also directly load Apple][DOS 3.3 and PrintShop graphics images. You can insert a picture in the middle of your word processing document at any point and in any size with Graphics Manager's automatic rotation and image enlarging/shrinking features.

Graphics Manager, the ultimate graphics utility program, operates as a Desktop Manager accessory or a stand-alone program. Use it to layout newsletters, combining text and graphics on the same page. Create a personalized letterhead with Draw ON and use the Graphics Manager to merge it with your word processing document.

The Color Graphics Manager supports the ImageWriter //, IDS Color Prism, Epson JX and the IBM PC Color Printer. This utility works with any interface card and graphics-compatible printer.

UniDisk ///.5 800K Drive

The UniDisk ///.5 is an 800K 3.5 inch disk drive for the Apple ///. If you have a hard disk and despise making back-ups, the UniDisk is the ideal solution. You can back-up an entire ProFile with just seven UniDisk micro-floppies.

Perhaps you don't have a hard disk. Wouldn't it be great to say goodbye to your regular floppy disks? The new 3.5 inch disks are smaller and more convenient. They fit into purses, briefcases and even shirt pockets. With their hard plastic shell, they can take much more punishment than regular 5.25 inch disks.

If you have an Apple //e or //c as well as a ///, you can use the same disks on all machines. You can also use one of the popular file conversion programs on the Macintosh to transfer your word processing and other files from a UniDisk ///.5 disk to the Mac, and back.

ON THREE offers the UniDisk ///.5 complete with drive, interface card, cabling, documentation and driver disk for only \$499 plus shipping. If you already have a UniDisk 3.5 for your //e or //c, simply order the documentation and driver disk for only \$50 plus shipping.

ON THREE O'Clock

Calling all time-conscious Apple /// owners. How would you like a working clock and calendar for your Apple ///? Did you know that your Apple /// has provisions for a built-in clock and calendar? With a clock your Apple /// can function more efficiently, just as it was originally intended, and make your life easier. The *ON THREE* O'Clock kit comes complete with a plug-in clock chip with battery back-up and easy-to-follow instructions.

With an *ON THREE* O'Clock installed, each time you save or modify a file, the current time and date will be stored on disk. Thus, you will be able to tell which file you last modified. Your programs will automatically use the Apple ///'s built-in time and date routines to give you an up-to-the-second read out of the time.

Extremely easy to install and adjust, it is completely compatible with SOS and doesn't use a precious slot. This is the one you have been anticipating. The package contains comprehensive instructions and a six month warranty. Try to get that deal anywhere else. For the special price of only \$39.95 (plus \$3.00 for shipping and handling) you can own the best little clock in town.

Fun And Games

Apple /// Fruit Machine, by Dr. Mel Astrahan. Lots of excitement with full color graphics and slot machine sound effects.

Apple /// Card Machine, by Dr. Mel Astrahan. Realistic simulation of the authentic blackjack game played by high rollers around the world. The game uses beautiful, full color playing cards created with Draw ON ///. You can control the action with a mouse, joystick or the keyboard.

Crossword Scrambler, by David Cortopassi. Musical interludes and great text/graphic displays make this educational program stimulating and challenging.

Mr. SandMan, by Dr. Mel Astrahan. A fast-paced game modeled after one of the most famous arcade games of all time (xxx-Man!). Not only is it enjoyable, it can be used as a Desktop Manager accessory.

Game Card ///. This small interface card allows you to run almost all Apple][game programs on your ///.

Apple.Sauce

lynne denicola

Happy New Year

This year is going to be a fine one for the ///. *ON THREE* will introduce many products in 1987 and I am going to share a few with you here.

ON THREE will offer several modules for the Desktop Manager on one disk for only \$29.95. (Remember that all of these modules are installed as part of The Desktop Manager and may be run from within *any* program.) In addition to the one which appeared in the December 1986 issue (see "Desktop Manager Module" on page 7), the disk will include another public domain module written by Tim Harrington.

The "Option List" when chosen from Desktop's Main Menu lists all of the desktop options by letter and title. This makes it easy to add new modules because the list quickly tells you which are being used and which are available. No more listing and counting every Desktop subdirectory to determine which is free. Tim's public domain Desktop modules as well as their sources are currently available from TAU (see page 25 of this issue for that group's address) and Ed Gooding's "///'s Company" bulletin board at (804) 747-8752.

The rest of the modules on the disk are available *only* on that disk. A new "Desktop Setup" includes a "Clipboard Tools" subdirectory. From it you may choose to view, save, restore, print and clear the clipboard. This is extremely handy. How many times have you wanted a hard copy of your clipboard for easy reference? With this you can do it by highlighting "Print the Clipboard" from the subdirectory and pressing **RETURN**. More information on this new module will be published in Part 2 of Ed Gooding's article, "The Desktop Manager," next month.

Another included update is a revised "Notepad" print option. If you call your printer by a name other than .PRINTER, this update lets you change it to the name you've chosen.

A "Menu Modifier" lets you create sub-menus of the Desktop's Main Menu. After choosing the option from the Main Menu, you are presented with a sub-menu from which you may choose another option.

With the "Labeler" you print address labels from any data base to a variety of envelope sizes. This option places a small box on your data base which you may expand with the arrow keys. Position the box so it highlights the address you want printed on the envelope and press **RETURN**. An envelope then appears on the screen so you may position the block of text on it in the location you want it to be printed. Now just press **RETURN** and it prints.

"Typewriter" is an option which behaves exactly as its name implies: it acts as a simple memory typewriter. Type a line and once you hit **RETURN**, it prints. A ruler appears across the screen for your reference and you will even be able to erase mistakes. But after you press **RETURN**, you'll need a bottle of correction fluid to remove them.

The "Printer Manager" is a module which contains four preset printer options. The concept is similar to that of programmable stations on your car radio. Just select one of the four options and the preset printer code is loaded. Or you can redefine one of the preset options to include the commands you want. Simply select "Manual" from the option list and you may choose from a menu of various printer commands such as italic or condensed print and left or right justification.

All of the aforementioned modules will be included on one diskette, all for the price of \$29.95. How can *ON THREE* offer all of these for such a low price? Simple. The Desktop Manager is now available for Apple's new computer, the //GS. Most of the above modules were written for the //GS version, so it was not too difficult to modify them to work on the ///. The /// will continue to benefit in this way from *ON THREE*'s work for the //GS.

For example, in 1987 *ON THREE* will offer three new modules. Because of the vast amount of work involved in producing them, these three modules will be sold separately for the /// as well as the //GS. They are a File/Disk Utilities (not to be confused with the Disk Manager), a Rolodex/Telephone Dialer and a Spelling Checker.

ON THREE had hoped to sell the Spelling Checker in the fourth quarter of 1986, but due to unforeseen (Continued on p.8)

An ON THREE Bibliography

david ottalini

When I first bought my Apple /// plus over two years ago, it didn't take me too long to discover *ON THREE Magazine*. Like many /// owners, I was starved for information and *ON THREE* helped satisfy my considerable hunger. I subscribed just as many other people did, suffered through the difficult times of non-publication following the ///'s demise (eased somewhat by Frank Moore's /// *Newsletter* and subsequent /// *Magazine*) and was finally pleased to see publication resume on a regular monthly basis again in January, 1986 with the hiring of Val Golding as editor.

The more publications we have about the Apple ///, the better. But to get the most out of any magazine, you must know the five W's: who wrote the article, what was it about, where you can find it, why didn't you know about it sooner? and when can you get at it! (I can do it this way...I'm a journalist!!)

Obviously, if you have all the issues of *ON THREE* you'll be able to find every article on whatever subject you're interested in. If you don't have all the back issues, check with a fellow ///er or purchase the back issues from *ON THREE* for \$5, postpaid.

When I first set up my /// Bibliography, *ON THREE Magazine* was one of the first publications I included. Below is the fruit of my labor, which ends with the December 1986 issue. The articles are arranged by subject in alphabetical order to make it easier for you to find the information you need.

My complete /// Bibliography of more than 1000 Apple /// articles is available on disk from TAU or Apple THREE Group International. Both groups' mailing addresses and telephone numbers are listed in the "Apple /// User Groups" section of this magazine. The *ON THREE: On Line BBS* also has a cross-referenced listing of its articles. You can download that information by calling (805) 644-1055.

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Pascal Tutorial 04	On Pascal ///	Cohen	3	08	August	1986	19-20
PFS Series	Hints and Shortcuts with PFS	Lyman	1	04	June/July	1983	16-19
PFS/WPL	PFS-WPL Merge	Merritt	2	01		1984	25-28
Piracy	Piracy Doesn't Pay		3	04	April	1986	14
Pkaso	Data Plotting with Pkaso	Johnson	3	07	July	1986	5-9
Printer Controls	Changing Characters on the Apple DMP	Smith	1	03	Apr/May	1983	13-16
Printing Headers	Headfirst	Gardner	1	04	June/July	1983	27-28
Products	New Product		3	04	April	1986	31
Program	Slots of Fun	McCaw	2	01		1984	35
Programming	Desktop Manager Module	Harrington	3	12	December	1986	7-10
Programs	Three Shorts-Fini!		1	02	Feb/Mar	1983	40
Programs	Three Shorts-Fini!	Cohen	2	02		1984	30
Q&A	One, Two, /// Forum	Consorti	3	06	June	1986	23-30
Q&A	One, Two, /// Forum	Consorti	3	07	July	1986	23-31
Q&A	One, Two, /// Forum	Consorti	3	08	August	1986	23-26
Q&A	One, Two, /// Forum	Consorti	3	09	September	1986	23-26
Q&A	One, Two, /// Forum	Consorti	3	10	October	1986	23-26
Q&A	One, Two, /// Forum	Consorti	3	11	November	1986	29-32
Q&A	One, Two, /// Forum	Consorti	3	12	December	1986	21-25
Q&A	Three Questions	Consorti	3	01	January	1986	21-24
Q&A	Three Questions	Consorti	3	02	February	1986	25-29
Q&A	Three Questions	Consorti	3	03	March	1986	23-26
Q&A	Three Questions	Consorti	3	04	April	1986	23-27
Q&A	Three Questions	Consorti	3	05	May	1986	23-24
Quick File Utility	Merging Files	Fox	3	10	October	1986	19-20
RAM Disks	Ram-bo Pascal	Martin	3	10	October	1986	21-22
RAM Drive	Looking at .RAM	Downs	3	05	May	1986	17
Reboot Prevent	Assembling (on) the ///	Nichols	1	03	Apr/May	1983	17-18
Review	And in a Supporting Roll	Schumer	3	02	February	1986	13-15
Review	Denver is More Than Dynasty	Chrzanowski	3	02	February	1986	9-12
Review	Desktop Manager	Sollman	3	09	September	1986	5-13
Review	Graphics Mangager	Sollman	3	12	December	1986	11-19
Review	Keystroke Data Base and Report Generator	Sollman	3	03	March	1986	13-18
Review	Let's Talk	Golding	3	07	July	1986	13-15
Review	Macro Manager	Sollman	3	11	November	1986	19-22
Review	Omnis 3 - The Database Manager	Brelje	3	08	August	1986	11-13

Review	Terminus	Sollman	3	10	October	1986	11-15
Review	Titan ///+///	Russell	3	01	January	1986	25-26
Review	Word Processing at its Finest	Schumer	3	01	January	1986	7-12
Review	A Look at the MicroSci A3 AND A-143	Consorti	2	02		1984	15-16
Review	Apple ///-The User's Micro	Fitzmaurice	2	01		1984	29-31
Review	Review On: Apple Speller ///	Sexson	2	02		1984	25-27
Review	Review On: AppleWriter ///	Consorti	1	02	Feb/Mar	1983	36-38
Review	Review On: Everything	Consorti	1	03	Apr/May	1983	24-29
Review	Review On: PFS:File and Report	Consorti	1	01	January	1983	29-35
Review	Review On: The Art of Negotiating	Consorti	2	02		1984	27
Review	Only a Business Computer?	Cortopassi	2	01		1984	18-20
Review	The ///'S for Me	Evans	1	02	Feb/Mar	1983	7
Review	Why is Everyone So Excited About Draw On?	Consorti	2	02		1984	12-14
Review	Why is Everyone So Excited About Lazarus?	Consorti	2	01		1984	12-17
Selector ///	Selector ///	Ottalini	3	11	November	1986	24-25
SOS	SOS Directory Structure Revealed	Consorti	1	02	Feb/Mar	1983	8-12
SOS Directories	Directories ///	Jeppson	3	03	March	1986	5-12+
Text Reader	Text File Reader	Saunders	3	03	March	1986	12
Tutorial	Apple /// Desktop Publishing!	Johnson	3	10	October	1986	5-9
Tutorial	In the Beginning	Fitzmaurice	3	02	February	1986	30-32
Tutorial	Installing the Xebec 9730	Sollman	3	04	April	1986	19-21
Tutorial	Interfacing the Diablo 630	Downes	3	07	July	1986	22
Tutorial	Now About This Basic Business	Golding	3	01	January	1986	13-16
Tutorial	Printer Protocols	Lomotire	3	05	May	1986	29-32
Tutorial	Printer Selection And Set-Up	Martin	3	11	November	1986	14-18
Tutorial	Printing Good Graphs	Lomatire	3	06	June	1986	19-20
Tutorial	Rebirth	Johnson	3	06	June	1986	21-22
Tutorial	Using Catalyst	Glenn	3	10	October	1986	29/32
Tutorial	Using System Utilities	Fitzmaurice	3	12	December	1986	3-5
Utilities	Assembling (On) the ///	Nichols	1	04	June/July	1983	34-38
Utilities	Disk Pak2	Consorti	1	02	Feb/mar	1983	13-18
Visicalc	Decision Support with Visicalc	Cunningham	2	01		1984	38-40
Visicalc	On Visi...or /C Maybe	Hanson	1	01	January	1983	27-28
Word Juggler	Query to Quark	Consorti	3	05	May	1986	25-26
WPL	Word Processing Language	Consorti	1	03	Apr/May	1983	20-21
WPL	WPL Revisited	Consorti	1	04	June/July	1983	29-31
WPL	WPL Shorts	Lomatire	1	04	June/July	1983	20
WPL 01	Apple Writer Forever	Webb	3	08	August	1986	21-22
WPL 02	Apple Writer Forever	Webb	3	09	September	1986	31-32



Products & Services

Available for the Apple ///

Current ON THREE Price List

Product	Price	S/H	Product	Price	S/H	Product	Price	S/H
Software			Hardware			Other Services and Products		
Disk Of the Month	\$14.95	\$2.00	ON THREE O'Clock	\$39.95	\$3.00	512K or 256K Upgrade installation	\$50.00	
Two or more DOM's	\$12.50 ea	\$4.00	Game Card ///+	\$39.95	\$2.00	(by appointment only)		
/// E-Z Pieces	\$135.00	\$3.50	Apple //e Mouse and Interface card			12-issue ON THREE subscription	\$40.00	
Apple Fortran /// (requires Pascal)	\$99.00	\$5.00	(Use with Draw ON and Desktop Manager)	\$160.00	\$5.00	ON THREE back issues	\$5.00 ea.	
Selector /// program switching utility	\$99.00	\$7.00	Apple /// UniDisk ///.5 (800K 3 1/2" disk drive w/ interface, driver & documentation)	\$499.00	\$10.00	ON THREE magazine binder	\$14.95	\$3.00
Lazarus /// file recovery utility	\$49.95	\$2.00	MicroSci A3 140K Disk Drive+	\$225.00	\$6.50	Dust Cover for Apple /// and Monitor ///	\$11.95	\$2.00
Unprotect Driver	\$19.95	\$2.00	MicroSci A143 560K Disk Drive+	\$325.00	\$6.50	Dust Cover as above plus ProFile	\$12.95	\$2.00
Desktop Manager	\$129.00	\$6.00	Reconditioned 512K Apple /// w/monitor ///	\$1048.00	\$50.00	I ♥ My Apple /// T-Shirts		
Desktop Manager/ON THREE O'clock combination	\$163.95	\$8.00	256K Apple /// w/monitor	\$749.00	\$50.00	sm, med, lg, x-lg	\$9.95	\$3.00
Disk Manager* (utilities)	\$44.95	\$3.00	512K Memory Upgrade, 256 to 512K (Remit \$324 and \$25 cash or \$35 credit is rebated when old board is returned.)	\$289.00	\$10.00	I ♥ My Apple /// Sweat Shirts		
Grafix Manager**	\$49.95	\$3.00	256K Memory Upgrade, 128 to 256K, no rebate	\$150.00	\$10.00	sm, med, lg, x-lg	\$15.95	\$3.00
Macro Manager*	\$44.95	\$3.00				yellow, blue, white, silver	\$3.95	\$2.00
ASCII Conversion Table*	\$9.95	\$3.00				I ♥ My Apple /// Caps		
Draw ON ///	\$179.00	\$5.00				*Background module for Desktop Manager		
Draw ON /// Graphics Tablet Version	\$229.00	\$5.00				**Runs as standalone or Desktop Manager module		
Fruit Machine (slot machine game)	\$11.95	\$2.00				+Quantity Limited		
Card Machine (blackjack game)	\$19.95	\$2.00				† \$100 rebate with returned interface board		
Fruit Machine/Card Machine combination	\$29.95	\$3.00						
Sandman** (arcade game)	\$19.95	\$2.00						
Crossword scrambler	\$9.95	\$2.00						
UniDisk ///.5 disk and documentation only	\$50.00	\$3.00						
Sider 10, 20 mb								
Driver and documentation only †	\$200.00	\$3.00						

To order, call toll-free (800) 443-8877 or in California (800) 331-1418. Send check or money order to:

ON THREE, Inc. Order Dept.
Post Office Box 3825
Ventura, CA 93006

Visa, Mastercard, American Express accepted. 3% Surcharge on American Express orders.

Items returned without prior authorization subject to 15% restocking charge.

California Residents add 6% sales tax.

Cross

richard m. smith

The program "Cross" is a computer emulation of an elimination game, something like the game "Nim" in that the player is supposed to eliminate items from a set so a specified end condition is achieved.

In this game, the player tries to eliminate all but one letter or number from the board by jumping over the character to be eliminated to an empty square on the other side. The program prompts you for a pair of characters. The first character entered is the one which does the jumping to the empty square while the second is the one which will be eliminated by the jump. These jumps are executed like and have the same result as a jump in the game "Checkers."

"Cross" has been commercially produced from time to time in wood and plastic versions. In the early 1930's, my grandfather made a version of this game for me from a flat block of wood with holes drilled in a cross pattern which held small wire brads. The object of the game was to jump one pin with another, gradually eliminating all but one pin. In that version of the game, I could replay a move and correct my errors as the game progressed. In this computer version, however, more strategy is required because the player cannot replay a move and, therefore, must make all of the right moves the first time to end up with only one character at the end.

There is no unique sequence of successful moves but there is a general strategy which is successful. I leave to you the task of developing the proper strategy.

The Program

The program is divided into approximately eight parts. The first part, lines 100 through 115, loads a set of arrays which contain the characters displayed during play. Array g\$ is played and array h\$ is used to reestablish the display for another game. Each time the display is reestablished for a new game, the empty cell is randomly repositioned in the display.

Lines 117 through 128 display an updated array. Lines 130 through 138 prompt the player to enter a jump pair. Lines 140 through 190 conduct a search through the array for the pair of chosen characters. If either character of the pair is not found, the message

"NOT FOUND" is displayed and the program flow jumps to line 250 to ask whether the player wants to continue.

Lines 200 through 240 analyze the propriety of the selected jump by determining whether the two characters are adjacent and the end point of the jump is an open space.

Lines 250 and 260 determine whether to continue after an illegal choice. Lines 270 through 305 prompt for another game and, if the player chooses, another game is set up by copying array h\$ to array g\$.

Lines 1000 through 1080 provide data for loading the arrays. To reduce the need for additional logic in testing for legal jumps, the spaces around the cross are filled with CONTROL-V characters so the jump-testing algorithm (lines 200 through 220) will not see spaces outside the cross.

I hope you enjoy playing this as much as I do.

```
10  REM +-----+
20  REM +   Cross by Richard M. Smith   +
30  REM +                                     +
40  REM +       Copyright (c) 1987       +
50  REM +             ON THREE          +
60  REM +-----+
70  REM
100 DIM g$(9,9):DIM h$(9,9):HOME:xx=5:y
    y=5
110 FOR i=1 TO 9:FOR j=1 TO 9:READ g$(i
    ,j):NEXT:NEXT:RESTORE
112 FOR i=1 TO 9:FOR j=1 TO 9:h$(i,j)=g
    $(i,j):NEXT:NEXT
115 PRINT CHR$(16):PRINT CHR$(20);4
117 FOR i=1 TO 23:PRINT SPC(40):NEXT
120 WINDOW 10,2 TO 28,17:PRINT CHR$(20)
    ;6
122 FOR i=1 TO 8:FOR j=1 TO 9:PRINT g$(
    i,j);" ";:NEXT
125 PRINT"                               ":NEXT:FO
    R i=1 TO 9:PRINT g$(9,i);:NEXT
128 WINDOW 8,19 TO 29,22
130 PRINT:PRINT:PRINT"Enter Jump
    Pair: ";:GET a$
```

```

132 IF ASC(a$)>90 THEN a$=CHR$(ASC(a$)-
133 32)
134 PRINT a$;"; ";:GET b$
136 IF ASC(b$)>90 THEN b$=CHR$(ASC(b$)-
137 32)
138 PRINT b$
140 FOR i=2 TO 8:FOR j=2 TO 8:IF g$(i,j)
141 =a$ THEN GOTO 170:ELSE NEXT:NEXT
150 PRINT a$+" NOT FOUND"
160 GOTO 250
170 FOR k=2 TO 8:FOR l=2 TO 8:IF g$(k,l)
171 =b$ THEN GOTO 200:ELSE NEXT:NEXT
180 PRINT:PRINT:PRINT:PRINT b$+" NOT FO
181 UND";CHR$(7);CHR$(7)
190 GOTO 250
200 IF i=k THEN IF ABS(l-j)=1 AND l+1<9
201 AND l-1>1 THEN IF j<l AND g$(k,l+1)
202 =" " THEN SWAP g$(i,j),g$(k,l+1):g
203 $(k,l)=" ":ELSE IF g$(k,l-1)=" " TH
204 EN SWAP g$(i,j),g$(k,l-1):g$(k,l)="
205 ":ELSE GOTO 240:ELSE GOTO 240:ELSE
206 GOTO 220
210 GOTO 120
220 IF j=1 THEN IF ABS(i-k)=1 AND k-1>1
221 AND k+1<9 THEN IF i<k AND g$(k+1,l)
222 =" " THEN SWAP g$(i,j),g$(k+1,l):g
223 $(k,l)=" ":ELSE IF g$(k-1,l)=" " TH
224 EN SWAP g$(i,j),g$(k-1,l):g$(k,l)="
225 ":ELSE GOTO 240:ELSE GOTO 240:ELSE
226 GOTO 240
230 GOTO 120
240 PRINT CHR$(7):FOR i=1 TO 99:NEXT:PR
241 INT:PRINT:PRINT:PRINT"ILLEGAL JUMP"
242 ;CHR$(7)
250 PRINT"CONTINUE ?":GET a$
260 IF a$="y" OR a$="Y" THEN GOTO 130
270 PRINT:PRINT:PRINT:PRINT"ANOTHER GAM
271 E ?";CHR$(7);:GET a$
280 IF a$="N" OR a$="n" THEN GOTO 310
290 FOR i=1 TO 100:x=RND(1)*9:y=RND(1)*
291 9:IF h$(x,y)>CHR$(32) THEN GOTO 300
295 NEXT:GOTO 290
300 SWAP h$(x,y),h$(xx,yy):xx=x:yy=y
305 FOR i=1 TO 9:FOR j=1 TO 9:g$(i,j)=h
306 $(i,j):NEXT:NEXT:GOTO 120
310 TEXT:HOME:END
999 REM >> Control-V in all spaces arou
999 nd cross <<
1000 DATA " ", " ", " ", " ", " ", " ", " ", " "
1001 ", " ", " ", " ", " ", " ", " ", " "
1010 DATA " ", " ", " ", " ", "1", "2", "3", " "
1011 ", " ", " ", " "
1020 DATA " ", " ", " ", " ", "4", "5", "6", " "
1021 ", " ", " ", " "
1030 DATA " ", "7", "8", "9", "A", "B", "C", " "
1031 "D", " ", " "
1040 DATA " ", "E", "F", "G", " ", " ", "J", "K"
1041 ", "L", " ", " "
1050 DATA " ", "M", "N", "P", "Q", "R", "S", " "
1051 "T", " ", " "
1060 DATA " ", " ", " ", " ", "U", "V", "W", " "
1061 ", " ", " ", " "
1070 DATA " ", " ", " ", " ", "X", "Y", "Z", " "
1071 ", " ", " ", " "
1080 DATA " ", " ", " ", " ", " ", " ", " ", " "
1081 ", " ", " ", " ", " "

```

(Apple.Sauce Continued)

problems with other programming endeavors it was sidelined. However, it *will* be released in the first quarter of 1987.

The Rolodex/Telephone Dialer is a convenient listing of names and addresses. You may create up to 255 different Rolodex files with up to 255 people in each file. Very busy people could have a different Rolodex for each letter in the alphabet. To use it, simply flip through the cards as you would with a regular Rolodex file. And you can dial a number which appears on one of the cards if you have a modem connected to your ///.

File/Disk Utilities by title alone appears similar to the Disk Manager, but it is not. This new module lets you view, print and ASCII or HEX dump any file. This is fantastic if you consider how many times you've been working within one file and need to see a line, paragraph or page from another. You will no longer have to save and exit your current file to load and view another. Simply invoke The Desktop Manager, choose

"File/Disk Utilities" from the menu and select the file you wish to view, print or dump. If you see a paragraph in that document you'd like to include in the new one, use the Pickup and Paste function to save it on the clipboard, press **ESCAPE** and then paste it into the document. It's that easy. And convenient.

As all of these modules become available you will be informed either in this column or through advertisements. Due to the inherent differences between the two machines, it will be impossible to modify every program *ON THREE* writes for the //GS to work on the ///. But any conversions which are possible and feasible will be made.

Next Month

In February's *ON THREE Magazine*, I will publish another module called "Reload & Exit." After you add a Desktop module, it reloads the Desktop's files without rebooting. Hence, you can check to see that you loaded a new module correctly and use it right away without leaving the program you're using! 

The Unprotect Driver

david ottalini

I didn't know what to expect when I ordered **ON THREE's** Unprotect Driver. It is advertised in the magazine as a device driver which lets you copy Apple Writer, VisiCalc and Advanced VisiCalc, all copy-protected programs.

ON THREE states clearly, up front, that it strongly opposes copying programs for any purpose other than archival or back up. The company developed this software device because those three Apple /// programs are no longer produced or supported. Thus, if one of those programs crashed, a user could be left without the program *and* without a manufacturer to replace it.

If you have a nibble editor, you can also make backups. But as those programs move to the ProDOS operating system (they essentially all have) and require a minimum 64K of memory, those /// users making do with the original emulation mode will be left out in the cold. Nibble editors are also slow and dependent upon many outside factors, such as disk speed, which can prevent the program from being copied easily.

Instead, here is an easy, straightforward, native-mode way for a user to make back ups that work the first time. All it takes is a cursory knowledge of using the System Configuration Program.

When you order the Unprotect Driver, you receive one disk from **ON THREE** along with a three-page user's guide which is easily read and understood. The disk contains not only the driver, but also a copy of System Utilities. All you need do is boot the disk and you're ready to install the driver. No hassles.

The System Utilities included with the Unprotect Driver contains the latest update of SOS.KERNEL. It is extremely important that you make sure all the programs you add the driver have the 1.3 version of SOS.KERNEL. Otherwise, the driver does not work properly (see *Unprotect Oversight* on p.29 of the July 1986 issue). While you're at it, make sure all of your drivers are the latest versions. Most of the old standards (.CONSOLE for example) are 1.3, but check with your Apple /// user group to make sure.

ON THREE recommends you first copy your program using the "Copy a volume" command. But

since the program is copy-protected, this copy will not boot until you perform the next step. Simply use the System Configuration Program to load your copy-protected program's drivers from the SOS.Driver file and add the Unprotect Driver, called UNCOPY.DRIVER, to the other drivers in that file. It may be placed first, last or anywhere between. After generating the new driver file, insert the copy you made of Apple Writer, Visicalc or Advanced VisiCalc, boot it and it should work without a problem.

You might also consider installing the Unprotect Driver on the original disk's SOS.Driver file so your original will always be ready to copy should your back up crash. If you do it this way, however, be sure to deactivate the Unprotect Driver with the System Configuration Program's editor first. It is designed to work only on copies and will crash the original program if left active. If you find you need a new copy, use the System Configuration Program to read the driver file and use the editor to activate the Unprotect Driver again.

On the reverse side of the disk is a copy of the public domain utility program Fixer which allows you to fix your Catalyzed Apple Writer or VisiCalc disks so the Unprotect Driver will work with them as well. The product can also be used with **ON THREE's** Selector /// hard disk menu program.

This is a real gem from **ON THREE's** President Bob Consorti and programming genius Rob Turner, now at Apple Computer. It's a must for those of you who want a quick and easy way to make back ups of your valuable Apple Writer Versions 1.0 and 2.0, VisiCalc or Advanced VisiCalc programs. And at only \$19.95, plus \$2 s/h, this program is a real bargain as well, especially since a copy of System Utilities and Fixer are included.

The Unprotect Driver is a unique way of solving this copy protection dilemma. We can only hope **ON THREE** will expand the driver to include a few other programs which are no longer supported.

Oh, and by the way, the Unprotect Driver is itself unprotected!



An Improved Sort

bill teel

This program was originally published in the January 1986 issue of ON THREE Magazine. I recommend you read Brenda Shaw's excellent article, titled "Sort of a Heap," in that issue if you want to know more about sorting.

The reason I'm publishing this again is that Bill Teel of Society Hill, SC has made an improvement to it which is not readily apparent unless compared to Ms. Shaw's original work. Mr. Teel has added a "shell quick sort" which is a great deal faster than either the heap or bubble sort, especially for very large data bases.

Mr. Teel thought some of ON THREE's readers might enjoy using his program, and I think he's right.

```
5  REM *****
10  REM * Heap Sort Program for the /// *
15  REM * by Brenda Shaw (c) 1985 ON THREE *
20  REM * Program is in four main parts: *
25  REM *   Part I:   Generate a list of *
30  REM *             25 random integers *
35  REM *   Part II:  Rearrange the *
40  REM *             integers into a *
45  REM *             'heap' *
50  REM *   Part III: Sort the 'heaped' *
55  REM *             numbers into *
60  REM *             ascending order *
65  REM *   Part IV:  A bubble sort for *
70  REM *             comparison purposes *
75  REM *   Part V:  A quick sort written *
80  REM *             by Bill Teel *
85  REM *             (c) 1987 ON THREE *
90  REM *****
95  PRINT:PRINT
100 REM -----Part I-----*
105 compl=0:comp2=0:DIM number(25),samenum(2
110 FOR i=1 TO 25
115   number(i)=INT(RND(1)*51):samenum(i)=nu
120   mber(i):anum(i)=number(i)
125   NEXT i
130 last=i-1
135 REM * Print out the beginning list of ra
140   ndom, unsorted numbers*
145 HOME:VPOS=2:HPOS=36:PRINT"HEAP SORT":VPO
150   S=4:PRINT"Begin: ";
155   FOR i=1 TO last
160     PRINT number(i);" ";
165   NEXT i
```

```
155 PRINT:PRINT
160 REM -----Part II-----*
165 FOR q=2 TO last
170   templ=q:temp2=number(q):temp3=number(q
175   )
180   IF temp1<=1 GOTO 200
185   j=INT(templ/2)
190   compl=compl+1:REM Not necessary, only
195   for demonstration
200   IF temp3<=number(j) GOTO 200
205   number(templ)=number(j):templ=j
210   GOTO 175
215   number(templ)=temp2
220   NEXT q
225 REM * Print out the list in current orde
230   r - they are now in a 'heap'*
235 PRINT"Heap: ";
240 FOR i=1 TO last
245   PRINT number(i);" ";
250   NEXT i
255 PRINT:PRINT:PRINT"Number of comparisons
260   to create HEAP: ";compl:compl=0:PRINT:PR
265   INT
270 REM-----Part III-----*
275 FOR q=last TO 2 STEP-1
280   SWAP number(1),number(q)
285   i=1:temp4=number(1):temp5=number(1)
290   j=2
295   compl=compl+1:REM Not necessary, only
300   for demonstration
305   IF j>(q-1) GOTO 300
310   j2=j+1
315   compl=compl+1:REM Not necessary, only
320   for demonstration
325   IF j2>=q OR number(j2)<=number(j) GOTO
330   285
335   j=j+1
340   compl=compl+1:REM Not necessary, only
345   for demonstration
350   IF number(j)<=temp5 GOTO 300
355   number(i)=number(j):i=j:j=2*i
360   GOTO 285
365   number(i)=temp4
370   NEXT q
375 REM * Print out the final list - sorted
380   in ascending order *
385 PRINT"Final: ";
390 FOR i=1 TO last
395   PRINT number(i);" ";
400   NEXT i
405 PRINT:PRINT:PRINT"Number of comparisons
```

(Continued on p.12)

Two Shorts - Fini!

ian barland and gary crum

I know this column is supposed to be "Three Shorts - Fini!," but I decided two are better than none. Ian Barland and Gary Crum are both from Salt Lake City, Utah and submitted these programs quite some time ago. I found them, dusted them off, ran them and was pleased with what I saw on my screen. These programs create beautiful graphic designs.

NOTE: For both of the programs listed on this page, make sure you have your Basic disk in your internal drive or set your hard disk prefix to the BASIC subdirectory containing "bgraf.inv" and remove ".dl" from the invoke lines.

```
1 REM +-----+
2 REM +      Web by Ian Barland      +
3 REM +
4 REM +      Copyright (c) 1987 by    +
5 REM +      ON THREE                +
6 REM +-----+
7 REM
10 TEXT:HOME
20 PRINT USING"79c";"Apple Weaver"
30 PRINT:PRINT
40 PRINT USING"79c";"Type <space> to
   change color"
50 PRINT USING"79c";"Type <return> t
   o clear screen"
60 PRINT USING"79c";"Type <escape> t
   o stop program"
70 PRINT
80 ON ERR IF ERR=20 THEN INVOKE".dl/
   bgraf.inv":RESUME:ELSE PRINT"Invo
   ke bgraf.inv, then run program.":
   STOP
90 PERFORM grafixmode(%1,%0):OFF ERR
100 PRINT USING"79c";"(hit any key t
   o begin)"
110 GET start$
120 IF start$=CHR$(27) THEN END
130 ON KBD GOTO 500
140 PERFORM initgrafix
150 PERFORM fillport:PERFORM grafixo
   n
160 xmax=279:ymax=191
170 xdir=1:ydir=1:x=0:y=0
180 change=0:color=15
190 REM      now start main loop
```

```
200 IF xdir=1 THEN xdist=xmax-x:ELSE
   xdist=x
210 IF ydir=1 THEN ydist=ymax-y:ELSE
   ydist=y
220 IF xdist<ydist THEN change=xdist
   :ELSE change=ydist
230 x=x+change*xdir:y=y+change*ydir
240 PERFORM lineto(%x,%y)
250 IF x=>xmax OR x<=0 THEN xdir=-xd
   ir
260 IF y=>ymax OR y<=0 THEN ydir=-yd
   ir
270 GOTO 200
280 REM      The apparent 'thickness'
   of the lines
290 REM (after the second screen) i
   s due to the
300 REM color masking used in grafi
   xmode 1.
500 IF KBD=27 THEN POP:HOME:TEXT:END
510 IF KBD=32 THEN color=color+7
520 IF KBD=13 THEN PERFORM fillport
530 IF color>15 THEN color=color-15
540 PERFORM pencolor(%color)
550 ON KBD GOTO 500
560 RETURN
```

```
1 REM +-----+
2 REM +      Aurora Borealis      +
3 REM +      by                    +
4 REM +      Ian Barland and Gary Crum +
5 REM +
6 REM +      Copyright (c) 1987 by    +
7 REM +      ON THREE                +
8 REM +-----+
9 REM
10 ON ERR IF ERR=20 THEN INVOKE".dl/
   bgraf.inv":RESUME:ELSE PRINT"Invo
   ke bgraf.inv, then run program.":
   STOP
20 ON KBD GOTO 500
30 PERFORM grafixmode(%2,%0):OFF ERR
40 PERFORM initgrafix
50 PERFORM fillport
60 PERFORM grafixon
70 pi=3.14159265
```

(Continued on p.12)

(Improved Sort Continued)

```

in HEAP sort: ";comp1:FOR i=1 TO 3:PRINT
:NEXT i
340 REM-----Part IV-----*
345 REM * Print out the beginning list of ra
ndom, unsorted numbers *
350 HPOS=34:PRINT"BUBBLE SORT":PRINT:PRINT"B
egin: ";
355 FOR i=1 TO last:PRINT samenum(i);" ";:NE
XT i:PRINT:PRINT
360 REM * Sort the numbers into ascending or
der *
365 FOR i=1 TO last-1
370   FOR j=i+1 TO last
372     comp2=comp2+1:REM Not necessary, on
ly for demsonstration
375     IF samenum(j)<=samenum(i) THEN SWAP
samenum(j),samenum(i)
380     NEXT j
385   NEXT i
390 REM * Print out the now sorted numbers a
nd the number of comparisons *
395 PRINT"Final: ";
400 FOR i=1 TO last:PRINT samenum(i);" ";:NE
XT i:PRINT:PRINT
405 PRINT"Number of comparisons in BUBBLE so
rt: ";comp2
500 REM-----Part V-----*
510 PRINT:PRINT:HPOS=34:PRINT" QUICK SORT":P
RINT:PRINT"Begin: ";
520 FOR Z=1 TO LAST:PRINT ANUM(Z);" ";:NEXT
Z:PRINT:PRINT
530 REM * For comparison - a shell-quick sor
t *
540 COUNTS=0
550 LT=Last
560 J6%=LT
570 J6%=INT(J6%/2)
580 IF J6%=0 THEN 720
590 J2%=LT-J6%
600 FOR J%=1 TO J2%
610   I%=J%
620   J3%=I%+J6%
630   IF anum(I%)<=anum(J3%) THEN 700
640   SWAP anum(I%),anum(J3%)
650   COUNTS=COUNTS+1
660   SWAP anum(I%),anum(J3%)
670   SWAP anum(J3%),anum(I%)
680   I%=I%-J6%
690   IF I%>0 THEN 620
700   NEXT J%
710 GOTO 570
720 REM
730 PRINT"Final: ";
740 FOR X%=1 TO LT
750   PRINT anum(X%);" ";
760   NEXT X%
770 PRINT:PRINT
780 PRINT"Number of Comparisons in SHELL sor
t: ";counts
790 END

```

(Two Shorts continued)

```

80 OPEN#1 AS OUTPUT, ".grafix"
90 a=INT(RND(1)*6):b=INT(RND(1)*6)
100 PERFORM moveto(%5,%10)
110 PRINT#1;"a=";a;" b=";b;
120 FOR theta=0 TO 2*pi STEP pi/64
130   x=280+COS(theta)*150
140   y=96+SIN(theta)*50
150   x.line=COS(a*theta)*75
160   y.line=SIN(b*theta)*40
170   PERFORM moveto(%x-x.line,%y-y.
line)
180   PERFORM lineto(%x+x.line,%y+y.
line)
190   NEXT theta
200 PERFORM moveto(%5,%10)
210 PRINT#1;"hit any key";
220 GET a$
230 IF a$=CHR$(27) THEN TEXT:END
240 PERFORM fillport
250 GOTO 90
260 REM Changing the 'SIN' in lin
e 250
270 REM to 'COS' generates a new se
t of designs.
500 IF KBD=27 THEN POP:TEXT:END
510 PERFORM fillport:POP
520 ON KBD GOTO 500
530 GOTO 90

```



      
DE CLASSIFIEDS
      
<p>For Sale: Apple /// Pascal \$50; Apple /// Aladin latest version \$99; Apple // Aladin latest version \$99; Advanced VisiCalc \$99; Sun Data Fontwriter \$25; SOS Tran \$20; etc. All near new. Tom (303) 973-4008.</p> <p>Clearance Sale: Limited quantities, new software. 10 VisiCalc's @ \$65 each. AppleFile /// for \$90. WordWeaver /// for \$45. VisiCalc Training Pack for \$15. Pascal Program Manual Vol. 1 & 2 for \$20. Used Word Juggler for \$99. (Payable in U.S. funds.) Call Mike between 6-9pm EST, M-F (416) 434-8166.</p> <p>Classified Rates: \$1 per word, \$25 minimum. Copy must arrive 60 days prior to cover date, e.g. February 1st for April issue.</p> <p>Subscriber Discount: \$.50 per word, \$12.50 minimum. The following restrictions apply:</p> <ul style="list-style-type: none"> - Non-commercial ads only. - No items valued over \$100.



The Beginning ///

richard and lavona rann

Getting Started

This is the first in a series of articles dealing with the basics behind operating the Apple ///. Why now, when no Apple /// has been made for more than three years? Simply because many new people have come to the /// over the past few years. Some have experience, but most are new to microcomputing and need help to get the most out of their Apple ///'s. These articles will help the beginner while serving as a review for the more experienced user. Hopefully there will be a few new tricks for even the most proficient among you.

These articles will present topics about Apple /// operation beginning with the simplest and moving to the more difficult in a logical, step-by-step manner. We hope the newest beginner will follow each procedure, learning by doing. Some areas may be familiar, while others may be completely new to you. For your benefit, we will use CAPITALIZATION and [brackets] to set off particularly important facts, so you may find them easier when using the articles as a reference tool. In the end, we hope everyone reading this series gains knowledge of their Apple ///'s and improves their efficiency.

An Apple /// Walk Around

Every experienced pilot walks around his airplane before taking off to make sure everything is working properly. Before booting your first program, let's do a quick walk around of your Apple ///. It is important to become familiar with its physical features, so let's examine the ///. Looking at the Apple /// with the keyboard facing you, you will see a standard typewriter-style keyboard and next to it a calculator-like numeric pad.

Keyboard

The Apple /// keyboard appears and operates much the same as a standard typewriter keyboard. Like most computer keyboards, it has a few special keys. ALPHA LOCK serves the same function as the Shift Lock key on a typewriter, except it ONLY SHIFTS THE STANDARD ALPHABETIC KEYS TO UPPER CASE. ALL SPECIAL CHARACTER KEYS AND PUNCTUATION KEYS REMAIN IN LOWER

CASE. TO RAISE THESE KEYS TO UPPER CASE, THE "SHIFT" KEY MUST BE HELD DOWN.

Every key is equipped with an automatic repeat. Holding down the key causes the letter or number to be repeated until the key is released. Some of the special character keys have a two speed repeat. The stronger the pressure on the key, the faster the character is repeated. This is advantageous when moving the cursor and drawing lines or dots.

Special Keys - Let's digress for a moment and examine the way you "talk" to a computer through a keyboard. Most programs (what you *really* talk to) follow one of a few generally standard human interface protocols. Older programs may follow a protocol which requires you to key in a line and then tell the computer you are ready to send it. In that case, the special key RETURN (or sometimes ENTER) is used to send the data you have typed. Unfortunately, not all programs use the same rules, so it will take a few moments to familiarize yourself with each new program. Some programs let you communicate and make choices by entering one character, without pressing RETURN or ENTER.

Many programs, like System Utilities, permit options which use ARROW KEYS (up, down, left, right) to position a highlighted area on your screen and then follow with RETURN to verify the selection.

The Escape, Control and Apple-shaped keys tell the computer that a special instruction is coming. The ESCAPE key is usually followed by another key to form a command to the computer. Some programs, like System Utilities, use the ESCAPE key to allow you to back out of a section of the program to the previous menu.

Unlike ESCAPE, the CONTROL and APPLE-SHAPED (called Open-Apple and Closed-Apple) keys are used as the shift key is: they change the value of what is sent to the computer to allow for special commands. The normal use of the CONTROL and APPLE-SHAPED keys requires that you hold them down WHILE another key is pressed. The table below indicates some of the control codes which are available

in many (but *not* all) Apple /// programs. If they don't mean anything to you now, don't worry. Most of them are nice-to-have's rather than necessities.

Reset - This key is located on the back edge of the keyboard just in front and a little to the left of the internal disk drive. It is used along with the Control key to load and start new programs. Basically the CONTROL-RESET combination does the equivalent of a power off and power on for your machine without subjecting it to the wear and tear of performing an electrical on/off. The system BOOTS from the diskette in the internal drive (.D1). The term "boot" is a shortened way of saying that the computer must pull itself up by its bootstraps. (When we first started learning about computers, each job had to be preceded with a "bootstrap card.")

Most software packages produced for the /// come with bootable disks. This means that the disk already contains the files necessary to start and run the programs as soon as it is inserted in .D1 and when a CONTROL-RESET is performed. In many cases, one of the files on the bootable disk must be tailored to operate with your own printer and with other add-on devices. We will cover this in a future discussion of SOS.DRIVER files. For now, just remember that whenever you do a CONTROL-RESET, EVERYTHING the computer had in memory which was not stored, or saved, on a diskette is LOST and the /// will try to load a new program from the internal drive.

Use of the RESET key *alone* is referred to as a "warm restart." This stops the program which is being run but leaves it in the computers memory. *Some* programs allow for a restart (Business Basic programs often do), but it is wise to avoid the RESET key unless you are certain you want to throw away what is in the machine's memory.

Numeric Keypad - This is located on the far right-hand side of the keyboard. In most programs this offers a way of quickly entering numbers, but the keys are programmable. Many times they are used for special functions. The ENTER key usually serves the same function as the RETURN key (some programs can tell the difference).

The numeric keypad offers an easier way to enter the numeric values found on the typewriter keyboard. However, there are programs that use these keys for special purposes.

Internal Disk Drive

Above the numeric keypad, in the body of the computer, is a disk drive. The drive is opened by

lifting the drive door located in the center of the disk slot. This drive is referred to as the INTERNAL DISK DRIVE or .D1. With the door open it is easy to see a small red rectangle at the bottom of the recessed area of the drive. This is the DRIVE OPERATING warning light. WHEN THE DISK DRIVE IS OPERATING, THE RED LIGHT COMES ON. DO NOT OPEN THE DRIVE DOOR WHEN THE LIGHT IS ON. Opening the drive door while it is attempting to read or write may damage the diskette.

Looking at the Back of the Apple ///

Besides the ON/OFF switch, the back of the /// has all the connectors for hooking up the various input and output devices which can be added to the ///. The standard monochrome monitor and an external disk are most often the first things added to a /// system. There is a serial port which can be used with either a modem or a MODEM ELIMINATOR CABLE which is used with a serial printer. Adding any devices other than the monitor will probably require that you change the SOS.DRIVER system file on EACH of your PROGRAM disks. If you have just purchased your first ///, we suggest you get it up and working without these additional devices before attempting to add them.

Putting Your System Together

First, no power should be on while connecting any cord. A short or power surge could damage your Apple ///. It is safest not to have the machine plugged in during setup. Many computer owners feel that a Power Conditioner (or Surge Protector) is necessary to go between your household current and the computer and its related devices. This is a personal decision but, if you are considering an extension cord to add outlets, we think a Power Conditioner with an on/off switch and multiple outlets is a better idea.

Plug one end of the monitor connector cable into the B/W Port if your monitor's screen is black and white, green or amber (all monochrome monitors and color monitors use a different port) and the other into the port on the back of the monitor. If you have an external drive, take the connector ribbon and plug it into the Floppy Disk Connector Port. NOTE THAT THERE IS A RAISED NOTCH INDICATING THE UP SIDE OF THE CONNECTOR TAPE. THIS MUST BE ALIGNED WITH THE MATCHING SLOT ON THE UPPER PART OF THE PORT. (Apple /// plus computers require an additional connector between the floppy disk connector port and the ribbon connector.)

If you have a serial printer you can connect it to a MODEM ELIMINATOR which you will then connect
(Continued on p.18)

Ranntings

richard and lavona rann

Trust and Communication, A Nice Change

Do you trust your Apple III? Do you believe the answers it gives you? How about the technology behind it, can you trust that to be relatively free of error? The fact that you are reading *ON THREE* proves you are very interested in the III and probably have a reasonably high level of confidence in it. If you did not trust it, you would not be here because you probably would not own one. If we change the question slightly and ask whether you trust *Apple*, what would you say? The answers we hear are considerably different. People trust their Apple computers, but many do not trust the company that developed and manufactured them.

Many new computer purchasers believe they are entering into a "Social Contract" when they buy a computer. For their money they expect to receive a working computer, but they have additional expectations. They expect training, technical support, new technology upgrades and a certain amount of hand-holding. These expectations are not just for the set up period or even some time measured in days or weeks. Somehow, they are expected to be honored into the hazy future. As nice as it may sound for the buyer, this has little basis in reality. Or, as has been often said, there's no such thing as a free lunch. Free consulting, classes, free (or below cost) upgrades and technical support past "normal business-type warranties" are daydreams.

Daydream or not, these expectations are a part of the mindset which drives the user community and are the root of much of the dissatisfaction with Apple and other computer manufacturers! We Apple III owners are certainly participants in much of this. Many in our ranks believe Apple broke the "Social Contract" with us by discontinuing manufacturing the III. There is sentiment that we and the Lisa owners were maliciously set adrift. What is surprising is this feeling of being set adrift is also common among Apple II and Macintosh owners.

We attended a user group conference at which a long time Apple II plus owner complained to an Apple representative that Apple has not done anything for the early computer owner. The IIe motherboard is too

large to fit into the II plus case, therefore, they have no upgrade. "What is Apple going to do for the people who made Apple great?" he asked. "We gave you our \$1000 years ago." But what can Apple do? They cannot turn back technology to its pre-1980 state in order to re-engineer their product line. All Apple can do is help these people into newer and better machines, and that is precisely what Apple is doing for the Apple II owners.

At some point a few years ago, Apple lost much of the support and confidence of its users. To a great extent, this happened during a period when Apple itself was not certain of its own direction. The Apple III, Mac IIe and Lisa were all announced in a relatively short period of time. The management of Apple spoke with conflicting voices and, in retro-spect, had no organized plan for the future. Projects were handled by teams which had little respect for other projects in process. Instead of seeing product development as a road traveling from past to future, it was seen as a series of specialized paths, each to be used for a short time and scrapped when something totally new was developed. Everyone has seen some product go through this stage, but never have technological and product changes been so obvious and occurred in such a short time as in the microcomputer industry over the past decade. Consequently, many otherwise satisfied customers are hesitant to trust Apple or believe its promises.

Users need Apple, and Apple needs to regain our trust. High on Apple's list of improvements is eliminating the Apple-is-out-to-get-us mentality. Unfortunately, this is not an easy process. Winning back trust is difficult at best, but Apple is committed. It knows it needs the support of its users to have the kind of success they want in the future. Not only does Apple need to sell us its new products, but it needs our help in proving the worth of Apple computers to those who have not yet seen it for themselves.

Apple is investing much time and money in building mutually beneficial, ongoing relationships between it and its many customers. Since it is physically impossible for Apple to send a representative to the home of every computer owner, it is attempting to deal with them through user groups. Last summer Apple began publishing "Quick Connect," a newsletter for Apple (Continued on p.18)

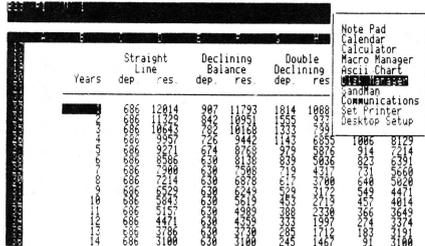
ON THREE Presents...

The Desktop Manager™

by Rob Turner and Bob Consorti

• The most complete and sophisticated desk accessory program ever written!

• For once and for all, unclutter your desk the Desktop Manager way!



Desktop Manager main menu, shown overriding a spreadsheet.

Running in the background, the Desktop Manager places all of the desk accessory utilities you ever wanted... Appointment Calendar... Notepad... Calculator... Disk Utilities... Macros... Graphics... Games... and more, into each program you own, just like they were part of it. Instantly available from /// E-Z Pieces, VisiCalc, AppleWriter, BPI, and all other programs, the Desktop Manager will clear your desk pronto.

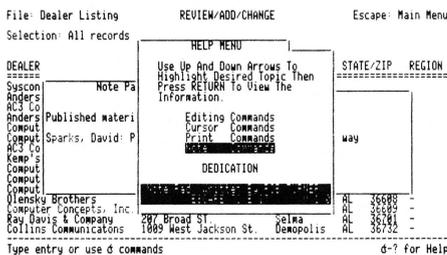
What is "Running in the background?" It is simply a program that, unlike most, "hides" from you. You are never aware of its presence, but when you need it, it is "Johnny on the spot," ready to serve you at the touch of a key.

While word processing, have you ever needed to multiply two numbers? Perturbed because you have a few thousand dollars worth of computer equipment at your fingertips and still can't multiply two figures when you want to? Or, you're entering data in a spreadsheet and can't find either a scratchpad or a pen to jot down a note. While you're digging under piles of paperwork, you probably mutter something unprintable under your breath.

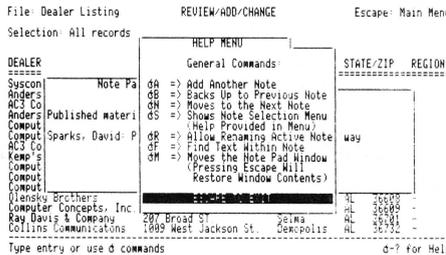
Perhaps you're entering text in a word processor document and decide it's time to do your first file save, but you can't remember if the file name you want to use already exists. Too bad the word processor has no provision to catalog a disk. Similarly, you may need to save a file and discover that you don't have a disk with enough room left on it. You have

plenty of blank, unformatted disks. If you exit the program to use the System Utilities to format a disk, all of your work will be lost.

Does this describe your situation? How about clearing your desk of that old-fashioned calculator, the pens and paper, your appointment calendar and increase your productivity? The Desktop Manager from ON THREE will do these things and a great deal more. From within any program, a keypress will override your current application and display a window into the Desktop Manager. At this point you have the entire facilities of the Desktop Manager at your beck and call. You can pause whatever you are presently doing, and select any of the following modules:

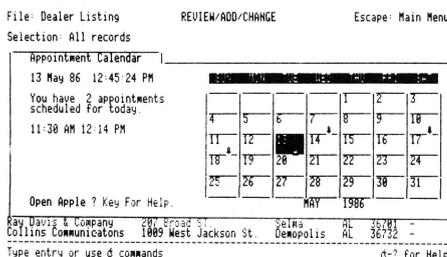


NotePad main help menu, superimposed on a NotePad memo and a database.

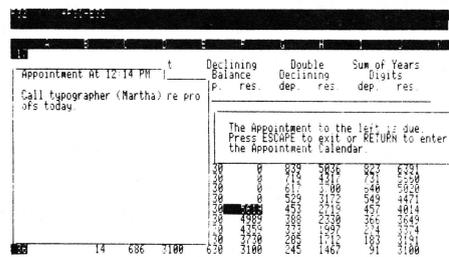


NotePad secondary help menu, superimposed on a NotePad memo and a database.

The Note Pad: A powerful and easy to use work processor. It lets you jot down notes for quick reference while you are entering data or for later viewing. No need to type in a file name, The Notepad does it for you, automatically. Multiple pages per note, plus the sophisticated features of word-wrap, automatic repagination, copying and more gives you the power of a word processor—available in an instant—from whatever program you are using. Instant on-line help screens (a feature of all Desktop Manager modules) make The Notepad easier to use than many word processors.



Appointment Calendar primary display.



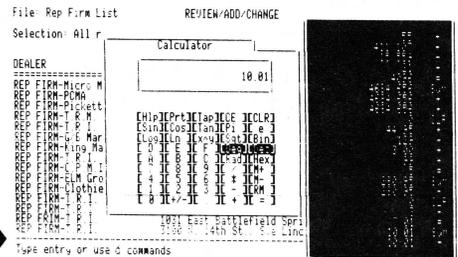
Appointment Calendar event, showing an appointment that has just come due.

The Appointment Calendar: A time scheduling productivity tool that allows you to set multiple appointments for any day through December 31st, 1999. These "Appointment Events" automatically notify you of your next appointment. From within any program, no matter what you are doing, the Appointment Calendar will pop up on your screen and display your next appointment. The day and week at a glance features show the appointments for a single day or an entire week. It also provides an easy way to set your system clock. Full help screens compliment this handy and easy to use perpetual calendar.

The Calculator:

An extremely powerful electronic workhorse. Full 16-digit accuracy and multiple functions like: SIN, COS, TAN, LOG's, natural LOG's, x to a power, square roots and more. In addition to the basic add, subtract multiply and divide, The Calculator features e, pi, degrees and radians, memory, base conversions from decimal to hex or binary and back again, a simulated scrolling paper tape, hardcopy printing and of course, on-line help screens.

The Calculator, with paper tape showing last calculations.→



The basic **Desktop Manager** comes complete with all the above features and more! For the first time, **Desktop Manager** lets you use a mouse from within any program, even those not designed for a mouse. You will be able to use the mouse to move the cursor and the mouse button doubles as the ESCAPE or RETURN key. The **Desktop Manager** also offers the Clipboard for information transfer. With the Clipboard, you can transfer information from one screen or program to another. Say you are using the Calculator to do some calculations and want to transfer the result into your word processor. You can simply cut from the calculator and paste it into your program. Likewise, you can move an entire section of text from your program to the notepad or vice-versa.

In addition, if you are running with Selector /// or Catalyst, you can also transfer directly from one application to another. After you have used the

Clipboard to transfer some information, you can return to your previous application by simply pressing Escape, and the cursor will even be exactly where you left it.

With our no-nonsense installation program, a few simple keypresses will quickly install the **Desktop Manager** on all of your application programs. No need to use the System Configuration Program, Desktop Manager does it all for you, and automatically! All **Desktop Manager** Modules have movable windows that can be placed anywhere on the screen that they will fit.

The complete package includes all of the features described above and a 110 page User's Guide that shows clearly how to use each function of the various **Desktop Manager** modules. Priced at only \$129 plus \$6 shipping, the **Desktop Manager** is the best thing to happen to the Apple /// in a long, long time.

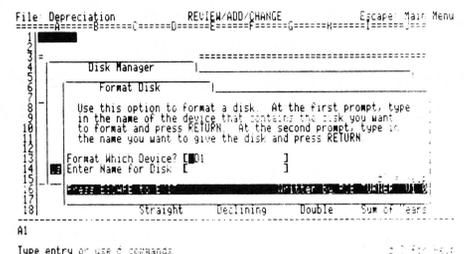
Disk Manager™

Provides the most frequently used features of the Apple /// System Utilities program. Formatting disks, listing, copying, deleting and renaming files and more are all available, at the touch of a button. Never again will you have to lose data when you need to exit a program to format a blank disk. On-line help screens and standard **Desktop Manager** "Ease of use" makes the \$44.95 (and \$3 shipping) price a steal.

Optional Desktop Manager Modules Available Now!



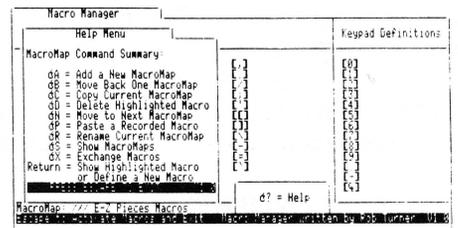
Main menu of the Disk Manager



"Format a Disk" option of the Disk Manager

Macro Manager™

Allows you to define a single keypress as a series of keystrokes to be played back at your command. Our innovative Record Macro mode lets you record a series of keystrokes—over 2000, if you want—right while you type them in response to prompts, etc., in an applications program. After you have finished choosing from your applications menu, you can go right back to the Macro Manager and assign the previously recorded keystrokes to a single macro definition. Up to 50 different definitions can be assigned to a single macro set. Each set of macros is called a MacroMap™ and over 200 different MacroMaps, which can be modified with additions and deletions, etc., can be selected from an easy to use menu. The Macro Manager allows you to copy macros from one key to another and to exchange or re-assign macro keystrokes. All of this and more for only \$44.95 plus \$3 shipping.



The Macro Manager's help menu, displayed over a MacroMap™

ASCII Chart:

List, in an easy to understand table, the decimal and hexadecimal values for all ASCII characters. A second screen features a keypress table that shows exactly which keys to press for different ASCII codes. The keypress table can be a lifesaver when you need to know what commands to send to a printer, or to an applications program, to enable different printing modes such as bold, italic, compressed print, etc. Only \$9.95 plus \$3 shipping. As an extra bonus, the source code is included on the disk.

Mr. SandMan:

A fast-moving, multi-level, full-color arcade game that you can play at any time. As a **Desktop Manager** background module, whenever you need a break from the tedium of entering data into your present application, you can instantly "take five" to team Mr. SandMan up with the wandering WOZ and eat up those nasty JOBs in this challenging and amusing game. For only \$29.95 and \$3 shipping, you will receive both the **Desktop Manager** and stand-alone versions. The stand-alone version allows you to play Mr.SandMan even if you don't have the **Desktop Manager**.

Available Now!

Graphics Manager™ and Color Graphics Manager™

Send graphic images you create with any Apple /// or Apple IIe program to your printer. Insert a picture in the middle of your word processing document at any point, in any size with Graphics Manager's automatic rotation and image enlarging/shrinking features. Layout newsletters, combining text and graphics on the same page. Create a personalized letterhead with Draw ON and use the Graphics Manager to merge it with your word processing document. The Color Graphics Manager supports the ImageWriter II, IDS Color Prism, Epson JX and the IBM PC Color Printer and works with any interface card and graphics-compatible printer.

The **Desktop Manager** requires an Apple /// with 256K or 512K of memory and an external disk drive of any type or capacity. The Appointment Event feature requires an **ON THREE O'Clock**, an Apple Clock or compatible Apple /// dock chip. The **Desktop Manager** uses between 32 and 40K of memory.

- Desktop Manager** \$129.00 plus \$6 s/h
- Disk Manager** \$44.95 plus \$3 s/h
- Macro Manager** \$44.95 plus \$3 s/h
- ASCII Chart** \$ 9.95 plus \$3 s/h
- Mr. Sandman** \$29.95 plus \$3 s/h

(Beginning /// continued)

**CONTROL KEY COMMANDS OFTEN
AVAILABLE IN /// PROGRAMS**

Control Reset	Initiates a Boot (just like power on)
Control 5	Toggles video display on and off
Control 6	Flush data from typeahead buffer
Control 7	Temporarily stops program in progress
Control 8	Makes Control codes visible on display
Control 9	Stops output to screen of printer
Reset	Initiates a Warm Boot (new program)
Control C	Cancels a program immediately (RESET)

to Port C, the RS-232 port. If you have a parallel printer, it will require a special card to be installed inside the /// in an EXPANSION SLOT. We will cover parallel printers in more detail in a later article.

Connect the AC power cord first to your Apple and then to an electrical outlet. Next plug you monitor power cord into an electrical outlet. With the door on disk drive one (.D1) open and no disk inside, turn on the monitor and then reach behind the Apple /// and turn on the computer. The disk drive will spin twice looking for a program in .D1. The auto speaker in the front of your machine will beep and the word **RETRY** will appear in the upper-left corner of the monitor. You are now ready to run your first program.

Booting or Starting the ///

The Apple ///'s operating system is called **SOS**, pronounced *sauce*, for Sophisticated Operating System. It is, by definition, present on every bootable disk. A bootable disk must have the following three files: **SOS.KERNEL** (the operating system code), **SOS.DRIVER** (the file which defines the input and output devices for your system) and **SOS.INTERP** (a special type of program which runs your system). These are the files an Apple /// must have to operate.

Anyone with an **APPLE ///** needs a copy of one of the versions of the **SYSTEM UTILITIES** program. If you did not receive one with your machine, contact a vendor or user group to get one. In the next installment, we will use **SYSTEM UTILITIES** to demonstrate some of the ///'s capabilities and introduce some new topics. 

(Ranntings continued)

user groups. It has instituted a program of supplying Apple employees as speakers to user groups around the country. It has become active on **MAUG™** on CompuServe, whereby user group representatives can obtain press releases and pointers on how to get problems solved for their members. Apple is seeking out the user community and working hard to regain trust. While the progress of technology cannot be stopped, Apple realizes it can provide help in making the best of change.

Information is a necessity for good decision making and Apple intends to help make its users the best informed and best prepared of all microcomputer users. While Apple is providing us with information, it is seeking and getting an increased flow of information from us. At last year's Apple World, Steve Wozniak talked about the importance of user groups. He estimates that he has visited as many as two hundred different groups in the past several years. "It became very good to meet the people, talk to them, know their problems," he said. "Meanwhile when I was at Apple...nobody knew these kinds of things. Nobody knew which kinds of hardware and software you could buy, what was really going on."

Not only did the users lose their trust in Apple, but Apple stopped trusting and listening to its users. Useful communication broke down because it stopped going both ways. Apple isolated itself, and by isolating itself it made mistakes. Now Apple is working to regain user support. It is listening. It wants to hear user's concerns. Apple realizes it can no longer isolate itself from users because there is an inescapable relationship between current and future users. 

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ON THREE Magazine keeps you abreast of the latest trends in the Apple /// world. It contains enlightening articles and programs, technical hints and product reviews. And you need not be a programming genius to benefit from this publication. *ON THREE Magazine* includes items of interest to new users and advanced programmers as well. User group listings, hot line consultants and the "One, Two, /// Forum" question and answer section provide help for all Apple /// users, old or new.

If your subscription has ended, renew. If you are new to the ///, subscribe. You won't believe what you're missing.

The Desktop Manager

edward n. gooding, sr.

This is the first of a two-part review of "The Desktop Manager: The Expandable Productivity Tool," produced by ON THREE.

I have used *ON THREE's* Desktop Manager since April 1986 and decided to write an article expressing my opinion of it. For those of you who may be unfamiliar with this product, the Desktop Manager is similar to the program SideKick which runs on the IBM PC and compatibles. It is a background program which is made available from within any other program by pressing double keystrokes such as **SOLID-APPLE ESCAPE** or **SOLID-APPLE 1, 2, 3** or **4**. This background program is loaded into memory at boot time and stays there always, even if you subsequently boot Apple Writer, VisiCalc, **/// E-Z Pieces** or any other program. This effectively turns your Apple **///** into a multi-program machine, with two programs residing in memory at the same time but only one processing at a time. Switching back and forth between the Desktop Manager and the other program you're using is extremely easy, even easier than switching between programs using Selector **///** or Catalyst.

The Desktop Manager is really an umbrella-type program and acts as a policeman directing the traffic of your programs. It stops the program you're currently working with and lets you use one of the Desktop's sub-programs, which you choose from its pop up menu. Once you've made your choice, the Desktop Manager loads that sub-program and turns control over to it. When you are finished using it, press **ESCAPE** and control is returned to the Desktop's umbrella program, which presents the Desktop's main menu sub-program choices again. If you are finished using the Desktop Manager, simply press **ESCAPE**. The Desktop program erases its main menu and returns you to the program you were originally working with. In fact, it freezes that program's screen until you've finished using the Desktop, at which time the cursor returns to exactly the same position on that program's screen as you left it.

This approach makes the Desktop Manager a flexible and easily used program, one that continues to grow and become even more useful as more sub-program modules are written and added. There are already a

couple of useful Public Domain Desktop Manager sub-programs (called modules) circulating, and I am beta testing others for possible future release as I write. *ON THREE* also provides a kit to serious programmers who want to develop Desktop Manager modules. If you have some 6502 assembler experience, you will have no trouble adding your programs to the Desktop's main menu because the documentation includes technical information on the interface.

Installation

Finally, an Apple **///** program which automatically installs itself for you. I think all programs should include this feature instead of requiring business people to alter device drivers and create sub-directories. The Desktop Manager program, when booted, presents you with an installation menu like the one in Figure 1.

On your first time through select Option 1, which prompts you for the name of the volume to contain the Desktop Manager program. The installation program then creates a sub-directory called "Desktop" in the main directory of your volume and proceeds to copy all the files and programs needed to operate the Desktop Manager, all *without* user intervention! When finished, the program tells you the files were successfully copied.

Now select Option 2, which prompts you to insert a boot disk into .D1 so the program can add the Desktop Manager driver to the SOS.DRIVER file on the boot

Figure 1

Desktop Manager Installation Program Version 1.0
(c) ON THREE Inc. 1986 All Rights Reserved

- (1) Install Desktop Manager
- (2) Add Desktop Manager Driver
- (3) Remove Desktop Manager Driver
- (4) Quit

Use Up and Down Arrows to Make Selection.

press RETURN to accept.

disk. The installation program will also modify the boot code on the disk to reserve 32K of memory for the Desktop program modules each time you boot your computer. All this is done automatically, so you don't even have to *think* about using the System Utilities program.

After Option 2 finishes, you are told the installation was successful. If you are a Catalyst or Selector user, you will only have to perform Option 2 once, on your Catalyst or Selector boot disk. If you individually boot your application programs (Apple Writer, VisiCalc, etc.) from floppies, perform Option 2 once on the boot disk of each program you wish to use the Desktop Manager with.

Option 3 of the installation program removes the Desktop Manager driver from your boot disks and restores the boot code to its original state. If you have an extremely large SOS.DRIVER file, using this option may be necessary. Version 1.2 of the System Utilities will only allow you to have a driver file of 51K. SOS, however, supports driver files of up to 64K. The Desktop Manager program follows SOS's 64K limit in determining whether there will be enough room to automatically install its driver on your boot disks' SOS.DRIVER files. Therefore, when the Desktop Manager automatically loads itself, it may make your SOS.DRIVER file greater than 51K, causing the System Utilities' System Configuration Program (SCP) to display the following message when you try to L)oad your SOS.DRIVER file: "Badly formatted driver file." If this occurs, simply use Option 3 to remove the Desktop Manager driver. Then you can manually manipulate your SOS.DRIVER file with the SCP and use Option 2 to re-install your Desktop Manager driver.

NOTE: Option 3, which removes the Desktop Manager driver, assumes the Desktop Manager driver is the last one on your driver list. As a result, it also deletes any other drivers you may have manually added after installing the Desktop Manager driver. For this reason, you should remove the Desktop Manager driver before manually manipulating your SOS.DRIVER file and then re-install it after you finish.

System Requirements

To use the Desktop Manager, you will need the following hardware:

An Apple /// with 256K or 512K of memory - Obviously, the Desktop Manager will best process with 512K of memory. I say this because I use it on both of my ///'s; one has 256K and the other has *ON*

THREE's 512K Memory Upgrade. If you have a 256K machine, you may have problems using programs like Draw ON ///, Lazarus, Business Graphics and BPI Accounting, especially if you also use a program switcher like Selector or Catalyst. Desktop Manager uses from 32 to 40K of your ///'s memory and coupled with the aforementioned programs presents a lot of code to load into memory at one time. You may find that your 256K /// is taxed to its limits and being seeing the dreaded "SYSTEM FAILURE 06" (stack overflow) message. This will especially plague you if you have a large driver file. Most of the problems can be circumvented, but you may find yourself having to dynamically load drivers (if you have Catalyst), eliminating or reducing graphics space, making the Pascal Disk][routines non-resident and even rearranging your drivers to reduce fragmentation and free some precious bits of memory. If you are fortunate enough to have a 512K machine, you will have absolutely no problem running Catalyst, Desktop Manager and Draw ON /// with 32K of graphics space allocated at the same time. I have experienced no problems of any kind with this configuration.

An external disk drive or any hard disk - The program runs fine from a Disk /// or Micro-Sci A143, but the various Desktop modules load much faster from a hard disk than a floppy disk drive. If you store your desktop on a Disk ///, you will be limited in the number of modules you can use. When I installed the Desktop Manager on one of my Disk ///'s to check it out, I was only able to fit the Note Pad, the Calendar and the Calculator. Nothing else would fit! I suppose by utilizing both sides of the diskette you could get a pretty useful desktop, but you would have to remember to flip the diskette when you wanted to invoke a Desktop module located on the other side, and you might have to store your appointments on both sides in order to have the program prompt you when an appointment is due. If you have a hard disk that is also fast, like the CMC Quick/20 or the Sider, the modules will load very quickly when you invoke them. It is very impressive!

A system clock, *ON THREE* O'clock, or other compatible system clock - *ON THREE* says this is optional and it is true. The Desktop Manager will run without one, but you will not have the automatic prompting feature of the Calendar function available to you.

A printer for hard copies of your Note Pad notes, Appointment Calendar appointments and Calculator paper tape - Once again, *ON THREE* says that this is optional. While that is a true statement, you will limit the usefulness of these

functions by not having a printer. I also think an Apple mouse is desirable. If you have one of these, Desktop Manager will allow you to use it in place of the ///'s cursor and RETURN/ENTER keys in all application programs like Apple Writer, VisiCalc, /// E-Z Pieces, etc. You can even configure the mouse button to invoke the Desktop Manager's main menu.

Features

I'll start my review of the features by using the Cut and Paste function of Desktop Manager to cut out a copy of my main Desktop Manager menu and paste it into this article. The Cut and Paste function is available from within any program and is also available while you are using other Desktop Manager functions. You can invoke it by pressing **SOLID-APPLE 5** (on the keyboard, not the keypad). A plus sign appears at the upper, left-most position of your screen. Use the arrow keys or mouse to place the "+" cursor at the upper left corner of the text "window" you wish to cut out. Once there, mark it by pressing **OPEN-APPLE B** (for begin). Next, place the "+" cursor at the bottom right corner of the block, or window, of text on the screen you wish to copy. Then press **OPEN-APPLE E** (for end) to lock the window. Pressing **RETURN** now causes the "+" cursor to sweep across the window you defined, picking up copies of the characters in the screen window. This copy is then stored in the Desktop Manager's clipboard, from which you can repeatedly paste it into other Desktop Manager functions or /// programs. This is a terrific timesaving feature of the Desktop Manager!

My main Desktop Manager menu appears in Figure 2.

Desktop Manager's main menu is invoked by pressing the **SOLID-APPLE** and **ESCAPE** keys simultaneously. From there, use the up and down arrow keys to position the cursor over the function you want and press **RETURN**. You may also directly access the first four functions listed on the menu by pressing **SOLID-APPLE** and either **1, 2, 3** or **4**. This bypasses the menu altogether and directly invokes the corresponding function. As with the main menu,

Figure 2

Note Pad	<-- Automated Post-it Notes
Calendar	<-- A nice appointment calendar
Disk Manager	<-- File and Volume utilities
Macro Manager	<-- Super Key keyboard macros
Calculator	<-- A full-function calculator
Ascii Table	<-- Decimal/Hex/Character
Graphics Mgr.	<-- Mel's super new graphics utility
Mr. Sandman	<-- Mel's Pacman look-a-like
Blank Screen	<-- A public domain module by Milt Johnson
Screen Dump	<-- A public domain module by Tim Harrington
Subdirectory01	<-- A beta test menu manager from Tim
AsciiCharacter	<-- A beta test, 2-page Ascii table display
Desktop Setup	<-- Configuration module

you may invoke these functions directly from within any other Apple /// program such as Apple Writer, VisiCalc or /// E-Z Pieces. To return to your foreground program, simply press **ESCAPE**. The main Desktop Manager menu disappears from the screen. Even though I isolated the main menu when I used the CUT and PASTE function to display it to you in Figure 2, it actually overlays whatever is on your screen at the time, just as a Macintosh window does.

Figure 3

Note Pad	
Bev Branch:	Branch Consulting Services
Gordon Fretz:	GDF Computer Services
Ed Groat:	Groat Computer Services
Maudie Lin:	Chising, Inc.
Chuck Shorter:	Custom Engineered Systems, Ltd.
Mark Turner:	Turner Computer Services
Mary Ann Welch:	Independent Software Services

Note Pad

The Note Pad is invoked directly by pressing **SOLID-APPLE 1** or indirectly by pressing **SOLID-APPLE ESCAPE** and then choosing it from the main Desktop Manager menu.

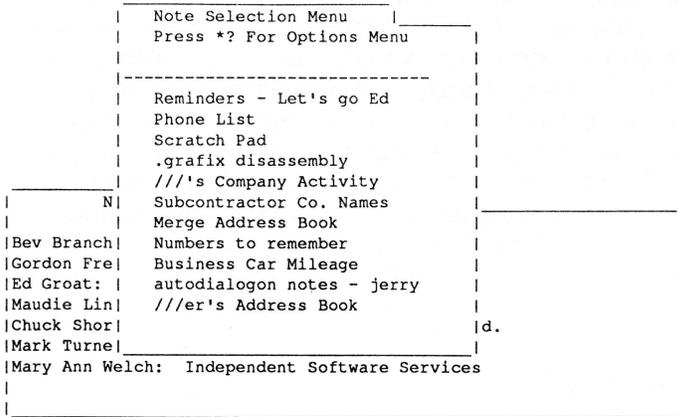
The Note Pad function looks like the one in Figure 3 when it is invoked. It will automatically present you with the last note you were using.

I use my Note Pad as a Post-it Note pad for quick little reminders and notes to myself and also as a Rolodex file for phone lists and addresses. I no longer use my /// E-Z Pieces phone number data base because, using the Note Pad, I can look up addresses and phone numbers from within any other program, rather than leave my current program, boot /// E-Z Pieces, load my phone list data base, get the number, leave /// E-Z Pieces, boot the program I was originally in . . . you get the picture. The Note Pad is a super time saver, and by using the print function, I can even print the address on an envelope while using VisiCalc, System Utilities or any other program! I use my address list Note Pad to print a quick address label without disrupting a VisiCalc session, and its a great convenience!

The Desktop Manager maintains a menu of notes for you so you don't have to remember the names of all the notes you've created. Pressing **OPEN-APPLE S** while using the Note Pad function displays a window like the one in Figure 4.

From the Note Selection menu you may delete an existing note to clean up the menu.

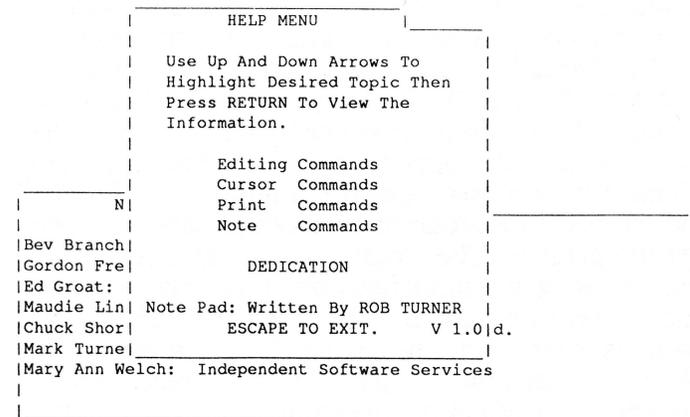
Figure 4



As in all the Desktop Manager functions, help screens are available to you by pressing the **OPEN-APPLE ?** keys. A display of the main help screen for the Note Pad function appears in Figure 5.

You may have up to 244 different notes, with each note holding up to 60 lines of information and each line having up to 63 characters. The function only displays eight lines of any note at one time, so you must scroll vertically to view a large note. Your note's location on the ///'s screen can be changed at any time to simultaneously view the note and part of whatever was on the screen before you invoked the Note Pad function.

Figure 5



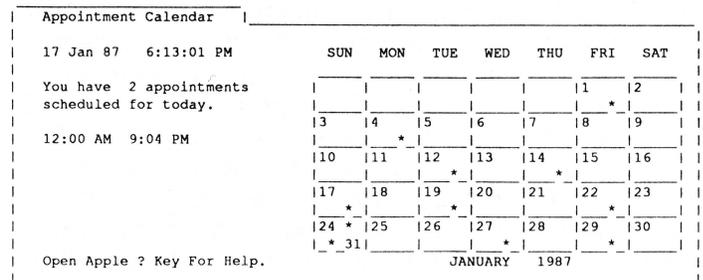
The Note Pad can be used as a miniature word processor. These capabilities include:

- ✓ toggle between insert and overstrike mode of data entry.
- ✓ jump forward or backward 8 lines at a time.
- ✓ tab forward or backward 6 characters at a time.

- ✓ character delete from either side of the cursor, line delete, and to-end-of-line delete from current cursor position.
- ✓ jump to beginning or end of a line.
- ✓ find any text within a note (handy for finding a specific person's phone number).
- ✓ print the contents of a note to either a character device (printer, console, .RS232) or a block device (disk).
- ✓ rename the current note.
- ✓ jump to the preceding or succeeding note.
- ✓ go to the note selection menu/window.

This Note Pad is both handy and useful. Its uses are limited only by your imagination, as long as you keep

Figure 6



Appointment Calendar

The Calendar function is invoked directly by pressing **SOLID-APPLE 2** or indirectly by pressing **SOLID-APPLE ESCAPE** and then selecting **CALENDAR** from the main Desktop Manager menu.

The Calendar function looks like the one in Figure 6 when first invoked.

The asterisks located on the calendar in Figure 6 actually appear as little bells if you use the standard Apple character set. They have been converted to asterisks here for publication. They note the dates for which appointments are scheduled. You can move from day to day on the calendar using the cursor keys. You can also move backward and forward through the preceding and succeeding months using single keystrokes. If you want to quickly skip forward or backward many months, a "GOTO" lets you jump directly to a specific month and year.

You may schedule multiple appointments for any day up to 12/31/99. If your computer has the clock chip installed, the program displays a reminder window on your monitor screen as the appointment comes due,

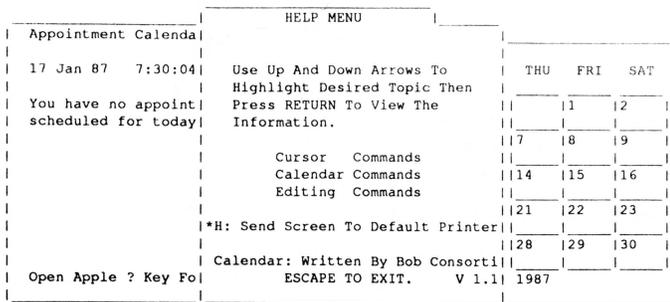
even if you are in the midst of using another program such as /// E-Z Pieces or Apple Writer at the time. You can also set the date and time with the Calendar function. This feature relieves you of going to System Utilities to set your system's clock.

You may schedule up to 15 appointments for each day of the month. Each appointment contains one line for the date and time and up to 14 lines for appointment information. Each line may contain up to 32 characters. The Appointment Calendar allows you to delete appointments and change appointment times as well as edit the contents of appointment information. You may also print a single appointment, an entire day's appointments, a week's appointments or even the month's calendar.

Pressing **OPEN-APPLE ?** invokes the online help function for the calendar. It is printed as Figure 7.

As with all other Desktop Manager function displays, the calendar may be moved around on your screen to view the information on the screen behind it.

Figure 7

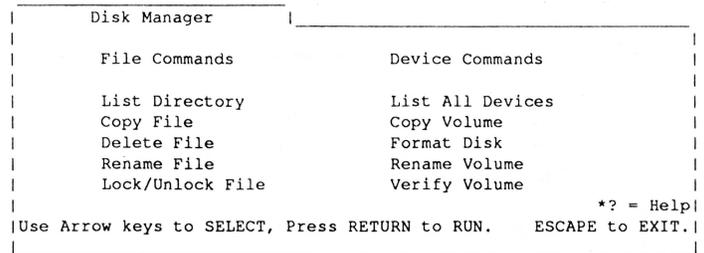


Disk Manager

As supplied by *ON THREE*, the Disk Manager is invoked from the main Desktop Manager menu by pressing **SOLID-APPLE ESCAPE** and selecting **DISK MANAGER** from the menu. I use mine so often that I moved it to the third position on the menu (the Calculator's) so I can invoke it directly by pressing **SOLID-APPLE 3**. I renamed **OPTIONNC**, the Calculator program, **OPTIONE** so I could name the Disk Manager program **OPTIONC**. Changing the last character of the module's name also changes its order of appearance in the main Desktop Manager menu. However, leave **OPTIONB**, the Calendar, and **OPTIOND**, the Macro Manager, as they are. The Desktop Manager expects to find them there at boot time because it initializes the Calendar for appointments and it automatically loads the macro map you were using when the Desktop was last active. I have moved all the other modules around without causing any problems. In fact, I've even moved the Calendar and the Macro Map modules around as well. The Desktop

Manager still booted and processed without any problems, but I had to manually load the Macro Map that I wanted, and my appointments weren't armed unless I invoked the Calendar function. If you move another module to **OPTIONB**, you will note that it will suddenly be invoked while you are booting your system, and you will have to press **ESCAPE** to continue booting.

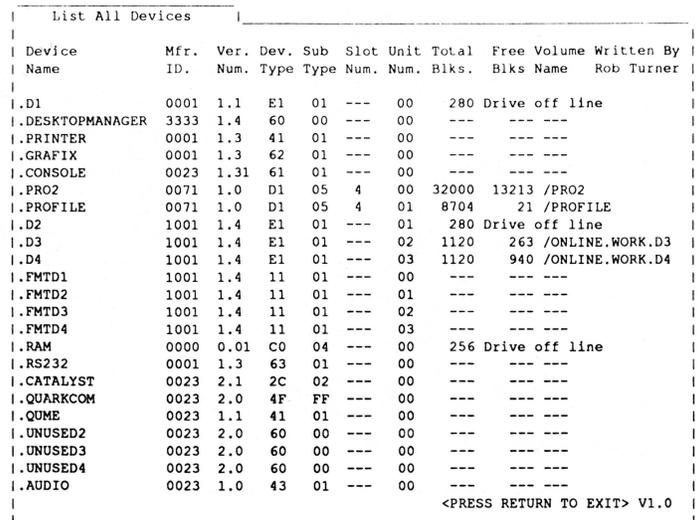
Figure 8



The Disk Manager is one of my most called upon functions. In fact, I do not even use my System Utilities program anymore, unless I need to use the SCP to configure some drivers. I never realized how often I needed the List Directory function. It is so handy being able to use it at any time from within any application! How many times have you wanted to list the contents of a sub-directory while in the middle of VisiCalc or while online telecommunicating with another computer system? The Disk Manager's main menu appears in Figure 8.

As you can see, the Make Directory function is the only important one missing here. To have all these functions available at any time by pressing two keys is truly fantastic! The functions all work as you would expect them to, and online help is available by pressing **OPEN-APPLE ?**. The List Devices feature deserves special attention here because it displays

Figure 9



much more information about your devices than its System Utilities counterpart. Figure 9 shows what it displays for the configuration on my 512K ///.

You would have to use the SCP Edit function and view each individual driver to obtain much of the data displayed in Figure 9 by the Disk Manager with only a keystroke. This is a quick and effortless way of checking all online disk drives to determine your system's available storage capacity.

The Utility functions are user friendly. The program double checks with you before overwriting or deleting any existing files. Error conditions are brought to your attention with messages written in plain English, not error codes in hexadecimal. You can always use the **ESCAPE** key to back out of a function if you end up somewhere you really don't want to be.

I think this is a must-have module, even if you do have the System Utilities available via Selector or Catalyst.



ON THREE Presents . . .

Draw ON ///™

The most versatile Apple /// graphics tool ever designed!

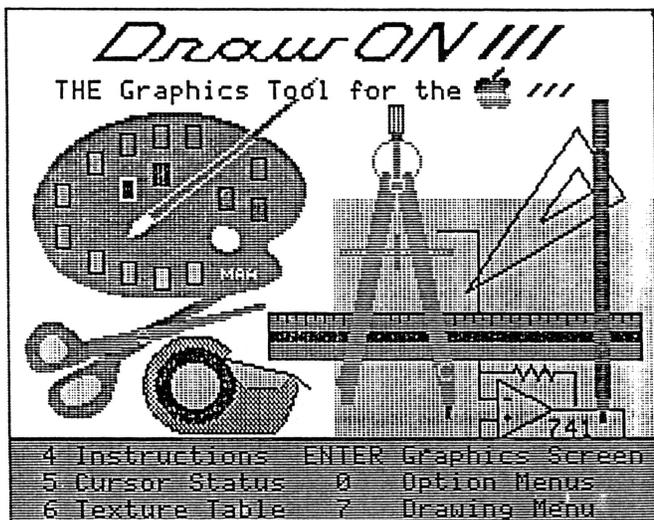
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- Use Draw ON /// directly with Apple //e mouse and interface, joystick, keyboard, or Apple Graphics Tablet (Graphics Tablet version \$50 additional)
 - Draw ON /// can spruce up dull graphs with its many typefaces or by creating fancy borders and textured images
 - Draw ON /// comes complete with easy to follow menus, a durable spiral-bound instruction manual and tutorial, keypad overlay, and unprotected diskettes which will install on Selector /// or Catalyst
 - Draw ON /// is compatible with all monochrome monitors as well as NTSC (standard) and RGB (hi-res) color monitors
- Multiple help screens
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 - Zoom in for detailed work
 - Rubber-banding of lines

What? A computer graphics program that is powerful and easy to use, has the resources of a complete graphics art studio, creates professional-quality charts and diagrams, complex illustrations and original artwork, letterheads, slides and tables for presentation? Don't you believe it! . . . unless you're talking about Draw ON ///™, from ON THREE!

Draw ON /// transforms your Apple /// into a drafting table, easel and sketch pad, all rolled into one, like MacPaint with color. Computer Aided Design (CAD) applications such as circuit layouts and flowcharts are childs play for Draw ON ///.

Draw ON /// comes with a wide selection of text fonts and objects which can be supplemented with those of your own design. Mix and match with drawings and charts, using Draw ON ///'s powerful cut and paste facility. You can use Draw ON ///'s many fonts to label your own drawings as well as those in other applications, and you can pick up objects, expand, shrink, rotate, invert, and texture.



Draw ON /// requires 256K minimum memory

Look!

You can print Draw ON /// screens with all of these popular printers:

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plus, with a PKASO/ PKASO-U interface:

- Centronics
- IDS Prism, Color Prism*
- NEC
- Okidata
- . . . and others

*required to print color drawings

Specify printer and interface when ordering

Call Three: Hot Line/Apple /// User Groups

If you want to meet other Apple /// owners and exchange ideas, a user group is what you need. Below is a listing of all Apple /// user groups known to us. If you recently formed a group or know of one not listed here, please contact *ON THREE* and tell us so we may include it in this section. There is no charge for this service.

California
Sacramento Apple /// User Group
1433 Elsdon Circle
Carmichael, CA 95608
(916) 482-6660

Orange County Apple ///
User Group
22501 Eloise Avenue
El Toro, CA 92630

L.A.-So. Bay Apple /// Users Group
P.O. Box 432
Redondo Beach, CA 90277
(213) 316-7738

Apple /// Users of Northern CA
220 Redwood Highway #184
Mill Valley, CA 94941

International Apple Core
Apple /// S.I.G.
908 George Street
Santa Clara, CA 95054
(408) 727-7652

Canada
Apples British Columbia
Computer Society Apple /// SIG
P.O. Box 80569, Burnaby, BC
Canada V5H3X9
(416) 839-7779

The Astronic Club
1453 Highbush Trail
Pickering, Ontario
Canada L1V1N6 (416) 839-7779

Colorado
Colorado Apple Three User Group
PO Box 3155, Englewood, CO 80112

Connecticut
Apple /// Society of So. Connecticut
34 Burr School Road
Westport, CT 06880
(203) 226-4198

Florida
Sarasota Apple /// User Group
c/o Computer Center
909 S. Tamiami Trail,
Nokomis, FL 33555
(813) 484-0421

Georgia
Atlanta /// Society
385 Saddle Lake Drive
Roswell, GA 30076
(404) 992-3130

Illinois
Third Apple Users c/o Lavona Ramm
1113 Wheaton Oaks Drive
Wheaton, IL 60187

Kansas
Kansas City Apple /// User Group
5533 Granada
Roeland Park, KS 66205
(913) 262-3555

Maine
So. Maine Apple Users Group
Casco St., Freeport, ME 04033
(207) 865-4761, ext. 2249

Maryland
Apple /// SIG Chairman
Washington Apple Pi
8227 Woodmont Ave. #201
Bethesda, MD 20814 (301) 654-8060

Minnesota
Minnesota Apple Corps User Group
P.O. Box 796, Hopkins, MN 55343

New Jersey
North Jersey Apple /// Users Group
c/o Roger T. Richardson
P.O. Box 251, Allamuchy, NJ 07820
(201) 852-7710

North Carolina
North Carolina Apple /// User Group
2609 North Duke St. #103
Durham, NC 27704

Ohio
Cincinnati Apple /// User Group
5242 Horizonvue Drive
Cincinnati, OH 45239
(513) 542-7146

Apple Dayton - Apple /// S.I.G.
P.O. Box 1666, Fairborn, OH 45324-7666
(513) 879-5895

Oregon
Oregon Apple /// Users Group
1001 SW 5th Ave. #2000
Portland, OR 97204
(503) 645-6789

Overseas
Apple THREE Group International
c/o H. Joseph Dobrowolski
P.O. Box 913, Langley AFB, VA 23665

Apple /// Users Belgium/Netherlands
c/o H. Van der Straeten, Vestinglaan 49
2580 Sint-Katelijne-Waver, Belgium
(015) 205328

Apple User Group Europe e.V.
Box 11 01 69 D-4200,
Oberhausen 11
West Germany 0049-6195-7 3917

Apple /// User Group Belgium/
Netherlands
c/o J. Woretshofer, Ganzerikweerd 22
NL-6229 TG Maastricht,
The Netherlands
(043) 611704

British Apple Systems User Group
(BASUG) Apple /// S.I.G.
P.O. Box 174
Watford Herts, England WD2 6NF
0727 73390/72728

Le Club Apple
43 Avenue de la Grande-Armee
75116 Paris, France

Apple /// User Group
c/o Canberra Accounting Services
P.O. Box 42
Duffy A.C.T. 2611
Australia

Texas
Apple Corps of Dallas
Apple /// SIG
P.O. Box 5537
Richardson, TX 75080

River City Apple Corps /// S.I.G.
Box 13349, Austin, TX 78711
(512) 454-9962

Houston Area Apple Users Group
(Apple /// Division)
P.O. Box 610150
Houston, TX 77063
(713) 480-5690 or 974-5153

Virginia
Charlottesville Apple /// User Group
216 Turkey Ridge Road
Charlottesville, VA 22901
(804) 642-5655

Greater Tidewater
Apple /// User Group
Route 2, Box 216
Hayes, VA 23072
(804) 642-5655 or
898-3500, ext. 2671

43 Avenue de la Grande-Armee
75116 Paris, France

The *Call Three: Hot Line* is a service whereby Apple /// users with questions can call an area number for answers. The individuals answering your calls are fellow Apple /// users who volunteered to help those in need over some of the rough spots. They are not compensated for this service, so we owe them a resounding "three cheers" for their kindness and generosity.

If you are willing and able to aid others by answering questions, please write to *ON THREE* and provide the necessary information. If you have questions, feel free to call our consultants listed below. Please observe the calling hours shown and, before placing a call, double-check the time zone so you don't inadvertently awaken someone! No other restrictions apply to this service.

For your reference, the accompanying table lists subjects and abbreviations used in the "Subjects" column of the consultants listing.

Subject	Code	Subject	Code
Accounting	AC	Graphics	GR
Agriculture	AG	Micro-Sci	MI
Assembly Lang.	AL	Modems	MD
Business Basic	BB	Modula-2	MU
Catalyst	CT	Pascal	PA
Cobol	CO	ProFile	PR
CP/M	CP	Quark	QU
Data Base	DB	SOS	SO
Education	ED	Spreadsheets	SS
Emulation	AE	Telecom	TC
Financial	FI	/// E-Z Pieces	EP
Fortran	FO	Word Proc.	WP
General	GE		

Name	Area	Telephone	Days	Hours	Zone	Subjects
Coville Woodburn	NH	(603) 863-5590	M,Tu,Th,F	7-8pm	Eastern	BB,CT,GE,GR,MI,QU,WP
Ken Johnson	MA	(413) 536-7502	Su-Sa	6-9pm	Eastern	BB,PA,MD,WP,MI
Don Loosli	MI	(313) 626-3848	M-F	9am-5pm	Eastern	GE,WP,SS,DB
Harry T. Hanson	NJ	(201) 467-0712	M-F	6-9pm	Eastern	GE,PA,BB,CT
Edward N. Gooding, Sr.	VA	(804) 747-8751	Su-Sa	6-9pm	Eastern	CO,SS,PR,MD,CT
Jeff Fritz	WV	(606) 353-9493	M-Sa	8-11pm	Eastern	BB,DB,GE,MI,SS,TC,EP
Al Johnston	FL	(904) 739-1600	M-F	9am-6pm	Eastern	GE
Paul Sanchez	FL	(305) 266-5965	Su-Sa	10am-4pm	Eastern	SS,PR,CT
R.B. Thompson	NC	(919) 787-1703	Su-Sa	10am-10pm	Eastern	BB,DB,GE,SS,WP
J. Donald Glenn	NE	(402) 291-9177	Su-Th	7-10pm	Central	GE
Scott Weddel	NE	(402) 572-7543	Su-Sa	4-10pm	Central	GE,TC
Jim Ferencak	IL	(312) 599-7505	M-F	10am-5pm	Central	GE,EP,DB
Neil Quellhorst	IL	(217) 434-8727	Su-Sa	7-9pm	Central	AL,BB,GR,PA,SO,TC
Paul Thomas	MS	(601) 494-8736	Su-Sa	6-10pm	Central	GE,AC,BB,CP,DB,FI,MI,MD,PA,PR,SO,SS,TC,EP,WP
Earl T. Brelje	MN	(612) 455-6405	M-F	4-9pm	Central	CT,DB,WP,GE, Quick File, Omnis 3
Ron Maupin	TX	(512) 280-0144	Su-Sa	8am-10pm	Central	AL,CO,CT,EP,MD,PA,QU,SS,TC,WP
Terri Wiles	CO	(303) 850-7472	Su-Sa	10am-6pm	Mountain	PA
William Prince	OR	(503) 254-6465	M-F	9am-4pm	Pacific	GR,TC, Corvus
Karl La Rue	WA	(509) 582-6459	F-Su	6-10pm	Pacific	MD,GE,EP,WP,TC,SS,CP
Pat Holwagner	CA	(415) 433-2323	M-F	10am-6pm	Pacific	GE,SS,WP,CT,DB,SU,AE,EP
Vincent F. Latona	CA	(818) 703-0330	M-F	9am-5pm	Pacific	GE,WP,BB,SS,AE
Dennis R. Cohen	CA	(818) 956-8559	Su	10am-10pm	Pacific	GE,PA,MU,WP,DB,SO
			M-F	7-9pm		
			Sa	12n-6pm		
Kelly C. McGrew	WA	(206) 943-8533	Su-M,Th-Sa	7-9pm	Pacific	DB,GR,SS,PR,MD,CT
H. Van der Straeten	Belgium	(015) 205328	Su-Sa	7-10pm	Europe	BB,CT,DB,GE,PA,PR,SS

One, Two, /// Forum

Ode to the ///

I have one article suggestion for you and two helpful hints for your readers.

I am, like most computer users, a very busy person. We probably wouldn't use computers if we had lots of time to kill. I do not always have time to read your publication when I receive it and at the same time I notice articles that will be useful to me in the future.

What would be very helpful is a cross index of all the articles you publish so readers will know in which issue of *ON THREE* the article with the information we are looking for is published. It would also help if you had subheadings and key words contained in the articles identified also. The article title does not always help you decide whether or not the subsequent information is of interest to the user.

Make it available in diskette form and/or over the phone and I think you would be providing a valuable service.

Following are the hints I promised:

Creating a glossary of terms - In the process of writing documentation for software that I write, I have come across a useful tool for creating a glossary.

The Apple Speller /// program allows you to list all the words in a document in alphabetical order. You can print this listing to diskette and reload the listing into Apple Writer. Simply delete the trite words and the information regarding the number of times each word is used. What remains is a complete list of relevant words contained in the document which you can now define.

Writing poetry and music using the Apple /// Speller - You can look up words in the Apple Speller /// dictionaries by only knowing part of the word. In the following example the word "season" rhymes with "reason" and "treason." By entering "=" followed by "eason" and listing the words that match your search, you will find all the words that end in "eason."

Example: Spring is the season,
When my pride commits treason,
There is no rhyme or reason,
I am in love, love, love.....

Thanks for doing such a great job.

I love you.....

Don Loosli
Farmington Hills, MI

The article you requested is in this issue. It is titled "An ON THREE Bibliography" and was written by David Ottalini. David developed this bibliography for his own use and was kind enough to share it. The listing includes every ON THREE article ever published and, with David's cooperation, it will be published every January. If you read the article you will learn how to obtain the bibliography on diskette.

And I'm sure your tips will prove useful to many readers. Perhaps I should start a new column devoted to poetry!

File Transfer with the ///

This letter is about computers talking but also I have an "inside Apple" story to share.

I use an Apple /// and my secretary uses an IBM PC XT. I want to get my Apple /// to send ASCII files to her's. We do a lot of word processing and we waste considerable time typing reports over again because they originally "were done on the Apple" and need to be completed by someone using the IBM. Temporary help workers usually know how to use our IBM but have never heard of the ///. While ideally I want both the computers to be able to send ASCII files to each other, I could probably live with just the /// sending to the IBM. It would be super, also, if I could complete a document on my /// that was started on the IBM.

The problem is, everyone I've asked knows *too much* about this! What I mean is that one "expert" tells me they know it can positively be done but they just don't know exactly how to go about it and they refer me to

someone else. Another expert tells me it can't be done and lists all the reasons why. Salespeople say it can be done *if* I buy a certain product they're selling. But when I ask them whether they have actually succeeded in sending ASCII files from a /// to an IBM PC XT, or if they know of *anyone* who has done so, they admit they don't know for sure whether their products work. I don't dare go to IBM (let alone Apple) to ask them. In either case, I have this feeling that once the words "Apple ///" come out of my mouth I will have reached a dead end.

Is there anyone out there who has tried to do this and been successful? What software is needed? Should I run a cable between the two computers? If so, which ports should I use? Can the transfer be done with diskettes only? Are DOS and SOS totally incompatible, or is it the opposite?

As promised, here is the inside Apple story. A friend of mine recently acquired a /// from a friend who has worked at Apple in Silicon Valley since the early days and was recently told by Apple management to remove her /// from her office. According to her, Apple management had a very tough time getting several Apple staffers to get rid of their ///'s. The staffers liked them so much that they didn't want to make the switch. Just another testimony illustrating how good the /// really is.

Glenn Krell
San Francisco, CA

You are not alone in your quest for communications capabilities between Apple /// and IBM computers. There are two ways of handling this, and your choice depends on how much money you've invested in your systems already.

The first way, and most difficult, uses an IBM serial card and a compatible communications package for it. The /// must also have its own communications package so it can send information to the IBM. If you have purchased any of the above peripherals for your system already, you may want to purchase the others you need to communicate.

However, there is an alternate available. A relatively new program which ON THREE was fortunate to receive, called "MatchPoint," allows the IBM to directly read Apple /// disks. Our technician, Terry McNeese, has used it and is reviewing it for future publication in ON THREE Magazine. He loves it and said it is worth every penny of the cost. And, if you haven't already invested much money in a communications set up, this could be a perfect solution for you. For more information and to order, contact

Debbie Armstrong at the address below:

MicroSolutions
125 South Fourth Street
DeKalb, IL 60115

(815) 756-3421

If you do contact Ms. Armstrong, please mention that you heard of her product from us. Only through that type of feedback are we guaranteed to receive new products to review and present to the readers of ON THREE.

Prompt Procedure Revisited

I hate to write a letter of complaint to you since you have provided excellent support for the Apple ///, but I must complain about the prompt procedure printed in the September 1986 issue. I spent some time typing the program, which was very hard to read, and when I compiled the text file I encountered several errors. I had to make two calls to *ON THREE* before being able to get my questions answered and was told that printing would improve as you are going to start using a LaserWriter to prepare copy for the magazine. Now for the part that blew my mind. I was told that the program was not compiled before printing. How can you trust the typing of a program that has not been compiled? No wonder I had problems getting the procedure to assemble!

Enough complaining. Now I have two problems which may be due to the fact that the prompt procedure was not compiled before printing.

1. When I use the prompt procedure the cursor always returns to location 0,0 and not to the end of the string displayed to the screen. Is this correct or can it be altered to leave it at the end of the string?
2. When I use the prompt procedure the string is always displayed on the screen in the inverse mode. I have checked my typing several times and cannot find any errors from the listing in the magazine. Have I made a mistake or was there a mistake in the program listing?

In closing I have a few suggestions for your magazine. How about a column of Pascal programming tips and techniques? And also an Assembly column for beginners which includes how to write and interface assembly routines into Pascal. I have several helpful procedures and functions which I am working on myself that I will send as soon as I have them error free and working correctly. Does anyone else out there?

I would be happy to help anyone who is having trouble with this, but I prefer to do it by mail rather than by telephone. I am very difficult to catch at work or home, and I'm afraid that phone calls would be irritating to the callers because most of the time the person answering my home phone is one of my children. However, you can write to me at my address given below.

I do appreciate the effort you folks make to help the world's Apple /// orphans. Keep up the good work.

Emmett Stevermer
2607 Tyler
Ames, IA 50010

Thank you for volunteering to help those in need with their /// E-Z Pieces problems. Without people like you there would be no ///.

Another EASY Answer

I am writing to you because I have both a problem and a solution.

First I will give the solution. In the September 1986 issue, one of your readers asked for the password to "EASY Executive Accounting System." I had the same problem myself and after hours of scanning the disk I found the "back door" password. The word I found is "BOBO". It lets you into the program but even if you change the password, "BOBO" still works, so it *will not* keep your system secure.

Now for the problem. I have an Apple /// with 256K, one external drive and a Qume Sprint 5 serial printer. I am doing some court reporting work and the specs call for 25 printed lines, double-spaced with the vertical spacing at 5.333 lines per inch. After setting up my printer for correct vertical spacing, I changed Apple Writer's (Version 2.0) page interval to 59 lines per page. As you can see, 5.333 x 11 inches equals 58.663. After printing several pages this causes the continuous form paper to move down several lines from the top of the form. I'd like to know if there is any way to get Apple Writer to send a form feed command to the printer instead of counting the lines and sending line feeds itself? I tried putting a **CONTROL L** in the bottom line command but that didn't work either. Any suggestions are welcome and would be appreciated.

Perhaps Apple Writer Version 4.0 can do this. How about a review of that version to see what enhancements have been made?

Wesley Seip
Plantation, FL

I'm sorry to tell you this, but no one at ON THREE could answer your question. However, don't give up hope. I am sure that one of ON THREE Magazine's many erudite readers can answer it for all of us. Also, if anyone reading this is willing and able to write a comparison of Apple Writer Versions 2.0 and 4.0, I will gladly print it.

Thank you for your solution to the EASY Executive Accounting System password dilemma. In November 1986's "One, Two, /// Forum" column there was another solution presented as well. I know that either one will help anyone having trouble with that program.

In the Year 2000

I appreciate the support which your company has continued to provide to owners of Apple ///'s. In particular I am thrilled with the SOS driver for Apple's UniDisk 3.5. It allows me to use the latest in disk technology on my /// as well as maintain compatibility with Apple //e files. I also enjoy your publication as it is one of few sources of information about solutions to Apple /// problems. I do have a few questions:

1. In the July 1986 issue, your recommendation to a reader to use a 65C802 chip in his computer was based upon leaving him in a position "to use forthcoming Apple /// enhancements." I would appreciate your sharing your knowledge or even speculation regarding these enhancements. In particular, is there a chance that VIP Professional will be made available to /// owners?
2. The introduction of the Apple //GS revealed the existence of the Mega// chip. Have you heard anything regarding it possibly being used to emulate an Apple //e on a single plug-in board for the Apple ///?
3. The recent release of Version 2.0 of AppleWorks with mail merge capability and enhanced spreadsheet functions introduces the possibility of incompatibility between AppleWorks data files and /// E-Z Pieces. Do you know if there are any plans to update /// E-Z Pieces to specifically include these new features? If there are not such plans being made by the current producers, is it possible that your company might secure the rights to make such revisions and possibly even expand further (65C802 support, spelling checker, communications, macros, charting module, report generator)? I realize that these would require more space, RAM and/or disk, but I believe most Apple /// owners have the hardware necessary.

4. What is the status of a utility which allows appropriate (text) Macintosh files to be translated to Apple /// format by the UniDisk 3.5? Although I do not have the program yet, I anticipate purchasing Microsoft Works when it becomes available. This would potentially allow me to have a great degree of compatibility on three different computers: my //c, /// and Macintosh.
5. Some time ago I used a copy program for the Apple /// which copied a 140K diskette in one pass. I would appreciate hearing from anyone who knows how to locate this utility.

Once again, thanks for your efforts in support of the ///.

Tom Ogle
Jefferson City, MO

I too am delighted with the SOS driver for the UniDisk 3.5 for the same reasons you are and because I am now typesetting all of the copy for ON THREE Magazine with a Mac XL computer and LaserWriter printer. However, I am still using my /// to edit the text because it has superior word processing capabilities, so having a UniDisk hooked up to my /// makes the file transfer a piece of cake. We're always glad to hear that customers enjoy using our products.

After discussing your first question with ON THREE President Bob Consorti, he said he may be marketing a speed up kit with the 65C802 and a new version of SOS, but he doesn't know when that will be made available. We have only so much time and can only work on a few projects at once. And he also said that modifying the VIP Professional program to work on the /// would be very difficult and time consuming. And, considering the size of the /// market, it would also be economically unfeasible.

About the Meg// chip, there is no way Apple will release it in anything other than a //GS. It was designed only for the GS and it is too integrated into that system to be adapted to work on the ///.

I'm sorry to tell you that there is no way /// E-Z Pieces will be updated. Haba Systems owns the right to market that program and won't share that right because it is still profitable for them. However, Apple /// product sales are not lucrative enough for them to invest the time and money needed to update it. Rupert Lissner, the creator of /// E-Z Pieces, has the source code for the program and will not produce a revised version because it would not be profitable for him either. Nor will he release the source code so others could revise it because it is too similar to his Apple //

version of AppleWorks, one of the most successful Apple computer programs ever created, and he doesn't want to risk its being copied.

However, all is not lost. ON THREE does have a spelling checker available which works with /// E-Z Pieces. We are selling it for \$79.95 plus \$3 s/h. And we may introduce communications and charting modules to work either under the Desktop Manager or as stand-alone programs. Whether we pursue those depends upon demand.

Because ON THREE has a developer's license with Apple, we frequently receive Apple-produced programs to review before they are marketed. One such program we recently received is "Passport" by Apple's Karl B. Young. It is a utility program for copying files between unlike Apple file systems. All you need is a Mac and a double-sided 3.5" drive. The program will convert from Mac to ProDOS and visa versa. I use it extensively while typesetting this magazine and it works magnificently (and I use a beta version). I spoke with Mr. Young about mentioning this program in my latest editorial and he said Apple is now marketing it. He also said that he has hundreds of disks filled with programs and data from his /// but had no way of converting them to Mac; that is why he wrote Passport. I strongly recommend buying it once it becomes available at a computer store near you. As soon as we receive a copy of the officially-released version complete with documentation, I will write a full review of the program and publish it in ON THREE.

And finally, I asked everyone in the office whether they'd heard of a program which copies a 140K diskette in one pass and many said they'd heard of one but didn't know its name or manufacturer. I hope one of ON THREE's faithful readers has a better memory and will be able to supply an answer.

Thank you for your words of encouragement and for raising such thoughtful, intelligent questions.

HELLO, Catalyst?

I just read Donald Glenn's article, "Using Catalyst," in the October issue of ON THREE. I found it useful and informative.

Some of the items I learned on my own. Catalyst Version 2.0 did not document the HELLO feature required when Business Basic is invoked. In fact, only after I purchased Business Basic Version 1.23Ax with my 512K Memory Upgrade did I realize a file called HELLO was expected! I had been calling the initial file in the directories for BASIC programs by

other names. Now I know that I must call them HELLO or set up a dummy program called HELLO.

The BASIC program on p.32 of October 1986's issue will not work as written. The address of the invoked file must be enclosed in quotes and BYE will not be performed in my version of CATALYST.UTIL, but BYE. will!

I wish you success in your new job. I look forward to my issues of *ON THREE* each month and I expect you will keep up the standards set by your predecessors.

Rutherford B. Thompson, Jr.
Raleigh, NC

Thank you for your letter and the corrections within. You are correct in all accounts. The only invokable Catalyst module requiring a period after BYE is CATALYST.UTIL, as you noted. Oddly, none of the others do.

I will do my best to fill the shoes of those before me and, if possible, make some improvements as I go.

One Picture is Worth 1,000 Words

My interest is piqued by Draw ON ///. On your product and services price list you have two versions listed, Draw ON /// and Draw ON /// Graphics Tablet Version. What is the difference?

I have a 256K Apple /// with one external floppy disk drive, an ImageWriter printer and the following software: Apple Writer, Advanced Version VisiCalc, Quick File, /// E-Z Pieces, BPI Accounting and Business Basic. I do not have a graphics program which will run on my /// but would like to use it to compose newsletters with pictures and graphs to mail to my patients. Would Draw ON /// do the job?

I have considered increasing my ///'s memory to 512K and purchasing either a mouse or joystick to work with the graphics program I ultimately purchase. I know that one or the other should be sufficient but can't decide which. Could you please give me some advice on this? And if I do expand to 512K, will the programs and files I have saved on disk work with the memory upgrade without recompiling?

Robert N. Brown, D.C.
Dallas, NC

The difference between the regular Draw ON /// and the tablet version is that the tablet version can be used with the light pen and graphics tablet which are sold as add-on accessories by several companies. The regular version cannot.

Draw ON /// is an excellent program for creating newsletters. It's graphics abilities are diverse and powerful and the program is easy to learn and use. You could use Draw ON /// to create your newsletter's pictures and graphs and then use the Graphics Manager to print them exactly where you want them on the page. You can also use PrintShop to create your graphics, but it does not have the versatility or power of Draw ON ///.

A mouse is best for any graphic program because it gives you greater, faster and easier control over creating the image. And, as far as upgrading your system to 512K, all of the programs you listed in your letter will run without recompiling them or the files created with them. Just follow the directions provided with the memory board and you'll have no trouble installing and using all of that extra memory. You may want to read the article I wrote about install-ing the 512K Memory Upgrade, called "Improving Your Memory," in November 1986's issue of ON THREE Magazine. I think it will convince you to upgrade.

Telecommunication Meditation

I've had a huge problem for almost a year with my Apple /// and would appreciate some advice on how to use it for telecommunications. Presently I have VisiTerm and Sun System Remarketing's Easy Term ///. I have a Popcom Model X-100 modem which I prefer to use and a TRS-80 Modem IB I could use if necessary. I've been working with a computer consultant but after 10 months I'm still nowhere.

Help! How can I send messages via my Apple /// to services such as Western Union's EasyLink, specifically? I've been using a Xerox 820-II for my EasyLink hook up, but I'd like to take advantage of the Apple ///'s greater capability.

I gather from the review of Terminus in your October issue that telecommunication via the /// is difficult at best. I need to make it do this one job well and simply. Am I asking too much?

I think this topic would make for an excellent article.

John Morrison
Toledo, OH

Thank you for writing and suggesting a telecommunication article for the magazine. I forwarded a copy of your letter to Edward N. Gooding, Sr. who knows more about telecommunications with the /// than anyone else on this planet. If he can't help you, no one can. You may call him any day of the week between 6:00 and 9:00 p.m. Eastern Standard Time at

(804) 747-8751. He is one of our valiant Call Three Hot Line participants.

I asked Ed to write a beginner's article about setting up a telecommunications system and determining necessary equipment. He is a very busy man so I can't make any promises as to whether he will or will not.

If anyone is having trouble with a program or an aspect of the III, check the Call Three Hot Line. Many talented people have volunteered their time to answer your questions, so why not take advantage of this service? It will only cost you the price of a telephone call, and since the listing notes the geographical location of the Hot Line volunteer, you can call the closest one who is versed in your problem area.

Driver, Driver, Who Has the Driver?

I'm wondering if you may be able to help me. I've been searching for a printer driver for the Apple III Business Graphics package produced by Business and Professional Software, Inc., Cambridge, MA to suit an ImageWriter I. I've been in contact (over the last 18 months) with Apple Australia who subsequently contacted Apple in California, but to no avail. I've also written to the producers of the package who produce the package PIK (a driver package which didn't work) as well. However, they did not respond to my letter.

Would you know where I might be able to solve this problem? Without hard copy, the package is useless. Thank you for any assistance you may be able to give.

D.R. Dobson
Canberra City
Australia

The Apple III Business Graphics package requires that you use BPS's "Printer/Plotter Installation Kit" (PIK) before your ImageWriter can print with it. You said in your letter that you tried it and it didn't help. Read the directions carefully and try it again. I spoke with the technician at BPS and she said to make sure you configure the PIK program for the Apple DMP printer when you are given a choice of printers by the program.

If this fails, perhaps you somehow damaged your printer driver. If this is the case, reinstall your printer driver. If you are using some other type of serial card to connect your III and your printer, you will have to contact the manufacturer of that card for a copy of the correct printer driver which will work with the ImageWriter.

If you are able to print from other programs, then the problem is not your printer's driver. Recheck that you have specified the Apple DMP printer when using Business Graphics. Also, re-read the manual to be sure you are doing everything correctly. If this fails, then my guess is that your PIK program is either defective or you purchased the wrong one. Sun Systems Remarketing still sells the III version of the PIK program you need. Their address is:

P.O. Box 4059
Logan, UT 84321
United States

Telephone: (801) 752-7631

I hope this helps. We at ON THREE know how frustrating it is trying to find solutions to problems with an out-of-production computer.

Dynamic Solution

In the June 1986 issue of *ON THREE*, Hobart S. Cable, II stated that he dynamically loaded the Micro-Sci drivers with System Utilities. He stated that these formatter drivers needed to be assigned to the first four .QUARKCOM UNUSED X positions. This is in error; these drivers need to be the first drivers listed on the .PROFILE/CATALYST/SOS.DRIVER file. It works great!

I very much appreciate *ON THREE*. However, because I am not a programmer, most of your articles are way over my head.

Darwin K. Holian, M.D.
Santa Barbara, CA

Thank you for your correction of Mr. Cable's letter. Your response will help many readers.

This is my third issue as editor and I feel I've made some progress in including more beginner articles. With the help of Richard and Lavona Rann, I am including a new series of articles called "The Beginning III" written especially for the beginner. The first of many interesting installments appears in this issue. If any reader has a suggestion for a beginner article or is willing to write one, please contact me. I'll help you in any way I can. 

ON THREE
TOLL-FREE ORDER LINES
(800) 443-8877
In California
(800) 331-1418

Disk of the Month

What is the ultimate time-saver? Why *ON THREE's* Disk of the Month diskettes, of course. Why use your precious time typing in *ON THREE* program listings when they are available on diskette for just \$14.95 (plus \$2 shipping and handling) each?

Better yet, mix and match. Any two or more for \$12.50 each (plus \$4 total shipping and handling). Best bet: the works.

Now is the time to start your collection of these program-filled diskettes from all issues of *ON THREE Magazine*. Bulk and group purchase rates are also available, call (805) 644-3514 to inquire about these super savers.

DOM #1—Extra Disk Space Plus!

This diskette contains all programs from volume I, nos. 1 and 2 of *ON THREE Magazine*. Included: Disk Pak1 with a program to give you four additional blocks of space on your data disks, and Disk Pak2, something you can't do without if you are a Pascal user, a convenient and easy way to list the files on a Pascal directory. Plus graphics and sound demos and more.

DOM #2—Changing Printer Characters

Here is an amazing program you won't want to miss. With it you can print to the Apple Dot Matrix and compatibles such as ImageWriter or ProWriter the same characters that are shown on your video display. Many special fonts, including fancy gothic characters, can enhance your printed output. And, it comes with complete documentation. Also on DOM #2 are the other programs from issue number 3, more graphic demos plus: a program to list files from an Apple II diskette without entering emulation mode.

DOM #3—Redefining a Keyboard

This disk is jam-packed full with programs that appeared in Volume I, No. 4 of *ON THREE*, and includes an easy-to-use program to redefine any or all keys on the Apple /// keyboard. Of particular interest is the ability to reassign the "V" to be the delete key so it can be used on AppleWriter /// and other programs. Also included are all the WPL programs, a disk formatting utility, a graphics sketching tool and still more that we don't have room to list here.

DOM #4—Emulation Patch

Volume II, No. 1 had so many great programs it took two disks, DOM's 4 and 5, to hold them all. DOM 4 has all of the Pascal programs and the *Apple II Emulation Patch*, a way to use any Apple /// Font in emulation. Also included is the Pascal startup program for *Access ///* that lets you autodial. Another fine utility is a Pascal program and UNIT to permit calculations from within the Pascal environment. Demos haven't been forgotten either with *Radiate Graphics Demo* and *Beatles Music Demo*. To top things off, we have included a number of *Draw ON* pictures you can view with the program on DOM #5.

DOM #5—Access Draw ON

Here we find the BASIC startup program to autodial from *Access ///*, and *Ben's SUPER Slot Machine*, along with all of the VisiCalc and WPL programs, and the *Circling Graphics Demo* which will show some of the fantastic images that *Draw ON* can create, plus still more *Draw ON* pictures, along with the *Draw ON ///Picture Demo* which you use to view *Draw ON* pictures.

DOM #6—BASIC Lister Plus!

Straight from the pages of Vol. II, No. 2 is a program which will give you perfectly formatted listings of Business Basic programs, and a Pascal program to guide and assist you in selecting noises for animation and game programs. Both the *Pascal Noisemaker* and the *BASIC lister* come with full documentation. We've also tossed in still more *Draw ON* pictures and some new fonts, as well. You can use the *Draw ON* viewer from DOM 5 to see them.

DOM #7—Heap Good Stuff

From Vol. ///, Nos. 1 and 2 we present a BASIC heap sort routine and demo, *IMAGEHELPER*, a neat graphics utility to simplify graphic image design, and a menu-driven program to pre-select printer codes and parameters.

DOM #8—Directory Sorting

Here is what you have been waiting for, a complete BASIC and Assembly program to take those old chopped up directories and sort them out in just the order you want. Included also is *Clean.Heads*, a Pascal program which exercises your disk drive at cleaning time and writes a program to remind you when you last cleaned heads, plus a simple utility to read a text file and find out what the contents are without having to write a program on the spot.

DOM #9—Music, Music, Music

Here is a great collection of programs from April through July, 1986. *Music Maker* and *Music Player* let you create and play your own Merry Melodies with alternate sets of DATA statements in BASIC. *Energy Plotter* not only plots energy consumption graphs, but contains techniques to "roll your own." In addition you will find a space game, graphics images and an assembly language subroutine to find maximum and minimum values in an integer array.

DOM #10—Editing Character Sets

A great Pascal program to download and modify or create new fonts, this editor makes child's-play out of designing new text characters to meet your specific needs. Special math signs, foreign alphabets, you can do them all. *Football Pool* is a BASIC program to print out a grid for that office pool. All you do is type in the teams, the scores, and the participants; it does the rest. What? 3-D Video? Yes, indeed, *Stereo Spiral* shows how, using simple Business Basic subroutines. For the more technically inclined, the assembly subroutine *Pixel Inverter* does just that. Also included is *Prompt Procedure*, a collection of Pascal and assembly demos to write to the screen, and a couple of programs in WPL (Word Processing Language) to be used with AppleWriter.

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Sandman

\$19.95

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a new multi-level arcade game by Mel Astrahan

- Use with joystick, keyboard or mouse
- Can be run as a Desktop Manager background module

The objective of SANDMAN is to score as many points as possible. Salvage all of the Apple /// parts discarded throughout the halls of Apple's labyrinthian research lab to receive points. WARNING! The lab is haunted by the ghosts of JOBs. . . if they catch you, you're done for!

Your only weapon against the JOBs is to find the WOZ who wanders about the lab peeking in on various projects. For a short time following a meeting of SANDMAN and WOZ the JOBs turn blue and may be exorcised if you can catch them.

"—Brilliant, colorful and fast moving, Sandman will provide hours of fun."

