

The Monthly Publication of NAUG: *The National AppleWorks Users Group*

Volume V, No. 3

Four Dollars

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Support for AppleWorks and ///EZ Pieces Users

Letters to NAUG

It is Tax Time

Dear Cathy,

I understand that there are spreadsheet templates that let you use AppleWorks to compute your federal income tax and fill out the required forms. Now that it is tax time, will NAUG review those products?

Jeanie Slaughenhoup
Magnolia, Massachusetts

[Ed: NAUG published a comprehensive review of three sets of AppleWorks tax templates in the February 1989 issue of the AppleWorks Forum. That article also includes a list of the tax forms completed by each package.]

The reviewer, Terry Higgins, an accountant from Hayward, CA, concluded by recommending 1040Works or KFS/Tax for users with 128K computers and 1040Works-X for users with more than 128K of RAM. The reviewer found that TaxMaster (now called TaxSmith) was accurate, but less convenient to use and more expensive than the other templates.

1040Works costs \$24.95; 1040Works-X costs \$27.95. Add \$3 for a 3.5-inch disk. Personal Financial Services, Box 1401, Dept. G, Melville, NY 11747; (800) 221-8939.

KFS/Tax costs \$26.95. Add \$3 for a 3.5-inch disk. Kronk Financial Services, 7172 Muirfield Lane, Eden Prairie, Minnesota 55346; (612) 937-0389.

TaxSmith.Quick (1040 A and B only) costs \$10. TaxSmith.Family (1040 A, B, D, D-1, 2119, 2441, 3903) costs \$20. TaxSmith.Full costs \$50. Island Computer Services, 3501 E. Yacht Drive, Long Beach, North Carolina 28465; (800) 826-7146.]

The **National AppleWorks Users Group (NAUG)** is an association that supports AppleWorks users. NAUG provides technical support and information about AppleWorks and enhancements to that program. Our primary means of communicating with members is through the monthly newsletter entitled the **AppleWorks Forum**.

Problems Patching AppleWorks 3.0

Dear NAUG:

I used the AppleWorks 3.0 Patch Disk to "de-bug" both my 5.25-inch and 3.5-inch copies of AppleWorks. The process went smoothly, and my 3.5-inch disks work properly. However, now I'm having difficulty using my patched 5.25-inch copy of AppleWorks. The program occasionally locks up and does not work properly. I repeated the patching process but still can't get the patched 5.25-inch copy of the program to work correctly. Do you know what is wrong?

Dr. Alex Huang
Mountain Top, Pennsylvania

[Ed: The current version of the AppleWorks 3.0 Patch Disk fixes nine bugs in AppleWorks 3.0. (See page 26 of last month's issue of the AppleWorks Forum for a description of those bugs.)]

The program on the disk installs some of its patches in a file called SEG.AW. Since the 3.5-inch disk version of AppleWorks 3.0 includes only a single copy of SEG.AW, the patch program has no problem correcting the bugs in that program file. However, if you use 5.25-inch disks, you have a copy of SEG.AW on the AppleWorks Startup Disk and on each AppleWorks Program Disk.

Version 1.0 of the AppleWorks 3.0 Patch Disk patches only the copy of SEG.AW on the Startup Disk. Thus, AppleWorks gets confused when it accesses the copy of SEG.AW that is on the other disks.

Versions 1.1 and later of the AppleWorks 3.0 Patch Disk correct this problem. If you use 5.25-inch disks, these versions ask you to insert each disk so it can patch every SEG.AW file.

As of early February, when this issue went to press, version 1.4 of this disk was current. Version 1.4 is compatible with JEM Software's DoubleData and fixes a problem introduced with version 1.2 of the disk. You can determine the version of your AppleWorks 3.0 Patch Disk by selecting "Version" at the Main Menu after you boot the disk.]

Help Installing UltraMacros 3.1

Dear Cathy,

Discussions with my fellow NAUG members suggest that there is some confusion about the process of updating from UltraMacros 3.0 to UltraMacros 3.1.

This is an important update. UltraMacros 3.0 has some troublesome bugs, including a problem that causes it to ignore the Open-Apple-Return key-strokes used in AppleWorks 3.0. In addition, version 3.1 is now the standard version of UltraMacros and most commercial task files such as Alpha Check, FlexiCal, and Mr. Invoice will not run under UltraMacros 3.0.

Unfortunately, you cannot simply install UltraMacros 3.1 on a copy of AppleWorks that contains UltraMacros 3.0. The installation process appears to work normally and gives you no indication that anything is wrong. However, if you check the version number by invoking Macro Options from the TimeOut Menu and then selecting "Version", you will find that UltraMacros 3.0 is still on your system. In addition, you will find that you can no longer change the status of the on-screen clock display. If the clock was off when you tried to install 3.1, you can no longer turn it on. Conversely, you cannot turn off the clock display once you try to install UltraMacros 3.1 on a disk containing UltraMacros 3.0.

In my conversations with Randy Brandt, he made it clear that you must start with a fresh copy of AppleWorks and then install UltraMacros 3.1.

Here are three suggestions to consider when you update to UltraMacros 3.1:

1. Use the Macro Compiler to convert your current macro set into a word processor document before you start the installation process. Otherwise you will have to re-create any macros you saved in the default set for UltraMacros 3.0.

After you install UltraMacros 3.1, you can use the Macro Compiler to re-compile the macros you saved from 3.0 and then use the Macro Options to make that your default set of macros.

2. The following technique lets you install UltraMacros 3.1 while making the fewest changes to your working copy of AppleWorks:
 - A. Delete the files ULTRA.SYSTEM, APLWORKS.SYS, TO.MACRO.OPT, TO.COMPILER, and TO.UTILITIES from your working AppleWorks disks.
 - B. Copy the file APLWORKS.SYSTEM from your *original* AppleWorks Startup Disk onto your *working* AppleWorks disk.
 - C. Boot your computer with UltraMacros 3.1 and follow the directions on the screen to re-install TimeOut and UltraMacros.
3. TimeOut Graph and SuperFonts might not work properly after you install UltraMacros 3.1. If that occurs, reinstall TimeOut using the installation program on either your Graph or SuperFonts disk. Then use the Utilities to check the configuration of Graph and SuperFonts.
4. Beagle recently released a new version of TO.UTILITIES. Catalog your TimeOut Applications Disk. If your TO.UTILITIES file is dated before October 17, 1989, you should update to the latest version to insure compatibility with all the TimeOut modules.

John Link
Kalamazoo, Michigan

AppleWorks Forum

Editor: Cathleen Merritt

Associate Editor: Warren Williams

Page Layout: Nanette Luoma

Publisher: The National AppleWorks Users Group

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The "AppleWorks Forum" (ISSN 0893-4118) is published monthly for \$27 per year by the National AppleWorks Users Group, 49068 Harvest Dr., Plymouth, MI 48170.

Second Class postage paid at Plymouth, MI, and additional mailing offices.
POSTMASTER: Send address changes to AppleWorks Forum, NAUG, Box 87453, Canton, MI 48187

UltraMacros and the No Slot Clock

Dear NAUG:

I believe the No Slot Clock is a useful accessory for Apple IIe owners who want to get time and date stamping of their files without using a slot in the computer. Unfortunately, the device does not meet the standards for clocks set by ProDOS, so you must patch ProDOS to recognize the clock.

Users of the No Slot Clock should be careful when configuring their new AppleWorks 3.0 disks with TimeOut UltraMacros. The patch which installs the clock driver in ProDOS must be done *after* you install UltraMacros. If you install the No Slot Clock patch first, your UltraMacros-enhanced copy of AppleWorks 3.0 will crash when you invoke a macro that calls for the current date or time.

Emery Roth II
Washington, Connecticut

[Ed: See the AppleWorks News article elsewhere in this issue for information about new AppleWorks 3.0-compatible software for the No Slot Clock.]

Quick Tip Doesn't Work

Dear Cathy,

I'd like to use the "Auto-save" feature suggested in the Quick Tip by Mark Munz and Randy Brandt in the January issue of the **AppleWorks Forum**, but I can't get it to work. Both Return and Apple-Return perform the same function on my system. What is going on?

A. William Neef
Grass Lake, Michigan

[Mark Munz replies: You are probably using UltraMacros 3.0 with your copy of AppleWorks. Unfortunately, a bug in version 3.0 of UltraMacros defeats most Open-Apple Return keystrokes. Thus, AppleWorks receives only the Return Key, not the Open-Apple Return. Upgrade to UltraMacros 3.1 through one of NAUG's Beagle Buddies; UltraMacros 3.1 fixes this problem.]

AppleWorks Screen Goes Blank

Dear NAUG,

My AppleWorks 3.0 screen goes blank after a few minutes unless I enter something at the keyboard. That is nice when I leave the computer unattended, but is distracting when I want to sit and study the screen.

Is there any way to turn this feature off? I find no mention of the screen blanking feature of AppleWorks in Claris' manuals.

Camillo A. Steiner
Recife, Brazil

[Ed: You are looking in the wrong manual, Mr. Steiner. Check the manual that came with TimeOut UltraMacros. While UltraMacros is known for its ability to memorize AppleWorks keystrokes, it adds other useful enhancements to AppleWorks.]

Your blank screen is caused by UltraMacros' screen preserver. UltraMacros automatically blanks the AppleWorks screen if you do not enter a keystroke for a specified length of time. That keeps the monitor's phosphor from darkening if you leave your display on for long periods of time.

Other features of UltraMacros include the following: If you have an Apple IIGS or a ProDOS-compatible clock in your Apple IIe, IIC, IIC Plus, or Laser 128, UltraMacros displays the time in the lower right-hand corner of the AppleWorks screen. UltraMacros also lets you use a mouse with AppleWorks and lets you control the blink rate of the AppleWorks cursor. UltraMacros also offers a "Key-Lock" feature that makes it easier for people who cannot press two keys simultaneously.

You activate and control these features by selecting Macro Options from the TimeOut Menu. Choice #4 on the Macro Options Menu lets you control the clock display. If you select "Other Activities" from the Macro Options Menu, you can change the cursor blink rate, activate or deactivate the mouse, activate or deactivate the key-lock and screen preserver features, and change the length of time the screen preserver waits before blanking the AppleWorks screen.]

Quick Tip

AppleWorks GS Recovers AppleWorks Data Files

by James Hirsch

Many AppleWorks data base file problems occur because the program, hardware, or operating system damages one or more of the report formats AppleWorks saves with your data. The data is intact, but is inaccessible to AppleWorks because of the damaged report format.

AppleWorks GS can import AppleWorks files, and ignores the report formats it imports. Therefore, you can use AppleWorks GS to recover AppleWorks data base files with damaged report formats. In addition, AppleWorks GS can export text files you can read with AppleWorks 3.0. As a result, you can use AppleWorks GS and AppleWorks 3.0 to recover damaged files from any version of AppleWorks.

Here is how:

1. Boot up AppleWorks GS.
2. Create a new AppleWorks GS data base from the damaged AppleWorks file.
3. Use the "Save as..." option in AppleWorks GS to save the data base as an ASCII file on your disk.
4. Boot up AppleWorks 3.0 and indicate you want to create a new data base from a text (ASCII) file. Indicate you want tabs between categories.
5. Issue an Apple-S command to save the file in AppleWorks format. Since you did not use the new features of AppleWorks 3.0, you can now read this file into any version of AppleWorks.

[Ed: Use AppleWorks GS version 1.1 to read files created by any version of AppleWorks. AppleWorks GS versions 1.0 and 1.0v2 will only read data files created with AppleWorks versions 2.1 and earlier.]

[James Hirsch is a Technology Consultant for the Anoka-Hennepan School District in Minnesota.]

NAUG News

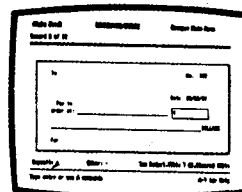
Special AppleWorks 3.0 Upgrade Offer

Claris Corporation recently announced a special AppleWorks 3.0 upgrade offer for NAUG members. From March 1 through May 31, 1990, NAUG members who cannot locate their original AppleWorks disks can upgrade to AppleWorks 3.0 for \$99, plus \$3 s/h. The terms and conditions of this offer follow:

1. Purchase is by credit card only. Claris cannot accept checks, money orders, purchase orders, or other forms of payment.
2. You must call (800) 628-2100, request extension 61, and identify yourself as a NAUG member. You will need your NAUG member number; see the address label on this issue of the *AppleWorks Forum*.
3. Orders can be shipped only to addresses within the United States. Members from other countries should contact their regional Claris distributor for information about current upgrade policies.

This offer is for members who cannot locate their original AppleWorks disks. Members who have their original disks can upgrade to AppleWorks 3.0 for \$79, plus \$3 s/h. If you have your original disks, contact Claris at (800) 544-8554 and request an AppleWorks upgrade packet.

CHECK IT OUT



A CURE FOR BILL PAYING HEADACHES

...Inside AppleWorks a check like interface permits entry of data plus financial and tax reporting. It prints any type personal, business or Quicken checks. Alpha Check loads through its own menu or Beagle Bros. timeOut system. (Read about us in the May inCider pg. 48).

Runs inside AppleWorks® 2.0, 2.1, 3.0

Alpha Check Only \$39.95
Plus \$3.50 Shipping and handling

ACTAsoft

(818) 996-6731 or (818) 786-9760
19700 Wells Dr., Woodland Hills, CA 91364

How to Prepare Your First Spreadsheet—Part 1

by Warren Williams and Cathleen Merritt

This is the first of six articles designed to help novices use the AppleWorks spreadsheet module. This article describes the different applications for spreadsheets and the purpose of spreadsheet templates.

While there are exceptions to every rule, an informal survey conducted at NAUG's *AppleWorks: Beyond the Basics* seminars suggests that the spreadsheet is the AppleWorks module novices approach last and understand least. While many novices believe they have no need for spreadsheets, most report that the module is helpful, once they know how to use it.

This series of articles will help novices develop and use AppleWorks spreadsheets. This month, we will present examples of different spreadsheet applications. Future articles will describe how to develop your own spreadsheets.

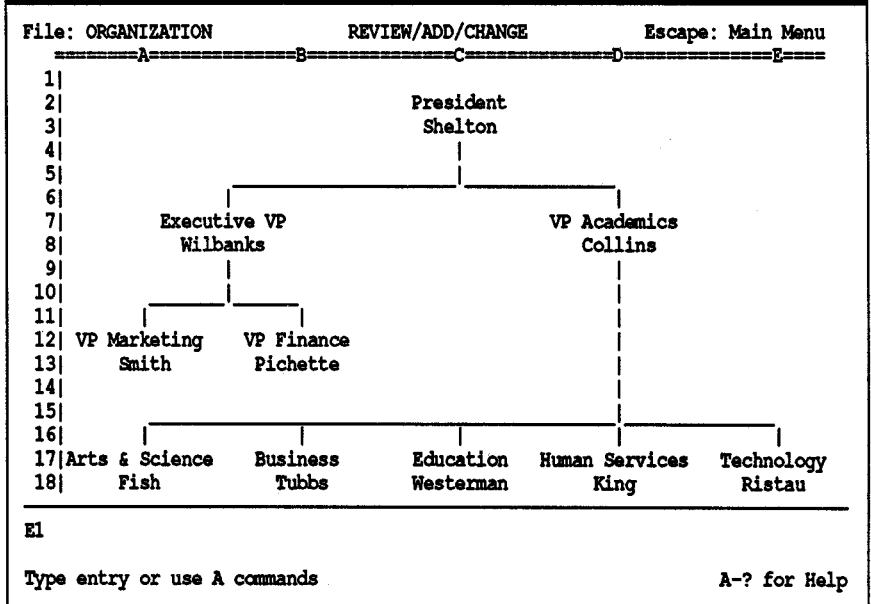
When to Use Spreadsheets

While there are an almost infinite number of applications for spreadsheets, we classify those applications into four types: charts, tables, lists, and "What if?" spreadsheets.

Charts

The spreadsheet module provides a pre-formatted matrix of cells that makes it easy to create charts like the organizational chart in *Figure 1*. You can use the default format for each cell or customize that format for your needs. The spreadsheet's ability to accept additional rows and columns makes the module a more flexible tool than the word processor for this application.

Figure 1: Organizational Chart Prepared with the Spreadsheet Module



When you are done, you can print your charts as spreadsheets or use the AppleWorks clipboard to move the charts into the word processor module.

Tables

"Tables" are formatted presentations of text and numbers, like the example in *Figure 2*. Tables require few or no calculations, and the final destination for a table is its inclusion in a word processor document. *Figure 2A* shows a table created in the spreadsheet module; *Figure 2B* depicts the same table incorporated into a word processor document. Note that while there is a mix of text and numbers in the table, it contains almost no calculations. It is

Figure 2: Sample Tables

2A: A Spreadsheet "Table"

File: TEMPERATURES REVIEW/ADD/CHANGE Escape: Main Menu

=====A=====B=====C=====D=====E=====F=====G=====H=====I=====J=====					
1	Average High and Low Temperatures				
2					
3					
4	State	City	Jan.	July	
5			Max.	Min.	Max.
6	Alabama	Mobile	61	41	91
7	Alaska	Juneau	27	16	64
8	Arizona	Phoenix	65	39	105
9	Arkansas	Little Rock	50	30	93
10	California	Los Angeles	67	48	84
11	California	San Francisco	55	42	71
12	Colorado	Denver	43	16	88
13	Connecticut	Hartford	34	17	85
14	Delaware	Wilmington	39	23	86
15	Florida	Jacksonville	65	42	91
16	Florida	Miami	75	59	89
17	Georgia	Atlanta	51	33	88
18	Hawaii	Honolulu	80	65	87

J1

Type entry or use A commands

A-? for Help

2B: Table Placed in Word Processor

Ideal Climates
by

Joyce James

It is difficult to determine the cities with ideal climates by studying summative temperature data in an almanac. If you examine the data that I abstracted from the table of average high and low temperatures, there appears to be little difference in the weather between cities such as Miami, Florida and Los Angeles, California.

Average High and Low Temperatures

State	City	Jan.		July	
		Max.	Min.	Max.	Min.
Alabama	Mobile	61	41	91	73
Alaska	Juneau	27	16	64	47
Arizona	Phoenix	65	39	105	80
Arkansas	Little Rock	50	30	93	71
California	Los Angeles	67	48	84	64
California	San Francisco	55	42	71	53
Colorado	Denver	43	16	88	59
Connecticut	Hartford	34	17	85	62
Delaware	Wilmington	39	23	86	66
Florida	Jacksonville	65	42	91	72
Florida	Miami	75	59	89	76
Georgia	Atlanta	51	33	88	69
Hawaii	Honolulu	80	65	87	73
Idaho	Boise	37	23	91	59

When you consider the topic, you realize that the data in this table does not include such important factors as relative humidity, percentage of hours of sunshine, and wind conditions.

obvious that preparing the table is more of a typing and formatting operation than a numerical problem.

The three factors that differentiate tables from the more popular calculating spreadsheets are (1) the heavy emphasis on formatting in the table, (2) the de-emphasis on calculations, and (3) the intent to include the product in a word processor document.

Since tables are ultimately designed for inclusion in word processor documents, you might ask why you would use the spreadsheet module instead of the word processor to create the table.

If you use AppleWorks 3.0, you will not need the spreadsheet module to prepare your tables. The AppleWorks 3.0 word processor includes enhanced tabbing features that let you line up numbers and center text over columns.

Unfortunately, the word processor module in earlier versions of AppleWorks has limited tabbing facilities that make it difficult to prepare a table. If you use an early version of AppleWorks, you can overcome these limitations by preparing your tables in the spreadsheet module and transferring the tables into word processor documents.

While the chart and table-generating capabilities of the AppleWorks spreadsheet are useful, they are not the primary application for this module; neither of these applications uses the program's calculating ability. Calculations are the domain of "list" and "What if?" models.

Lists

Figures 3 and 4 depict examples of list applications of the spreadsheet module. Figure 3 presents financial data in a departmental budget. Figure 4 con-

Novice Notes...

tains a gradebook that lists student names and scores on tests and assignments.

Maintaining lists such as budgets and gradebooks is one of the most frequent applications of any spreadsheet program. In this series of articles you will learn the skills necessary to develop and maintain these models.

"What If?"

Figure 5 contains an example of a "What if?" spreadsheet; the most powerful and complex of the spreadsheet applications. The model in Figure 5 calculates the monthly cost of a loan and allocates the correct proportion of each payment to the interest and principal on the loan. You enter values in the "Amount Borrowed", "Annual Interest Rate", and "Number of Payments" cells. The spreadsheet assumes you will make 12 payments each year and automatically calculates the amount you have to pay each month, how much of each payment is interest, and how much is allocated to paying off the balance of the loan.

"What if?" spreadsheets encourage you to experiment with different scenarios; you can enter different figures and see the consequence of borrowing more money or getting the loan at a different interest rate.

Unfortunately, "What if?" spreadsheets are the most difficult models to develop because they require competence with both spreadsheet design and the calculations underlying complex numerical models. (For example, the spreadsheet in Figure 5 contains a complex formula in cell D12 that calculates the amount you must pay each month.) As a result, developing "What if" spreadsheets is not an activity for novices and will not be our focus in these articles. (However, we will discuss the development of these models in a future series of articles on spreadsheet design.)

Templates

While "What if?" spreadsheets can be difficult to develop, the final models are generally easy to use. Once you have the model, all you need do is enter

Figure 3: Example of a Departmental Budget

A			B		C	
1	Widgets - Projected Budget					
2						
3						
4			Credits		Debits	
5	Income					
6						
7	Sales of products		\$1,568,900			
8	Fees for services		574,000			
9	Misc. additional income		135,000			
10						
11	Total income		2,277,900			
12						
13	Expenses					
14						
15	Salaries				\$1,200,000	
16	Insurance				48,000	
17	Retirement				144,000	
18	Misc. benefits				120,000	
19	Temporary help				15,000	
20	Materials				22,000	
21	Transportation/travel				7,000	
22	Telephone				3,000	
23	Printing				8,000	
24	Postage				1,000	
25	Office supplies				3,000	
26	Consultants				10,000	
27	Data processing				3,000	
28	Overhead				100,000	
29	Miscellaneous				100,000	
30						
31	Total expenses				1,784,000	
32						
33	Summary:					
34						
35	Total income				\$2,277,900	
36	Total expenses				1,784,000	
37						
38	Profit/(loss)				493,900	
39						
40	Profit as % of revenue				21.7%	

numbers into the appropriate cells, tell the spreadsheet to do the calculations, and print the results. Since anyone who develops a spreadsheet model can save the file on disk and sell or give away the model, other users can load the file onto their AppleWorks desktops, enter different numbers into the cells, and get results for their own application.

As you might imagine, this has become an important way to enhance user productivity with AppleWorks. Once you know the basics necessary to use the spreadsheet module, you can acquire these models, called "templates", and produce meaningful reports without understanding the underlying formulas and calculations.

In fact, there are hundreds of spreadsheet templates available from different sources. Many are put in the public domain by altruistic authors and are available through local users groups and through

Novice Notes...

Figure 4: Example of a Gradebook Application

A B C D E F G H I J K L M N O P Q R S T											
1	Teacher: Jones					Homework:		50%			
2	Semester: Winter, 1990					Tests:		30%			
3	Course: Second Hour					Final:		20%			
4											
5		Homework		Tests			Home	Test	Overall		
6	Name	1	2	1	2	Final	Avg	Avg	Avg	Grade	
7											
8	Adams, Mary	80	85	85	90	90	83	88	85.9	B	
9	Baker, Joe	75	80	80	85	85	78	83	80.9	B	
10	Collins, Jack	95	90	95	90	90	93	93	92.4	A	
11	Dooley, Sue	70	75	70	65	70	73	68	70.9	C	
12	Evans, Anthony	65	65	65	70	65	65	68	65.9	D	
13	Fisk, Troy	85	80	80	85	90	83	83	84.4	B	
14	Golden, Nancy	85	90	75	70	80	88	73	81.9	B	
15	Holden, Cathy	95	90	90	90	95	93	90	92.5	A	
16	Isaacs, Jacob	90	90	85	90	95	90	88	90.4	A	
17	Jernigan, Jay	85	75	80	70	75	80	75	77.5	C	
18	Klebb, Michael	80	75	80	80	80	78	80	79.0	C	
19	Loren, Sophia	80	85	85	75	80	83	80	81.5	B	
20	Morgan, Stanley	90	95	90	90	85	93	90	90.5	A	
21	Napier, Cindy	75	70	65	60	60	73	63	67.4	D	
22	Olofant, Richard	85	80	75	75	80	83	75	80.0	B	
23	Price, John	90	85	85	80	75	88	83	83.9	B	
24	Quinn, Stacey	100	100	95	95	90	100	95	96.5	A	
25	Richards, Allen	85	80	90	95	90	83	93	87.4	B	
26	Strick, Susan	90	90	85	75	90	90	80	87.0	B	
27	Tripp, Ellen	75	60	55	65	70	68	60	66.0	D	
28											
29	Averages =	83.8	82.0	80.5	79.8	81.8	83.3	80.4	82.1		

the Public Domain Library of national groups such as NAUG. Others are comprehensive, professionally developed commercial products sold by developers or dealers. Probably the best example of such commercial templates is 1040Works, a set of spreadsheet templates that compute your complete federal income tax.

Novices only need to know about the availability of these templates and the basics of spreadsheet use to take full advantage of their features; you do not need to know how to develop spreadsheet models nor any of the tricks and nuances of spreadsheet development and design to use a template.

Summary

This is the first in a series of articles designed to help novices use AppleWorks' spreadsheet module. By the end of this series you will be able to prepare list-type spreadsheets and use commercially developed or public domain spreadsheet templates.

This article describes and gives examples of four different types of spreadsheet applications. In addition, the article introduces the concept of "templates" and describes some of the different sources of public domain and commercial template products. Next month you will start to develop your first spreadsheet.

[Dr. Warren Williams is on the faculty at Eastern Michigan University where he teaches courses in the Educational Technology program. He is the President of NAUG and is a frequent contributor to the AppleWorks Forum.]

Cathleen Merritt is the Director of NAUG and is the Editor of the AppleWorks Forum.]

Figure 5: Example of a "What If?" Spreadsheet

A
B
C
D
E

3	Loan Amortization Program				
4	for loans from one month to 10 years in duration,				
5	based on 12 payments per year.				
6					
7	*****				
8	* Amount Borrowed.....		\$1,000.00	*<---	
9	* Annual Interest Rate.....		12%*<---		
10	* Total Number of Payments.....		12	*<---	
11	* Number of Payments Per Year...		12	*	
12	* Payment Amount.....		\$88.85	*	
13	*****				
14					
15	No. of	Payment	Interest	Principal	Balance
16	Pymts	Amount	Paid	Paid	After
17	-----				
18	1	\$88.85	\$10.00	\$78.85	\$921.15
19	2	\$88.85	\$9.21	\$79.64	\$841.51
20	3	\$88.85	\$8.42	\$80.43	\$761.08
21	4	\$88.85	\$7.61	\$81.24	\$679.84
22	5	\$88.85	\$6.80	\$82.05	\$597.79
23	6	\$88.85	\$5.98	\$82.87	\$514.92
24	7	\$88.85	\$5.15	\$83.70	\$431.22
25	8	\$88.85	\$4.31	\$84.54	\$346.68
26	9	\$88.85	\$3.47	\$85.38	\$261.30
27	10	\$88.85	\$2.61	\$86.24	\$175.07
28	11	\$88.85	\$1.75	\$87.10	\$87.97
29	12	\$88.85	\$0.88	\$87.97	\$0.00
30	13	\$0.00	\$0.00	\$0.00	\$0.00

Patches that Customize AppleWorks 3.0—Part 2

by John Link

This is the second in a series of three articles that describe how to install patches that enhance AppleWorks 3.0. The author assumes you developed a bootable BASIC disk following the procedures described in the first article in this series.

Last month I described how to make 13 modifications to AppleWorks 3.0 that let you customize the program for your own taste and applications. This month I will describe how to make eight additional patches to the program.

You will need a working copy of AppleWorks 3.0, a blank disk, a utility program like Apple Computer's System Utilities, TimeOut FileMaster, or Copy II+, and a disk I will call the BASIC disk with the files PRODOS and BASIC.SYSTEM. I described how to prepare that disk in the first article in this series.

Make certain you install these patches on a backup copy of AppleWorks in case something goes wrong. You can install any combination of patches in any sequence; there are no conflicts between any of the patches. Type carefully and proofread your work before you press the Return Key.

How to Start

You start all patches the same way:

1. Use the BASIC disk to boot the computer. That will leave you in BASIC.
2. Remove the BASIC disk and insert the appropriate AppleWorks disk as specified for each patch.

Once you are in BASIC, you can insert one or all the following patches.

Remember that TimeOut UltraMacros changes the name of APLWORKS.SYSTEM to APLWORKS.SYS. If you use TimeOut UltraMacros, substitute APLWORKS.SYS for each of our references to APLWORKS.SYSTEM.

Patch 1: No Apple-H Form Feed

If you issue an Apple-H command with earlier versions of AppleWorks, the printer produces a copy of the screen and stops. AppleWorks 3.0 sends a form feed command to the printer after printing the screen image.

Many AppleWorks users prefer the way the Apple-H command worked prior to version 3.0. Some users like to print two screens on a single page. Others have difficulty with their printers when AppleWorks issues a form feed command. This patch substitutes a carriage return for the form feed character used in screen dumps.

Follow these steps to install this patch:

1. Boot the computer with the BASIC disk as described above.
2. Insert the AppleWorks disk with the file APLWORKS.SYSTEM in Drive 1.
3. Type the following:

```
POKE 768,13
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L1,B$1AD
```

Enter the following to cancel this patch and return AppleWorks to its original condition:

```
POKE 768,12
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L1,B$1AD
```

Patch 2: Change the Vertical Line Character

Most Apple II computers offer two ways to generate the vertical line character ("I") on the screen. One method is to use the ASCII "pipe" character. While this approach works well on standard USA display

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screens, many foreign language video ROMs substitute the umlaut for the pipe. If you run AppleWorks on these computers, the vertical lines in the program's file card menus become unattractive.

Fortunately, *all* Apple IIGs, IIC, IIC Plus, and enhanced Apple IIe computers support mousetext and can generate a similar vertical line by using the equivalent mousetext character. *[Ed: The mouse-text character is the same height as the pipe, but is displaced to the right side of the character box. There is a second vertical mousetext equivalent to the pipe, but it is displaced to the left of the character box, and is not as attractive.]* The mousetext vertical line character is the same on all foreign language displays, so this patch presents more normal looking file cards on foreign language systems.

Follow these steps to install this patch:

1. Insert the AppleWorks disk with the file APLWORKS.SYSTEM in Drive 1.

2. Type the following:

```
POKE 768,154
BSAVE APLWORKS.SYSTEM,TSYS,A$300,L1,B$EF
```

Enter the following to cancel this patch and return AppleWorks to its original condition:

```
POKE 768,124
BSAVE APLWORKS.SYSTEM,TSYS,A$300,L1,B$EF
```

Patch 3: Cancel IIGs Routines

During bootup, AppleWorks calls a routine in the monitor which checks if the computer is an Apple IIGs. When it runs on a IIGs, AppleWorks automatically loads itself into the memory in that computer. If AppleWorks finds that it is not on a IIGs, the program checks for the presence of either a bank switched or slinky type memory expansion card and invokes the proper segment to load onto that card.

This patch deceives AppleWorks into thinking it is running on an Apple IIe instead of on a IIGs. Your patched version of AppleWorks will recognize any Apple IIe-compatible slinky memory expansion card (such as an Apple Memory Expansion card or an Applied Engineering RamFactor) installed in the IIGs and will work as if the card was plugged into the IIe. That is, AppleWorks will load itself

onto the memory expansion card, and use the remaining memory in the card and 128K of the IIGs memory for AppleWorks desktop. Your patched version of AppleWorks will ignore any remaining IIGs memory.

But why would you want to trick AppleWorks into thinking it is running on a IIe? You lose access to the extra memory in your computer, and certain AppleWorks functions run slower in IIe-mode.

First, this patch lets you store AppleWorks permanently on a battery backed-up memory card such as a RamFactor supported by an Applied Engineering RamCharger. That dramatically reduces the time necessary to boot AppleWorks.

Second, if you shift between IIGs and IIe computers, you can apply this patch and test how AppleWorks templates and enhancements will perform on a IIe. *[Ed: This is similar to a patch the AppleWorks 3.0 programmers installed in their copy of AppleWorks as they developed the program on their IIGs systems.]*

Follow these steps to install this patch:

1. Insert the AppleWorks disk with the file APLWORKS.SYSTEM in Drive 1.

2. Type the following:

```
POKE 768,44
BSAVE APLWORKS.SYSTEM,TSYS,A$300,L1,B$1772
```

Enter the following to cancel this patch and return AppleWorks to its original condition:

```
POKE 768,32
BSAVE APLWORKS.SYSTEM,TSYS,A$300,L1,B$1772
```

Patch 4: Change Error Beep

This patch changes the AppleWorks error buzz to a short, high-pitched beep.

Follow these steps to install this patch:

1. Insert the AppleWorks disk with the file APLWORKS.SYSTEM in Drive 1.

2. Type the following:

```
POKE 768,180
BSAVE APLWORKS.SYSTEM,TSYS,A$300,L1,B$6C6
POKE 768,20
BSAVE APLWORKS.SYSTEM,TSYS,A$300,L1,B$6C8
```

Figure 1: MouseText Character Chart

Hi:	192	193	194	195	196	197	198
Low:	64	65	66	67	68	69	70
Hi:	199	200	201	202	203	204	205
Low:	71	72	73	74	75	76	77
Hi:	206	207	208	209	210	211	212
Low:	78	79	80	81	82	83	84
Hi:	213	214	215	216	217	218	219
Low:	85	86	87	88	89	90	91
Hi:	220	221	222	223			
Low:	92	93	94	95			

Enter the following to cancel this patch and return AppleWorks to its original condition:

```
POKE 768,149
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L1,B$6C6
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L1,B$6C8
```

Patch 5: Change the Insert Cursor

Although the normal insert cursor for AppleWorks looks like a blinking underline, the programming behind that character is more complex than it appears. If you put the inserting cursor on any character and watch its action, you will see that AppleWorks actually alternates the underline character with that character.

This patch lets you replace the underline character with any mousetext character. Note, however, that your patched version of AppleWorks will only work correctly on Apple II systems that support mousetext; it will not work correctly on older, unenhanced Apple IIe computers.

Follow these steps to install this patch:

1. Figure 1 contains a list of the different mouse-text characters. Select the character you want to use as the inserting cursor and remember the "low ASCII value" associated with that character. You will enter that value in step #3 below.

2. Insert the AppleWorks disk with the file APLWORKS.SYSTEM in Drive 1.

3. Type the following; replace the "x" with the value determined in step 1:

```
POKE 768,x
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L1,B$C44
```

Enter the following to cancel this patch and return AppleWorks to its original condition:

```
POKE 768,223
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L1,B$C44
```

Patch 6: Change the Overstrike Cursor

This patch changes the overstrike cursor from a flashing "space" to any mousetext character you specify.

Before installing this patch, get an AppleWorks document on the screen and put the overstrike cursor on any letter. Study the display and you will see that the overstrike cursor flashes between the regular character and the same character in inverse.

AppleWorks tests the underlying character for a number of conditions, including whether that character is a space or a carriage return blot. In most instances, AppleWorks just changes one of the bits in the character so it becomes the inverse of the character on the screen. That lets you see the character you are about to overstrike.

This patch makes the overstrike cursor function like the insert cursor. That is, after AppleWorks loads the accumulator with the desired character, the jump instruction ("jmp"; in the third, fourth, and fifth bytes) jumps to the point where the character is sent to the console driver. This skips over the code AppleWorks normally uses to test and invert the character.

Proceed as follows:

1. Select the character you want to use from the chart in Figure 1 and remember the low ASCII value associated with the character you choose.
2. Insert the AppleWorks disk with the file APLWORKS.SYSTEM in Drive 1.
3. Type the following; replace the "x" with the value determined in step 1:

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```
POKE 768,169
POKE 769,x
POKE 770,76
POKE 771,119
POKE 772,28
BSAVE APLWORKS.SYSTEM,TSYS,A$300,L5,B$C61
```

Enter the following to cancel this patch and return AppleWorks to its original condition:

```
POKE 768,173
POKE 769,245
POKE 770,16
POKE 771,41
POKE 772,127
BSAVE APLWORKS.SYSTEM,TSYS,A$300,L5,B$C61
```

Patch 7: Change the Carriage Return Blot

This patch lets you substitute any mousetext character for the standard carriage return blot that shows on the screen when you issue an Apple-Z command. The bent arrow is a popular choice for a replacement character.

If you install this patch, you should also install patch six. Otherwise, when you put the overstrike cursor on the character, the carriage return character will alternate with the inverse capital letter which corresponds to the mousetext character. Once you install this patch, your copy of AppleWorks will not run correctly on older, unenhanced Apple IIe computers.

Proceed as follows:

1. Select the mousetext character from *Figure 1* that you want to use as the carriage return character. Remember the high ASCII value associated with that character.
2. Insert the AppleWorks disk with the file APLWORKS.SYSTEM in Drive 1.
3. Type the following; replace the "x" with the value determined in step 1:

```
POKE 768,x
BSAVE SEG.AW,TBIN,A$300,L1,B$9389
```

Enter the following to cancel this patch and return AppleWorks to its original condition:

```
POKE 768,127
BSAVE SEG.AW,TBIN,A$300,L1,B$9389
```

Patch 8: Change Location of the Dictionaries

AppleWorks normally looks for its spelling dictionaries on the device you used to launch the program. For example, if you launch AppleWorks from a 5.25-inch disk with the volume name /APPLEWORKS, the program insists that the dictionaries be on a disk with the same volume name. This limitation makes it impossible to launch AppleWorks 3.0 from a disk and store the spelling dictionaries on a RAM disk in the computer or on a floppy disk in Drive 2. This patch lets you put the spelling dictionaries in any location you specify and modifies AppleWorks so it can find those dictionaries.

This patch is more complex than others in this series, so I developed "Twister" which installs this patch. Twister lets you specify any prefix (up to 18 characters long) for your dictionaries. *[Ed: Twister is a self-contained ProDos-8 system file which automates the process of installing patch eight. The Twister Disk is available from the NAUG Public Domain Library for \$4 (5.25-inch disk) or \$6 (3.5-inch disk), plus \$2 s/h. Note that Randy Brandt's SpellCopy and Quality Computers' RamUp programs patch AppleWorks and also copy the spelling dictionaries onto a RAM disk.]*

When you start AppleWorks, the program stores the prefix from which it was launched in a special buffer. When you issue an Apple-V command to check the spelling of a word processor document, AppleWorks finds its dictionaries by using the prefix in this buffer. Fortunately, there is another buffer located at memory location \$A6BA that AppleWorks uses if the value stored at location \$0F06 is greater than zero.

There are four parts to this patch. Part One stores a value greater than zero at \$0F06 so AppleWorks knows that you do not want to use the launching prefix for the dictionaries. Part Two transfers the new prefix for the dictionaries into the buffer at \$A6BA. Part Three contains the new prefix. Part Four activates the code that transfers the new prefix into the buffer at \$A6BA.

The first and fourth parts of this patch do not change regardless of where you move the dictionaries. However, the second and third parts of this patch depend on the new location and the length of

Dictionary Locations: An Advanced Discussion

The critical byte for patch eight is located at file byte \$1B2 and is relocated to memory location \$11B2 when you launch AppleWorks. The normal code looks like this after APLWORKS.SYSTEM is relocated during the launch:

```
11B2:00 brk ; (normal code)
```

If the value in \$11B2 is zero, AppleWorks looks for its dictionaries by using the prefix you used to launch the program. However, AppleWorks does not look at location \$11B2 to decide this issue. Instead it looks at location \$0F06 each time you issue an Apple-V command. If it finds a zero in \$0F06, it uses its launch directory as the location of the dictionaries. If it finds anything other than a zero, it uses the buffer at \$A6BA to find the dictionaries.

Therefore, the content of location \$11B2 must be moved to location \$0F06. This is accomplished by the following code, found at file byte \$148B (but relocated to and executed from memory location \$248B):

```
248B:AD B2 11 lda $11B2 ; (no need to patch this)
248E:8D 06 0F sta $0F06
```

As the launch progresses to memory location \$3148, AppleWorks checks \$11B2. If it finds a value greater than 127 (\$7F), AppleWorks transfers control to a jump vector at memory location \$11B3. Thus, the byte which starts at location \$11B2 must be greater than 127. In order to make the patch work correctly, the zero must be changed to an \$80, at file byte \$1B2, and found in memory at \$11B2; like this:

```
11B2:80 dfb $80
```

The code responsible for checking the value at memory location \$11B2 starts at file byte \$2148, which is executed from memory location \$3148:

```
3148:AD B2 11 lda $11B2 (no need to patch this)
314B:10 03 bpl $3150 ;avoid dictionary vector
                        if less than 128
314D:20 B3 11 jsr $11B3 ;the dictionary vector
                        location
3150: ...continues
```

There are 33 unused bytes in APLWORKS.SYSTEM, beginning at file byte \$2127, which resides at memory location \$3127 once AppleWorks executes its launch. (Ultimately, these bytes are replaced with the SANE nu-

Figure 3: Code for "Twister"

```
1 * twister
2 * (c) 1990 by John Link
3
4 org $3127 ;address after AW loads
5
6 ldy #6 ;6=number of bytes to move
7 sty $a6ba ;buffer location
8 :loop lda Path-1,y ;get one byte
9 sta $a6ba,y ;add it to buffer
10 dey ;decrease counter and...
11 bne :loop ;get another if not done
12 rts ;return control to caller
13 Path asc "/ram5/"
13A: B5 AF
13C: 00 00 00 00 14 ds 12 ;room for 12 more bytes
140: 00 00 00 00 00 00 00 00
```

"Path" can be any length up to 18 characters, including a leading and trailing slash. I use high ASCII, but I believe low ASCII would work just as well. This patch assumes you are using "/ram5/" as the pathname to the new location.

merics package.) However, if the value at \$11B2 is greater than \$7F and if the dictionary vector is directed towards them, as described below, these bytes can be used before they are replaced. There is room for 15 bytes of code to transfer the new dictionary location to \$A6BA, and 18 bytes for the new prefix itself.

You must first patch the dictionary vector at \$11B3 to execute the 15 bytes which move the new prefix into place. In APLWORKS.SYSTEM, these bytes are located at file byte \$1B3, which contains 4C 00 00 in an unpatched copy of AppleWorks. The patch must change these bytes to 4C 27 21 which results in memory location \$11B3 looking like this:

```
11B3:4C 27 31 jmp $3127 ; (patched code)
```

Figure 3 contains a portion of the code for Twister, a routine I wrote to move the new prefix (as assembled to run at memory location \$3127). It begins at file byte \$2127 in APLWORKS.SYSTEM.

You can use the last 12 bytes in Figure 3 to increase the length of the new prefix, but the value of the byte at memory location \$3128 must be adjusted to reflect the new length. Likewise, if you decrease the length of the prefix in Path, you must decrease the value of the byte at \$3128 (or file byte \$2128). Your final prefix should be installed beginning at file byte \$2136 in APLWORKS.SYSTEM.

The complete Twister program appears as a system file on the Twister Disk available from NAUG. — John Link

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the prefix to the dictionaries. I will describe how to patch AppleWorks to use /ram/, /mram/, /ram1/, /ram2/, /ram3/, /ram4/, /ram5/, /ram6/, or /ram7/ as the location for the dictionaries. However, you can use any prefix you wish, as long as it is terminated at both ends by a slash and is no longer than 18 characters.

After you install this patch, AppleWorks will spell check a document only if it finds the dictionaries in the new location. Therefore, you must use Spell-Copy, RamUp, or some other utility program to copy the dictionaries to the new location before you launch AppleWorks.

Follow these steps to install this four-part patch:

Part One: This patch tells AppleWorks not to use the launch directory.

```
POKE 768,128
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L1,B$1B2
```

Part Two: This segment patches AppleWorks so it transfers the new prefix to the buffer at \$A6BA.

The contents of this patch depend on the length of the new prefix. Where the patch instructions say "length", enter the number "5" if you want AppleWorks to use "/ram/" as the location. In all other instances, enter "6".

```
POKE 768,160
POKE 769,length
POKE 770,140
POKE 771,186
POKE 772,166
POKE 773,185
POKE 774,53
POKE 775,49
POKE 776,153
POKE 777,186
POKE 778,166
POKE 779,136
POKE 780,208
POKE 781,247
POKE 782,96
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L15,B$2127
```

Part Three: This patch enters the new prefix to the dictionaries. The instructions depend on the characters that constitute the prefix to the new location. You must coordinate the "length" used in part three with the choice you make here.

For "/ram/" (5 characters):

```
POKE 768,175
POKE 769,242
POKE 770,225
POKE 771,237
POKE 772,175
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L5,B$2136
```

For "/mram/" (6 characters):

```
POKE 768,175
POKE 769,237
POKE 770,242
POKE 771,225
POKE 772,237
POKE 773,175
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L6,B$2136
```

For "/ram1/", "/ram2/", and so forth (6 characters): Substitute one of the following values where the patch says "digit": /ram1/=177; /ram2/=178; /ram3/=179; /ram4/=180; /ram5/=181; /ram6/=182; /ram7/=183.

```
POKE 768,175
POKE 769,242
POKE 770,225
POKE 771,237
POKE 772,digit
POKE 773,175
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L6,B$2136
```

Part Four: This patch activates the transfer of the new prefix to the buffer.

```
POKE 768,39
POKE 769,49
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L2,B$1B4
```

Restoring AppleWorks

Although the dictionary pathname change patch is complex, it is relatively easy to restore AppleWorks to its normal condition. All you do is restore the byte that tells AppleWorks to look for its dictionaries in the launch directory. Once you restore that byte, the other patched bytes remain in APLWORKS.SYSTEM, but are ignored by AppleWorks.

Enter the following to restore AppleWorks to its normal functioning:

```
POKE 768,0
BSAVE APLWORKS.SYSTEM,TSYS,A$3000,L1,B$1B2
```

[John Link is a Professor of Art at Western Michigan University. He is the developer of SuperPatch and is an AppleWorks consultant.]

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Bulletin Board Update

Free Command Summary

by Tim Harrison

NAUG's bulletin board, the Electronic Forum, has now received more than 32,000 calls from members sharing ideas about AppleWorks, seeking answers to their AppleWorks questions, and downloading some of the hundreds of templates, utility programs, and AppleWorks enhancements available on the board.

BBS Hardware Problems

If you called the board since late December, you know that we are experiencing problems with our equipment that forced us to revert to a single user system. For a while, our telephone continued to forward calls to the second computer, which was not operating, so callers got a continuous ringing and no answer. The telephone problem is now corrected, and the board remains active despite our temporary return to a single user system. We appreciate your patience while we install a more reliable multi-user system.

Free Command Summary

NAUG members can get a free, 16-page summary of the commands that work on the Electronic Forum. Send a self-address, stamped, #10 envelope to: BBS Command Summary, NAUG, Box 87453, Canton, Michigan 48187.

Shrink-It

NAUG compresses all files available for downloading on the board, thus saving disk space and reducing transmission time. You need "Shrink-It" to un-compress those files. (See the Public Domain Update and Bulletin Board Update articles in the October 1989 issue of the *AppleWorks Forum* for more information about Shrink-It.)

Users comfortable with telecommunications can download Shrink-It from Library 3 on the board and un-compact the file from its Binary II format. Others can order Shrink-It on a bootable disk from NAUG's Public Domain Library (\$4 on a 5.25-inch disk, \$6 on a 3.5-inch disk, plus \$2 s/h per order).

Hard Drives & Automobile Tires

The Quality and Reliability of a hard drive system comes down to the manufacturer of the drive and the technology used in the drive. Unlike RAM chips where many manufacturers make exact equivalents, hard drives are very different from manufacturer to manufacturer. Chinook systems use only hard drives from elite manufacturers, Quantum and Conner Peripherals. Quantum has supplied hard drives to Apple for over two years. Conner supplies the low power 40MB drive used in the new Macintosh Portable.

These manufacturers have abandoned stepper motor technology in favor of voice coil actuators. Voice coil actuators provide faster access times and more accurate and repeatable positioning of the data heads. This is possible through a technique called closed loop servo positioning. A technique that, at best, can only be crudely implemented with stepper motor systems but is inherent in voice coil systems.

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CT-105	19ms	64K	SCSI	1029
CT-20c	27ms	8K	IIC*	599
CT-40c	25ms	8K	IIC*	759



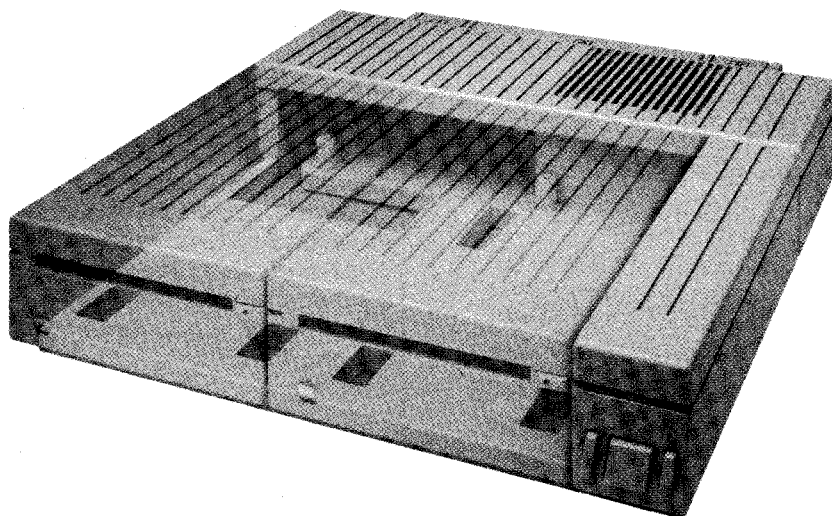
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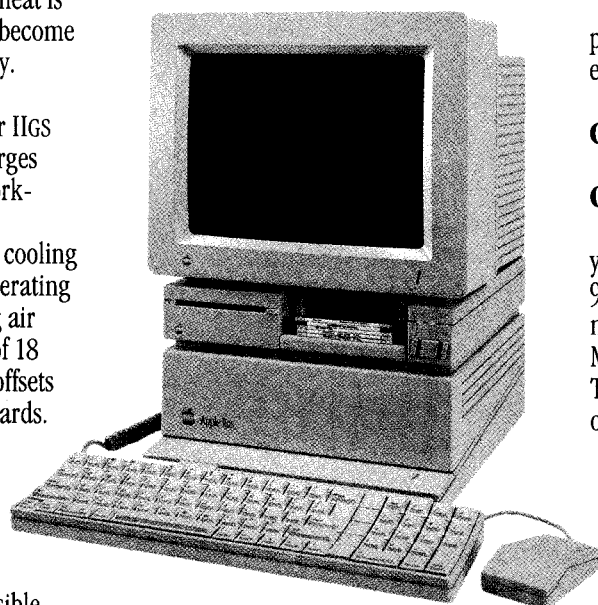
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How to Use AppleWorks 3.0 with One Disk Drive

by Edward Lederman

I recently heard a fellow AppleWorks user claim that you need extra memory and high-capacity disk drives to use AppleWorks 3.0. While this might be true for power users, the rest of us can use AppleWorks 3.0 comfortably on a 128K computer with a single 5.25-inch disk drive.

The trick is to create AppleWorks program disks that leave room for your data. During the day, you can store your data on the program disks; later, you copy the files onto separate storage disks.

Setting Up the Disks

Follow these steps to prepare your AppleWorks program disks. (Use a two-drive system to develop these disks; otherwise you will have to do a lot of disk swapping during this part of the process.)

You will start by configuring AppleWorks for your system. AppleWorks will store that configuration in the file SEG.ER ("Segment-Environment") on the Startup Disk. Then you will copy the personalized SEG.ER file onto each program disk. Whenever you change your printer or configuration settings, remember to re-copy the SEG.ER file from your Startup Disk onto each of the three Program Disks.

1. Boot the computer with your backup copy of the AppleWorks 3.0 Startup Disk. Select "Other Activities" and then "Select standard settings for AppleWorks".
2. Install your printer, change the standard location of your data disk to "Drive 1" (Apple IIc owners should change this setting to "Built-in Drive"), and establish your operating preferences. Make certain the preloading standards are set to "None".
3. Use a utility program such as TimeOut FileMaster, Copy II+, or the System Utilities and format

Figure 1: Disk Configuration for Single Disk Drive System

<u>Startup Disk:</u>	<u>Data Base Disk:</u>
PRODOS	SEG.AW
APLWORKS.SYSTEM	SEG.DB
SEG.ØØ	SEG.ER
SEG.EL	
SEG.PR	<u>Spreadsheet Disk:</u>
SEG.ER	SEG.AW
SEG.AW	SEG.SS
	SEG.ER
<u>Word Processor Disk:</u>	<u>Dictionary Disk:</u>
SEG.AW	MAIN.DICTIONARY
SEG.WP	CUST.DICTIONARY
SEG.ER	

three blank disks. If you use FileMaster or the System Utilities, assign these disks the name "/APPLEWORKS". If you use Copy II+, assign these disks the volume name "/TEMP".

4. Use the *disk* copy function of the utility program to make copies of the AppleWorks Startup and Dictionary disks.
5. Use the *file* copy function of the utility program to copy the files SEG.ER and SEG.AW from the AppleWorks Startup Disk onto the Word Processor Disk, Data Base Disk, and Spreadsheet Disk.
6. Use the *file* copy function of the utility program to copy the files SEG.WP, SEG.DB, and SEG.SS from your original AppleWorks disk onto your new Word Processor, Data Base, and Spreadsheet disks.
7. If you used Copy II+, select "Rename" from the Copy II+ Main Menu and rename the Word Processor, Data Base, and Spreadsheet disks to the volume name "/APPLEWORKS". All five disks should now have the same volume name.

AppleWorks 3.0 Primer...

Working with the Disks

Boot your computer with the Startup Disk and watch the prompts at the bottom of the screen; AppleWorks will tell you which disk to insert as you work. Save your data right on your program disks. At the end of the day, use the disk utility program to copy all the files onto data disks you will use for more permanent storage.

You will have to do some disk swapping when you load files from the storage disks onto the AppleWorks desktop, when you spell check a document, and when you switch between modules. Although you will have five separate disks (Startup, Word Processor, Data Base, Spreadsheet, and Dictionaries), most of your work will use only one or two AppleWorks modules, so you will not change disks often during the day.

This approach is not elegant, but it lets you use the features of AppleWorks 3.0 without upgrading your computer.

[Dr. Edward Lederman is on the faculty at Eastern Michigan University in Ypsilanti, Michigan.]

Quick Tip

How to Identify Your AppleWorks 3.0 Files

by Janet King

You probably know that earlier versions of AppleWorks cannot read AppleWorks 3.0 files. This can be bothersome if you switch between AppleWorks versions because you cannot tell if your system can read a file without trying to load the file onto the AppleWorks desktop. Only then does the "Getting errors trying to read..." message tell you that you are trying to load an AppleWorks 3.0 file onto an earlier version of the program.

You can avoid this problem by putting ".3" at the end of the name of every file you create with AppleWorks 3.0. Then you can identify the files that require AppleWorks 3.0 when you look at the disk catalog. For example, this file is QuickTip.3.

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New Software Available from NAUG

by Brian Theil

Bank Sizer

The NAUG Public Domain Library now includes Bank Sizer, a program that keeps AppleWorks 3.0 from capturing all the memory on bank switched memory expansion cards (e.g., RamWorks cards). The program, developed and submitted to the NAUG Public Domain Library by John Link, checks if you have a bank switched card with sufficient memory in your computer. If it finds such a card, Bank Sizer patches AppleWorks 3.0 so the program does not overwrite the amount of memory you specify. This is useful for AppleWorks 3.0 users who want to configure their systems to maintain a RAM disk. Once you run Bank Sizer, you can use the software that came with the expansion card to configure the RAM disk and copy files onto that "disk".

Note that Bank Sizer does not provide all the functionality of three other RAM disk programs. JEM Software's SpellCopy 2.0, Quality Computer's RamUp, and Checkmate Technology's AutoRAM automatically configure a portion of a memory expansion card as a RAM disk and copy any files you designate onto that "disk". SpellCopy assumes you have an Applied Engineering memory card. RamUp and AutoRAM work with most popular memory products. (See page 33 of the January 1990 issue of the *AppleWorks Forum* for more information about AutoRAM and pages 28 and 29 of this issue for information about SpellCopy 2.0 and RamUp.)

Bank Sizer is available in 5.25-inch format (\$4) or 3.5-inch format (\$6) plus \$2 s/h per order.

Fontasm: A Sophisticated Font Editor

Fontasm is a sophisticated Apple IIGS font editor that lets you create and edit fonts for TimeOut SuperFonts and IIGS-specific programs such as AppleWorks GS, BeagleWrite, Deluxe Paint, and Medley.

The program, developed by Stephan Hodinger of Francheville, France, comes on a bootable 3.5-inch

disk that includes comprehensive documentation in a file on the disk.

Fontasm requires an Apple IIGS with at least 768K of RAM and a single 3.5-inch disk drive.

Fontasm is available only in 3.5-inch format and costs \$6 plus \$2 s/h per order. The program is shareware; the author requests a \$20 donation if you want to use the program for more than two weeks. (Send the shareware payment directly to the author.)

Our thanks to William Davis for submitting this disk to NAUG's Public Domain Library.

Microbiology/Microchemistry Dictionary

NAUG's Public Domain Library now includes a Microbiology/Microchemistry dictionary developed and submitted by Dr. John Larkin, a microbiologist at Louisiana State University. This 5,000 word dictionary is compatible with the spell checker in AppleWorks 3.0 and with TimeOut QuickSpell.

Irish Immigrant Now in AppleWorks GS Format

NAUG recently added The Irish Immigrant to its collection of AppleWorks GS Public Domain templates. Irish Immigrant contains data base and spreadsheet files with information associated with the Irish immigration into the United States in the mid-1800's. The disk was developed by the Harvard University College of Education for use in social studies projects based on the experience of immigrants of that era.

The AppleWorks GS-compatible version of the Irish Immigrant costs \$6 plus \$2 s/h per order. A "Classic" AppleWorks-compatible version of this disk is available in 5.25-inch format (\$4) or 3.5-inch format (\$6), plus \$2 s/h per order.

We thank Karl Schober for converting The Irish Immigrant into AppleWorks GS format.

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How to Get Help Recovering AppleWorks Data

by Cathleen Merritt

If you use AppleWorks long enough, you will see two unpleasant messages that will cause you much consternation. I am referring to the "Getting errors trying to read (filename)..." and "Getting errors trying to read directory at..." messages.

Fortunately, once you know how AppleWorks stores data on a disk, it is relatively easy to understand these messages and to determine how to proceed when your disk clatters and one of these frightening missives appears on the screen.

AppleWorks and ProDOS

Strange as it might seem, AppleWorks does not know how to use your disk drives. Every time you issue an AppleWorks command that requires access to a disk, AppleWorks passes the appropriate commands to ProDOS; it is ProDOS that actually does the disk management.

Schematically, ProDOS divides each disk into two segments; a large "data area" where it stores your files, and a smaller "disk directory" which contains information about the files stored on the disk. ProDOS uses the information in the directory: (a) to find the files you want to load onto the desktop, and (b) to locate empty space in the data area on the disk when you save a file.

Obviously, the directory is the most important part of the disk; if the electronic messages stored in the directory get scrambled, ProDOS (and, therefore, AppleWorks) is unable to locate any data stored on the disk.

AppleWorks files contain more than just the characters that appear on the screen; they contain formatting information and data about your printing preferences and report formats. While ProDOS determines *where* it will save information on the disk,

it is AppleWorks that tells ProDOS *what* to store on the disk. AppleWorks stores much of this additional information in a special portion of the data file called a "header".

Is It a ProDOS or Data Problem?

While there are many causes of disk and file problems, they generally manifest themselves as either ProDOS problems that occur when you try to read the data disk, or data problems that emerge when AppleWorks tries to interpret the contents of a file.

ProDOS problems usually result from having a damaged directory or physical problems with the disk or disk drive. Thus, ProDOS problems usually generate the "Getting errors trying to read directory at..." message.

If you get the "directory error" message, try reading the disk with a different disk drive. If that does not work, format a new data disk and use a file copy program to copy all the files from the unreadable disk onto the new disk. (Make certain you use a *file* copy, not a *disk* copy program. File copy programs construct a new directory on the destination disk; disk copy programs copy the damaged directory onto the new disk.)

If those techniques do not work, try "Bag of Tricks #2", a disk recovery program available from Roger Coats and other vendors. Bag of Tricks will solve some, but not all, disk directory problems. (Directions for using Bag of Tricks #2 to recover damaged AppleWorks data disks appear in the January 1987 issue of the *AppleWorks Forum* and in the *AppleWorks Handbook: Volume Two*.)

Data Problems

The "Getting errors trying to read (filename)..."

Figure 1: Disk Rescuers Volunteers

Key

The symbols below each name indicate the kind of disks the expert can recover:

- ✖ = Damaged ProDOS directories
- = Damaged AppleWorks files
- ◇ = Damaged 5.25-inch disks
- = Damaged 3.25-inch disks

message usually indicates that AppleWorks is having difficulty interpreting the data on the disk after ProDOS locates the correct file.

If you get a "Getting errors trying to read (file-name)..." message, try to read the file with AppleWorks 3.0. Earlier versions of AppleWorks cannot read AppleWorks 3.0 files, and this is the message that appears when you try to read AppleWorks 3.0 files with earlier versions of the program. Sometimes that is the only problem with the data.

If AppleWorks 3.0 generates the same error message, you either have a damaged header or damaged data within the AppleWorks file. That is the domain for RepairWorks, a program designed to recover damaged AppleWorks word processor and data base files.

RepairWorks is easy to use: Boot up the program and follow the on-screen menus and prompts. (A review of RepairWorks appears in the April 1989 issue of the *AppleWorks Forum*. RepairWorks is available from NAUG, from Quality Computers, and from other vendors.)

Unfortunately, there are presently no programs that recover damaged AppleWorks spreadsheet files.

Disk Rescuers

As a NAUG member, you have one other alternative; you can turn to one of NAUG's Disk Rescuers. Figure 1 lists fellow NAUG members who enjoy trying to recover damaged disks and files.

Disk Rescuers Volunteers

- | | |
|----------------------------------|---|
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Comments: Only charges for successful disk recovery. |
| James Hirsch
✖ ■ ◇ ○ | 12310 Jonquil Street NW
Coon Rapids, MN 55433
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(612) 422-5572 (work)
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Turn Around Time: 2-5 days
Comment: Send printed copy of disk directory if possible. |
| John Jesmer, Jr.
✖ ◇ ○ | 3550 Grimes
Robbinsdale, MN 55422-2838
(612) 522-6169 (Answered by modem.)
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Turn Around Time: 1 week
Comments: Also requires a return disk mailer and 1st class postage. |
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New Hardware and Software for AppleWorks Users

Applied Engineering

AW3.0 Expander: Applied Engineering recently announced the AW3.0 Expander, an enhancement program for AppleWorks 3.0. The AW3.0 Expander lets you create word processor documents up to 23,290 lines long and store up to 23,290 records in a data base file. The Expander supports segmented files on multiple disks, print buffering, and RAM disk partitioning on RamFactor, RamWorks, and Z-RAM Ultra cards. The program also reads any ProDOS-compatible clock and displays the time and date on the AppleWorks screen.

The Expander is compatible with TimeOut and most other AppleWorks enhancements, with one important exception: If you install TimeOut, you cannot expand AppleWorks to accommodate more than 16,250 word processor lines or data base records.

The AW3.0 Expander is compatible with GS-RAM, PC-Transporter (Ile only), RamWorks, RamFactor (Ile only), Z-RAM, and RAM Express cards. The AW3.0 Expander costs \$29 directly from Applied.

Memory Cards: Applied Engineering recently reduced the suggested list prices of most of their memory expansion cards. For example, the company lowered the price of the GS-RAM Plus board with 1-megabyte of memory from \$379 to \$319.

Vulcan Drives: Applied increased the prices for its fast and popular Vulcan series of internal hard disk drives. The 20 megabyte Vulcan drive now lists for \$799. The 40 megabyte drive lists for \$999.

TransWarp II: A component used in the TransWarp II accelerator card is no longer manufactured. As a result, Applied recently discontinued the TransWarp II and will soon introduce the TransWarp III, an 8 megahertz accelerator card for Apple II+ and Ile computers. (A standard Apple Ile runs at 1.04 megahertz.) The 8 megahertz TransWarp III, which will be upgradeable to 12 mega-

hertz, will have a suggested retail price of \$199 and should be available by the end of this month.

Applied will honor the five year warranty on the TransWarp II and has a sufficient supply of components to service the units in the field.

GS-RAM Products: Apple Computer made significant design changes in the new Apple IIGs. While all current Applied GS-RAM and GS-RAM Ultra cards are shipped with chips for both the ROM 01 and ROM 3 IIGs, earlier models of these products may need a chip change or modification to work on the new computer. Contact Applied or your local Applied Engineering dealer before installing one of these cards in a ROM 3 Apple IIGs.

[Applied Engineering, Box 5100, Carrollton, Texas 75011; (214) 241-6060.]

Beagle Bros

Font Library: Beagle Bros' Font Library includes 40 fonts you can use with TimeOut SuperFonts, AppleWorks GS, BeagleWrite GS, and other programs that use standard Apple IIGs fonts. Text fonts include Antripa, Apple II, Asimov, Benningham, Caldon, Chaucer, Cranston, Doverfield, Dylan Thomas, Evran, Fine Print, Finster, Flash, Gharst, Hardin, Intigael, Juniper, Langley, Mendelton, Nashville, Newark, Overscan, Phantom, Quently, Ransom, Reston, Russell, Shakespeare, Smallville, Space, Temley, Two Tone, Waugh, and Wylie. Graphic fonts include Borders, Michelangelo, and Morse.

The Font Library, formerly marketed by Styleware, has a suggested list price of \$49.95.

Clip Art Library: A collection of 120 images you can use with AppleWorks GS, BeagleWrite GS, and other programs that accept images in Apple Preferred, BeagleDraw (formerly TopDraw), PICT, or Paint format. The images relate to sports, holidays, food, transportation, animals, faces, miscella-

neous, and maps. These graphics are in Super HiRes formats and are *not* compatible with Time-Out SuperFonts.

The Clip Art Library, formerly marketed by Styleware, has a suggested list price of \$49.95.

UltraMacros 3.1 Manual Update: Beagle revised and expanded the manual that accompanies UltraMacros to include the features added to UltraMacros 3.0 and later. You can upgrade to the new manual by sending the cover from your current manual and \$10 to Beagle.

[Beagle Bros, 6215 Ferris Square, Suite 100, San Diego, California 92121; Outside California: (800) 345-1750. In California: (800) 992-4022.]

Central Point Software

Copy II+: Central Point Software released version 9.0 of Copy II+, a popular disk utility program that formats disks, copies and renames disks and files, locks files, recovers deleted files, and performs other disk utility functions. Copy II+ is best known for its ability to copy many copy-protected disks.

Version 9.0 supports a mouse, does byte by byte comparisons between files, uses all the memory in your computer when you copy disks (but not files), and includes over 400 new parameters for copy protected software.

Note that you cannot use Copy II+ 9.0 to copy GS/OS files with resource forks. For example, you cannot use Copy II+ to copy AppleWorks GS *program* files between disks. However, Copy II+ can copy AppleWorks GS *disks* and *data files*.

Early Copy II+ 9.0 disks have some bugs. Catalog your Copy II+ disk and check the date of the file UTIL.SYSTEM. If that date is December 21, 1989 or earlier, contact Central Point for a free replacement.

Copy II+ lists for \$39.95 and is available from discount dealers at significant savings. Registered Copy II+ owners can update to either a 5.25-inch or 3.5-inch copy of version 9.0 for \$18 (\$23 for both disks), including a new manual. Call the company's automated 24-hour order desk at (800) 888-8199 or order updates from Central Point at (503) 690-8090 (M-F, 8am - 5pm Pacific Time).

JEM Software

Outliner: JEM recently announced Outliner, an AppleWorks 3.0 enhancement that adds outlining capability to AppleWorks. Once installed, Outliner is fully integrated into the AppleWorks word processor module. The program lets you enter topics and up to five sub-topics for each main idea, plus a segment that stores body text for each topic. Topics can be easily moved, sorted, or copied.

Outliner lets you display the entire outline, just the main topics, or any combination of subtopics and body text. You can create body text for each topic and then remove the outline, thus producing a document you can continue editing with the word processor. Outliner automatically numbers topics in the standard Harvard outline or legal styles. The program also lets you use any symbol repetitively for all topics within the same level and lets you create your own numbering system.

Outliner lists for \$44.95 plus \$3.50 s/h.

SpellCopy 2.0: SpellCopy is an AppleWorks 3.0 enhancement that lets you store AppleWorks' spelling dictionaries on any device you specify, including a RAM disk. SpellCopy can also automatically copy the spelling dictionaries onto a RAM disk before launching AppleWorks.

SpellCopy 2.0 includes an enhanced, AppleWorks 3.0-compatible version of Applied Engineering's Partition and ProDrive programs. These programs let you configure RamWorks and Z-RAM memory cards as a RAM disk. SpellCopy can then copy AppleWorks, the AppleWorks spelling dictionaries, and all your TimeOut enhancements onto that "disk". AppleWorks' spell checker runs significantly faster from a RAM disk than from a 5.25-inch or 3.5-inch floppy disk.

SpellCopy costs \$12.50. Owners of earlier versions can upgrade to version 2.0 for \$5.

DoubleData 1.1: JEM is now shipping version 1.1 of DoubleData, an AppleWorks enhancement that lets you store up to 60 categories in each data base record. DoubleData lets you use an Apple-J command to jump between the first thirty categories and the next thirty categories in each record. You can combine any 30 categories in a data base report

or in Mail Merge documents. The program includes excellent and sometimes humorous documentation in an AppleWorks word processor file on the disk.

Version 1.1 fixes some minor bugs in version 1.0 of the program.

DoubleData costs \$30; updates from DoubleData 1.0 cost \$5.

Mr. Invoice 1.2: JEM is now shipping version 1.2 of Mr. Invoice, an invoicing and order entry system that works within AppleWorks. Version 1.2 includes additional sample invoices and prints multiple copies of an invoice with different messages you can specify (such as "Customer Copy").

Mr. Invoice costs \$40; updates from earlier versions cost \$5.

[JEM Software, Box 20920, El Cajon, CA 92021.]

NAUG

NAUG members who develop add-on enhancements to AppleWorks can get three useful sets of technical notes about AppleWorks and Apple II computers from NAUG.

AppleWorks File Formats: Contains technical information about the structure of AppleWorks data files on disk. Includes formats for files created by all versions of AppleWorks. Useful for programmers who want to store data in AppleWorks-compatible files or write applications that use AppleWorks data files. Also useful for members who recover damaged AppleWorks disks and to the curious. Prepared by Claris Corporation. 27 pages. NAUG members: \$10 including domestic postage; Non-members: \$12.50.

AppleWorks 3.0 Entry Points: Technical information about many of the routines in AppleWorks. Assumes a knowledge of Assembly Language. Useful for developers of AppleWorks enhancements and programmers curious about the operation of AppleWorks. Developed by Claris Corporation. 44 pages. NAUG members: \$12.50 including domestic postage; Non-members: \$15.00.

Apple II Technical Notes: More than 720 pages of technical information from the Developer Technical Support Group at Apple Computer. Sections include technical information about: Apple IIC,

Apple IIe, Apple IIGs, AppleTalk, GS/OS, ImageWriter Printer, Apple Memory Expansion Card, Mouse, Pascal, ProDOS 8, SmartPort, UniDisk 3.5. NAUG members: \$43 plus \$5 shipping/handling; Non-members: Not available.

Foreign orders only available by credit card; specify surface or air delivery.

NAUG members must supply their NAUG ID number from their label on the *AppleWorks Forum*.

Quality Computers

RamUp 4.3: Quality Computers recently released version 4.3 of RamUp, a RAM disk management system. RamUp makes it easy to set up and manage a RAM disk on any popular auxiliary or peripheral slot memory card installed in an Apple IIe, IIC, IIC Plus, IIGs, or Laser 128 computer.

RamUp automatically partitions the memory on the card into RAM disk and AppleWorks desktop components and automatically copies AppleWorks, the AppleWorks spelling dictionaries, and all your AppleWorks enhancements onto that "disk". RamUp then lets you launch AppleWorks and any other programs you install on the RAM disk by selecting those programs from a menu.

Quality reports that RamUp 4.3 is compatible with all versions of AppleWorks and with all AppleWorks accessories.

RamUp lists for \$39.95. AppleWorks users who ordered RamUp since November 20, 1989 will automatically receive version 4.3. Owners of earlier versions can upgrade to version 4.3 for \$12.

RepairWorks 3.1: Quality Computers also released version 3.1 of RepairWorks, a program that recovers damaged AppleWorks data files. Version 3.1 enhances RepairWorks' ability to recover damaged word processor files and corrects some minor bugs in RepairWorks 3.0. Like RepairWorks 3.0, version 3.1 is compatible with all versions of AppleWorks.

RepairWorks 3.1 lists for \$39.95. NAUG members can upgrade to version 3.1 from NAUG's Beagle Buddy program. (See page 33 of this issue of the *AppleWorks Forum* for information about NAUG's Beagle Buddies.) Non-members can upgrade from Quality Computers for \$12.

[Quality Computers, 15102 Charlevoix, Grosse Point, MI 48230; (800) 443-6697.]

SMT Peripherals

No Slot Clock: The No Slot Clock fits under a chip in Apple IIe, IIC, Laser 128, and Laser 128EX computers and maintains time and date information for the system. The chip comes with complete installation directions and a built-in, non-replaceable, lithium battery with a life expectancy of approximately ten years. Software included with the chip patches ProDOS so application programs like AppleWorks can time and date stamp your files. SMT reports that once you install this patch, the No Slot Clock is compatible with UltraMacros 3.1, SuperPatch 6.1, and other programs that display the time on the AppleWorks screen. In addition, AppleWorks 3.0's data base can use the clock to insert the current date and time in the appropriate categories.

You can determine if you have the current No Slot Clock patch disk from the version of ProDOS that appears on your screen when you boot with the disk. The current software boots with ProDOS 8 version 1.8.

The No Slot Clock has a suggested list price of \$59.95 and is available from mail order dealers at significant discounts. If you purchased the clock since December 15, 1989, you can get a free upgrade to the new clock software by sending a proof of purchase and your original program disk to the company. Others can upgrade to the new software for \$7.50. The company does not accept credit cards; send a check or money order.

[SMT Peripherals, Ltd., 310 Via Vera Cruz #112, San Marcos, California 92069; (800) 326-1638.]

SoftSpoken

Cross-Works: SoftSpoken recently announced the release of version 2.0 of Cross-Works, a utility program that offers two-way transfer of files between AppleWorks and popular MS-DOS programs such as WordPerfect, Lotus 1-2-3, and dBase.

Cross-Works 2.0 is compatible with all versions of "Classic" AppleWorks and supports the transfer of files between AppleWorks and any version of Microsoft Works-PC.

The Cross-Works package now includes a cable adapter that lets you use a Super Serial Card configured for either a printer or modem. The newest version of Cross-Works remembers your configuration and automatically re-installs your settings when you launch the program. Cross-Works 2.0 also warns you if you are in danger of overwriting a file already on a disk. Cross-Works 2.0 costs \$99.95. Registered users of earlier versions can upgrade to 2.0 for \$20.

[SoftSpoken, Box 18343, Raleigh, NC 27619; (919) 870-5694.]

Classified

S Corporation 1120S Template: Uses your basic accounting data to complete a 1120S Form. Requires AW3.0. UltraMacros makes it easy. We are developing a list of S Corporation owners for a special user group with that interest. \$20 gets this template and your name on this list. Comco Company, 2073 Lake Road, Youngstown, NY 14174; (716) 791-4453.

DOING MY TAXES CAN BE FUN?

SURE CAN, WITH 1040WORKS, THE APPLEWORKS ENHANCEMENT THAT DOES YOUR TAXES.

It can cut hours from your tax return, too. For a fraction of the cost of comparable tax software, **1040Works** or **1040Works-X** will turn your AppleWorks spreadsheet into a comprehensive 1989-90 tax program that:

- Prepares 15 tax forms
- Figures your income and tax
 - Prints out ready-to-file schedules and forms
 - Does much, much more.

Easy to set up and use, saves hours of time — yes, it's even fun, customers tell us. Friendly, free support, too. And if you use a macro program, you can save even more time with our free custom macros. Reviews compared **1040Works** to \$250 tax software. (See *NAUG Forum*, March '88 or April '89.)

For 128K Apple or compatible, **1040Works** costs only \$24.95 (includes shipping). Got IIGS or 256K RAM? **1040Works-X** uses larger AppleWorks desktop to save steps, speed your work, \$27.95. Either on 3.5-inch disk, add \$3. In NY add state/local tax. Send check or MO. Sorry, no bankcard orders.

PERSONAL FINANCIAL SERVICES
P.O. Box 1401, Dept. G
Melville, N.Y. 11747
800-221-8939

How to Use GS/OS with AppleTalk

by William Marriott
Claris Technical Support

Recent issues of the *AppleWorks Forum* include a series of articles that describe how to use a LaserWriter printer with AppleWorks. Now, the release of GS/OS 5.0.2 makes it easier for Apple IIGS users with one megabyte of memory to print on a LaserWriter connected to an AppleTalk network. In this article, I will describe how to configure GS/OS so you can print on the LaserWriter from AppleWorks or AppleWorks GS. I will describe the procedures for a single 3.5-inch disk system; owners of dual 3.5-inch disk drives or hard disks should be able to generalize these techniques to their own equipment.

You will need a copy of GS/OS 5.0.2, a blank 3.5-inch disk, a copy of AppleWorks or AppleWorks GS, and an Apple IIGS connected to an AppleTalk network.

Setup

You will start by constructing a GS/OS System Disk that lets you use the network. Then you will configure your hardware and AppleWorks. Proceed as follows:

1. Boot your computer with a copy of the GS/OS 5.0.2 System Disk.
2. Initialize a blank 3.5-inch disk formatted for 800K of data at a 2:1 interleave. (If you have a white 3.5-inch drive, it is a UniDisk; format disks for that drive with a 4:1 interleave.) Name the disk LW.STARTUP.
3. Insert the System Tools Disk and launch the Installer.

Now you will use the Installer to prepare a Startup Disk that lets you print on the LaserWriter. Proceed as follows:

4. Select "Latest System Files" from the scrollable list of scripts on the left side of the screen.
5. Insert the LW.STARTUP disk and click the "Drive" button until LW.STARTUP appears on the right side of the screen.
6. Click on the "Install" button. If you have a single drive, you will have to swap disks repeatedly while the installer copies these files to your new disk.
7. Quit the Installer.

Now you will remove some files from LW.STARTUP to accommodate the LaserWriter driver. You do not have to delete these files if you use a hard disk drive.

8. With the Finder on the screen, open the LW.STARTUP disk and drag the icons BASIC.SYSTEM and BASIC.LAUNCHER to the trash.
9. Open the System folder and then open the Fonts folder. Select all the files except Courier.12, Helvetica.12, Times.12, and FastFont. Drag the selected files to the trash.
10. Close the Fonts folder and open the Drivers folder.
11. Drag the ImageWriter file to the trash. (If you are using the copy of GS/OS supplied with AppleWorks GS, also remove the file ImageWriter.CL.)
12. Close the Drivers folder and open the CDevs folder.
13. Remove all the files from this folder except the RAM file.
14. Select "Empty trash" from the Special Menu.

Printer Primer...

Now you will add the LaserWriter driver to the System folder. Continue as follows:

15. Insert the GS/OS System Tools Disk, launch the Installer, and select LaserWriter from the list of scripts on the left.
16. Insert the LW.STARTUP disk and click "Disk" until LW.STARTUP appears on the right.
17. Click on the "Install" button and swap disks as requested.

Configure Your Hardware and Software

Steps 1-17 create a disk you can use to launch AppleWorks. That disk lets you use the ImageWriter Emulator built into the Control Panel to produce LaserWriter quality output from AppleWorks. Now you must configure your hardware and AppleWorks to use that printer. Proceed as follows:

1. Activate AppleTalk by issuing an Apple-Control-Escape and select the "slots" option on the IIGS Control Panel. If you have a ROM 01 IIGS, change slot 7 to "AppleTalk" and slot 1 or 2 to "Your card". If you have a ROM 3 computer, change slot 1 or 2 to "AppleTalk".
2. AppleWorks "Classic" users should boot their computers with AppleWorks and add an ImageWriter printer (not an ImageWriter II) to the Printer Menu. Name that printer "LaserWriter" and assign the printer to the slot you use to access AppleTalk.

AppleWorks GS users do not have to configure their program.

Each Session

Then follow these steps at the beginning of each working session:

1. Turn on the LaserWriter and wait for it to eject a test page.
2. Boot your computer with the GS/OS 5.0.2 LaserWriter Startup Disk you prepared above.
3. Select the Control Panel desk accessory from the Apple Menu.
4. Scroll to the LaserWriter icon on the left and select it.

5. One or more LaserWriters will appear on the right. Choose the LaserWriter you want to use. If you connect to a large AppleTalk network, "zones" might appear on the right. Choose the zone that contains the LaserWriter you want to access.
6. If you use AppleWorks, click on the ImageWriter Emulator button. It will confirm that the emulator is available on the LaserWriter or will download the emulator to the printer.
7. Close the Control Panel desk accessory.
8. Launch AppleWorks or AppleWorks GS from the GS/OS Finder. Do not reboot.

AppleWorks users can now print on the LaserWriter that will appear on the AppleWorks Printer Menu. The default font will be 12-point Courier, which prints at ten characters per inch. You can get more attractive output by issuing a P1 command which prints in proportionally spaced 12-point Times, or a P2 command that produces output in 10-point Times. Page 6 of the August 1989 issue of the *AppleWorks Forum* presents examples of these fonts.

AppleWorks GS users can use any size of the three fonts left in the System folder in step 9 on the preceding page.

[Ed: To get proportionally-spaced, Palatino output with full justification, replace the IWEM file on LW.STARTUP with the patched version of IWEM that appears on NAUG's AppleWorks/LaserWriter Patch Disk. The AppleWorks/LaserWriter Patch Disk costs \$6 plus \$2 s/h from NAUG's Public Domain Library.]

[William Marriott, former Associate Editor of the AppleWorks Forum, is now a Technical Support Specialist for Claris Corporation.]

Corrections

The announcement of the availability of AppleWorks/Network 3.0 in the February issue contains incorrect upgrade prices for site licenses. All licensed AppleWorks sites with AppleShare networks are eligible to receive AppleWorks/Network 3.0 for a processing and shipping fee of \$29. Schools that purchased site licenses or AppleWorks/Network 2.1 after December 15, 1989 can upgrade to AppleWorks/Network 3.0 at no charge. Orders must be received by May 1, 1990.

Current TimeOut Version Numbers

Beagle Bros has produced so many TimeOut enhancements to AppleWorks that it is difficult to keep track of the current version of each product. This article will help you determine if you have the latest release of your favorites.

The Numbering System

Beagle assigns a version number to each disk and updates that number when the product undergoes a major revision. *Figure 1* contains the version numbers for all 13 TimeOut disks.

Beagle often makes minor updates to one or more modules on a disk without changing the disk number. You do not need the latest version of each module, but you will probably want the latest versions of your favorite enhancements. *Figure 2* lists the version number for each file on every disk.

Getting the Current Versions

NAUG members who own earlier versions of the TimeOut programs can update to the current versions by contacting one of NAUG's Beagle Buddies:

Bruce Shanker, 1279 Boyd Road, Warminster, Pennsylvania 18974-2260.

Oliver Roosevelt, Box 303, Fairforest, South Carolina 29336.

Joe Connelly, 32148 Camborne Lane, Livonia, Michigan 48154.

Pete Ross, 35026 Currier, Wayne, Michigan 48184-2348.

Include your NAUG membership number from the mailing label on this issue of the *AppleWorks Forum*, your original TimeOut disk(s), and payment of \$2.50 for the first 5.25-inch disk and \$1 for each additional 5.25-inch disk, or \$3 for the first 3.5-inch disk and \$2 for each additional 3.5-inch disk.

JEM Software Updates

Bruce Shanker also updates the AppleWorks enhancements from JEM Software. (*Figure 3* lists the current version numbers for the JEM Products.) JEM updates cost an additional dollar per disk.

Figure 1: TimeOut Disks—March 1990

Module	Version	Module	Version
DeskTools	3.0	SideSpread	3.0
DeskTools II	2.0	SpreadTools	2.0
FileMaster	3.0	SuperFonts	3.0
Graph	3.1	TeleComm	1.2
PowerTools	2.0	Thesaurus	2.0
QuickSpell	3.0	UltraMacros	3.1
ReportWriter	2.2		

Figure 2: Module Version Numbers

On Multiple Disks:		PowerPack:	
TO.UTILITIES	3.0	TO.ASCII	1.1
TO.CLIPBOARD	2.0	TO.AWP.TO.TXT	3.0
TO.PAINT	2.0	TO.DB.SEARCH	3.0
TO.WORD.COUNT	2.0	TO.DESK.SORTER	3.0
DeskTools:		TO.HELPSCREENS	3.0
TO.CALCULATOR	1.2	TO.LIBRARIAN	3.0
TO.CALENDAR	3.0	TO.LINE SORTER	3.0
TO.CASE.CONVERT	2.0	TO.SELECTOR	3.0
TO.CLOCK	1.1	TO.TRIPLE.CLIP	3.0
TO.DIALER	1.1	TO.TRIPLE.DESK	3.0
TO.ENCRYPTER	2.0	QuickSpell:	
TO.ENVELOPE.ADR	2.0	TO.QUICKSPELL	3.0
TO.NOTE.PAD	2.0	ReportWriter:	
TO.PAGE.PREVIEW	1.2	TO.REPORTWRITER	2.2
TO.PUZZLE	1.1	SideSpread:	
DeskTools II:		TO.SIDESPREAD	3.0
TO.AREACODE	2.0	SpreadTools:	
TO.CALC.PLUS	2.0	TO.ANALYZER	2.0
TO.CLIP.VIEWER	2.0	TO.BLOCKCOPY	2.0
TO.DIRECTREE	2.0	TO.CELLINK	1.1
TO.DISK.TESTER	1.0	TO.COPYRC	2.0
TO.FILE.SEARCH	3.0	TO.FRM2VAL	2.0
TO.MEASURE	2.0	TO.QUICKCOL	2.0
TO.PM.IMAGE	2.0	SuperFonts:	
TO.SCREENOUT	1.0	TO.SUPERFONTS	3.0
TO.SCREENPRINT	1.0	TeleComm:	
TO.STOPWATCH	2.0	TO.TELECOMM	1.2
FileMaster:		Thesaurus:	
TO.FILEMASTER	3.0	TO.THESAURUS	2.0
Graph:		UltraMacros:	
TO.GRAPH	3.1	TO.COMPILED	3.1
		TO.HELP.V2.Ø	3.0
		TO.HELP.V3.Ø	3.0
		TO.MACRO.OPT	3.1

Figure 3: JEM Software—March 1990

Product	Version	Product	Version
DoubleData	1.1	Mr. Invoice	1.2
FlexiCal	1.3	SpellCopy	2.0

Help with the AppleWorks Modules

by Nanette Luoma

Each month, the *AppleWorks Forum* lists the member-volunteers who offer technical support for AppleWorks products. This month's list identifies the volunteers who can answer questions about the three AppleWorks modules. Next month's issue will contain a list of members who offer help with AppleWorks utility software.

AppleWorks Modules

How to Use this List

To the left of each volunteer's name are numbers indicating the AppleWorks modules the consultant supports. Volunteers are listed alphabetically by state.

- | | |
|--------------------|-------------------------|
| 1 = Word Processor | 4 = Integrating modules |
| 2 = Data Base | 5 = Mail Merge |
| 3 = Spreadsheet | 6 = AppleWorks Network |

		City	Home	Work
Alabama				
1-5	Norma Gradwohl	Mobile	205-343-4905	205-343-4905
Arizona				
1-5	Clay Evitts	Tucson	602-885-9789	602-296-5491
1-5	Bill Holmes	Chandler	602-849-4841	602-786-7170
Arkansas				
1-4	Norman Nelsen	Garfield	501-359-3612	
California				
1,2	Dan Balsley	San Ramon	415-829-5085	
1-3,5	Brian Blue	Danville	415-838-0997	415-954-6002
1,2	Don Farrar	Pleasant Hill	415-932-5509	
1,2,4,5	Rolf C. Freerks	San Pedro	213-833-8266	213-337-1333
1-5	Jim Gentilucci	Los Osos	805-528-5049	
1-5	Terence P. Higgins	Hayward	415-887-7499	415-887-7499
1,2,5	Wayne Kliman	Santa Barbara	805-967-3620	
1-4	Lucien LaCour	Woodland Hills	818-348-7787	
1-5	Berenice Maltby	Corona del Mar	714-640-7369	
1-3	Will Nelken	San Rafael	415-459-0845	415-456-1795
2,3	Jesus Orosco	Milpitas	408-270-1011	408-945-4344
Colorado				
1-5	Gary P. Armour	Littleton	303-933-9493	303-972-4665
1-4	Lyle Graff	Littleton	303-794-5970	303-977-4557
1-5	John Lefebvre	Thornton	303-451-5558	303-457-2852
1-4	John Loren	Littleton	303-978-0603	
1-5	Dr. Larry Thaele	Boulder	303-939-9072	303-492-2717
Connecticut				
1-5	William Delaney	Enfield	203-745-4048	203-749-8391
1-5	Martin Knight	Middletown	203-346-9698	203-347-8594
Delaware				
1-4	W. Henry Linton, Jr.	Wilmington	302-478-3740	

		City	Home	Work
Florida				
1-5	Virginia Bobrick	Miami	305-653-3136	
1-5	Michael R. Childers	Hollywood	305-966-5475	305-624-2400
1,2,4,5	Bruce Pfeffer	Tallahassee	904-385-3447	904-386-2685
1-3,5	Andrew Pliuka	Ft. Lauderdale	305-525-3301	
1-3	Ronald Stankiewicz	Patrick AFB		407-494-2227
1-5	Jeff Strichard	Ft. Lauderdale	305-587-9590	
1-5	Mike Ungerman	Oviedo	407-366-0060	407-366-0156
Idaho				
1-4	Donald H. Campbell	Lewiston	208-743-9639	208-743-8589
Illinois				
1-5	Mark Baniak	Park Ridge	312-825-6301	312-292-4116
1,2	William Davis	Hinsdale	312-655-9142	312-887-1730
1-5	George Duffey	Bloomington	708-894-0849	708-451-3106
1-5	Clifford S. Egel	La Grange Park	312-354-4639	312-387-4045
1,2,4,5	Susan Husar	Chicago	312-631-5884	
1-4	Bowen Schumacher	Winnetka	312-501-3314	
Indiana				
1,2,4,5	Jack Countryman	Greensburg	812-663-4998	
1,2	Kevin Gold	Indianapolis	317-290-8948	317-543-7098
1-4	Laura J. Kelley	Gwynneville	317-763-7290	
Iowa				
1-5	Keith M. King	Ft. Madison	319-372-9521	
1-3,6	Stephen May	Audubon	712-563-2925	712-563-4217
Kentucky				
1-4	Donald L. Corson	Louisville	812-256-3517	502-473-3083
Louisiana				
1-5	Charles Fryling, Jr.	Baton Rouge	504-766-3120	504-388-1473
Maryland				
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1-5	Pete Ross	Wayne	313-728-8269	
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1-5	Bob Suits	Columbia	314-445-6082	
Montana				
1-5	Steve Bernbaum	Shepherd	406-373-6393	
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Nevada				
1-4	Keith Johnson	Sparks	702-359-2543	702 84-4812
New Hampshire				
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1-5	Frank R Savory	Derry	603-434-5407	
1-5	Bob Skinner	Plymouth		603-536-3626
New Jersey				
1-5	Pete Crosta	Nutley	201-667-6369	201-677-4050
New Mexico				
1-5	Willis George, Jr.	Albuquerque	505-897-4886	505-883-9743
1,2	David Selwyn	Las Cruces	505-522-7622	
New York				
1-5	Bob Beer	Coram	516-928-6870	
1,2,5	Steve Black	South Glens Falls	518-798-1128	518-793-9644
1-6	Linda Doscher	New York	914-358-7064	
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1-5	R. Joyce-Petrovich	Yonkers	914-376-1044	
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4	Frances H. Snedeker	Larchmont	914-834-3081	
1-3	Terry Williamson	Orchard Park	716-662-5104	716-873-9750
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1-5	Jason Fogt	Lakeview	513-843-5779	
1-4	Carman Greco	St. Clairsville	614-695-5026	
1-5	Robert J. Netro	Canton	216-477-3667	
1-5	Marcia Reed	Millbury	419-836-9291	419-836-9291
Oregon				
1-6	Jim Emig	Portland	503-771-1916	503-280-5666
1-4	M.W. Fox	Corvallis	503-754-7623	503-737-3628
1-5	Dave Lomax	Lake Oswego	503-636-7289	
Pennsylvania				
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1-5	Richard L. Gable	Pittsburgh	412-963-6158	412-963-1128

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1-5	Joel Perlsh	Havertown	215-789-7673	
1-5	Charles Schultes Jr.	Lehighton	215-377-5169	215-377-6180
1-5	Bruce Shanker	Warminster	215-674-0118	
1,2,5	Hal Shapiro	Eagleville	215-630-8936	215-922-0500

Rhode Island

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1-3	Joel Goldman	Nashville	615-352-3617	

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1	Joseph Kline	Lubbock	806-796-0829	

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1-3,5	Linda Metzke	Concord	802-748-3298	802-626-9371

Virginia

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Wisconsin

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Australia

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1	Jeff Pavlou	Melbourne	462-2177	

Canada

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1-5	Nick Van Helsdingen	Tranquillity Base	604-296-3260	

England

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France

1-4	Henry Marsh	Fontenay Aux Roses	43502745	43502745
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Mexico

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1-5	James Hanushek	Dhahran, 31311	966-38784075	966-38771533

New Zealand

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Venezuela

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