

# Forum

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

Volume I, No. 1

Premier Issue

August, 1986

## TABLE OF CONTENTS

### FROM THE EDITOR

#### **Welcome to the NAUG Forum**

The Editor outlines the purpose of this newsletter and describes the  
*National AppleWorks Users Group*

p. 2

### LETTERS

p. 2 - 3

- Apple Corporation wants to know about unusual uses for Apple Works.
- Legend Industries is looking for users who know AppleWorks from the inside out.
- Needs help using a CP/M card with AppleWorks.

### USING NAUG TO GET ANSWERS TO APPLEWORKS QUESTIONS

p. 3

How to submit questions and get help.

### USING APPLEWORKS AS A PROGRAMMING TOOL

pp. 4 - 5

How to use AppleWorks as a BASIC editor.

### GUIDELINES FOR CONTRIBUTORS TO THE NAUG Forum

p. 5

We're a user's group, folks. Here's how to share your ideas with your colleagues.

### PRINTER PRIMER

pp. 6 - 9

How to configure AppleWorks so it works with custom printers.

### IMPACT IS IMPACT

pp. 10 - 11

Which software product has had the greatest impact on personal computing?

### NOTES FROM APPLELINK

p. 11

Word from Apple Computer about using their products outside the U.S.

### SPREADSHEET TIPS

pp. 12 - 13

The "Arrange" command is a powerful spreadsheet tool - but it can get you in trouble. Here's how to avoid its "bite".

### BULLETIN BOARD NEWS

p. 13

Welcome to NAUG's electronic forum.

### DATA BASE TIPS

p. 14

How to arrange your data entry screen to facilitate data input.

### FROM THE PUBLIC DOMAIN

pp. 14 - 15

An introduction to the NAUG public domain library.

### MEMBER INFORMATION

p. 15

### WISH LIST

p. 15

Tell us what you want in the next version of AppleWorks.

### NEXT FORUM

p. 15

Coming in September.

### MEMBERSHIP FORM

p. 16

Join NAUG today; share the *Forum* with your AppleWorks colleagues.

## From the EDITOR

### WELCOME TO THE NAUG FORUM

by Cathleen Merritt, Editor

Although I'll never meet most of you, I want to welcome you to one of the largest families in the world...the family of AppleWorks users. It's estimated there are as many as 800,000 of us world-wide.

The **National AppleWorks Users Group (NAUG)**, from now on) is dedicated to helping members of our family. We are a forum to help you learn more about AppleWorks, share ideas, and get answers to your many questions about the program.

This is my opportunity to introduce you to some of the **NAUG** family.

I am a former elementary school teacher who took time off to raise three children and earn two Master's Degrees. I'm responsible for coordinating **NAUG's** activities, member services such as maintaining the **NAUG** registration lists and answering the **NAUG** mail, doing the bookkeeping, and editing this newsletter. You can reach me either at the **NAUG** phone (313-397-1594), on Compuserve (72227,3463), or by mail at our postal box address:

**National AppleWorks Users Group  
Box 87453  
Canton, MI 48187**

Richard Lewandowski, the Coordinator of Instructional Computing for the Ypsilanti, Michigan Public Schools, is Sysop of the 24-hour **NAUG** electronic bulletin board. This is the second public bulletin board Richard has started, so he's familiar with many of the problems associated with running a board. Right now there's not much on the **NAUG** Board for you to explore, but we expect members to upload templates and files for use by other members, share ideas, ask and answer questions, and otherwise communicate with each other. Richard describes the bulletin board service in his article in this issue of the **Forum**.

John Denzer is the group's public domain librarian. He is responsible for gathering AppleWorks templates and other files submitted by members either through the bulletin board or on disk directly to **NAUG** at our post office box. John will put those files together in some meaningful fashion on disks and

make those disks available at a nominal charge to **NAUG** members. (Here's a definition of "nominal": \$6 for the first disk, \$4 for each additional disk.) John's article in this issue introduces himself and the public domain library.

Our editorial board consists of Warren Williams, a Professor at Eastern Michigan University; Keith Bernhard, Director of Instructional Computing at Bowling Green State University; and Hal Heidtman, an Associate Principal at Anthony Wayne High School in Whitehouse, Ohio. All three individuals are experienced AppleWorks users, as you will see from their contributions to this newsletter.

**NAUG** is a "users group"; a rich and diverse community of people with different interests and backgrounds but with a common desire: to share ideas and learn more about AppleWorks. We are beginners and experts alike. We want your questions, your ideas, your thoughts, your suggestions.

Welcome to the family.

## LETTERS

Dear Cathleen,

I'd like to get in touch with individuals who are knowledgeable about the technical aspects of AppleWorks. I particularly want to hear from people who know about the code in which AppleWorks is programmed. If you know anyone who is comfortable with the inside of AppleWorks, would you let me know.

Mike  
Legend Industries  
2220 Scott Lake Road  
Pontiac, MI 48054

[Ed: Legend Industries manufactures the Legend "S", "E" and "C" cards. Look on page 114 of the July issue of A+ for one of their advertisements.]

## F O R U M

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Design & Layout: Don Shall, The PaperWorks

Publisher: The National AppleWorks Users Group

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To the Editor:

I'd like to save formatted ASCII files for transfer to another computer. When I use the Print command (Apple-P) and choose to create an ASCII file on disk, AppleWorks strips out all of my fancy formatting. Can I get a disk file that's nicely formatted? (I've heard that it's possible to configure AppleWorks so it prints formatted files to a disk instead of to the printer. Is that possible? How do I do it?)

Steve Greene  
San Diego, Ca.

*[Ed: AppleWorks versions 1.2 and 1.3 support printing formatted files to a storage disk. To accomplish this you must add a printer to your printer menu and direct the output from that printer to a disk drive. Here's how:*

*Add a custom printer to your system but insert no printer codes. When you add a printer to the menu, AppleWorks asks the slot for the printer. Select the last choice on the printer slot menu: "Print onto disk or on another Apple." That will add a choice to your printer menu that is labelled "Disk Printer". Select that choice when you want to print a formatted file on a disk for transmission to another computer. NAUG Forum will have a complete article on printing to disk in a forthcoming issue.]*

Dear Cathleen,

I would appreciate your help with a project I am working on. I am in the process of collecting information from users of AppleWorks. My focus is on what people are doing with AppleWorks, the nature of their business and so forth. I would appreciate it if you could inform your readers of my intentions and pass along my address to anyone willing to take the time to share their experiences with me.

Daniel Lewis Paul  
Marketing Support Specialist  
Apple Computer, Inc.  
20525 Mariani Avenue  
Mailstop 3P  
Cupertino, California 95014

*[Ed: If you contact Dan, please mention you saw his letter in the NAUG Forum. The more Apple is aware of our presence, the more support we're likely to get from the company...and the more likely we are to get expanded versions of the program.]*

To the Editor:

I have a CP/M card in my Ile. I understand that card has 64K of RAM aboard. Is there a way I can

configure my Ile to use that 64K as additional RAM with AppleWorks? Maybe I can load some of the AppleWorks overlays or Pinpoint accessories into that 64K. Any help is appreciated.

Jim Smith  
Dexter, MI

*[Ed: I understand the Franklin automatically lets AppleWorks use some of the memory on its CP/M card. Users of Franklins report that AppleWorks shows a 70+K desktop on boot-up. Anyone know how Ile owners of CP/M cards can get the same benefits?]*

## USING NAUG TO GET ANSWERS TO APPLEWORKS QUESTIONS

by Cathleen Merritt, Editor

How can NAUG help you get answers to your AppleWorks questions?

Obviously, NAUG cannot maintain a technical staff to answer the many questions that arise about the Appleworks program. But we will help you get those answers. If you can believe InfoWorld, there are about 800,000 AppleWorks users out there and we soon expect to have thousands helping each other through NAUG.

### Here's how to get help:

1. Send your question to me in writing and I'll try to get it answered. I'll publish both the question and the answer in the **Forum**. Please don't call the NAUG office requesting help. We're getting dozens of calls for assistance every day and we can't offer an on-line consulting service.
2. Post your question on the bulletin board. We expect a significant number of technically competent AppleWorks users to share the board. You should get an answer there. If the question is not answered, Richard Lewandowski, the Sysop, will pick it off the board and we'll print the question in the newsletter to get it noticed by a wider audience.

Don't be shy about asking your questions...or answering someone else's. If there's anything you learn from using a computer it's that we're all in this together...and we can help each other.

# USING APPLEWORKS AS A PROGRAMMING TOOL

by Jules Shrage

I don't write many BASIC programs any more, but when I do it's frustrating to go back to Apple's rudimentary BASIC editor after using something as sophisticated as AppleWorks. I could buy one of the programs that are designed to help edit BASIC, but then I'd have to learn a new editor. Besides, I'd rather use the powerful editing commands within AppleWorks for that job.

It turns out that using AppleWorks as a BASIC editor is a practical alternative. Here's how to write and edit a BASIC program using AppleWorks:

1. Create a new document for the AppleWorks word processor. This file will contain your BASIC program.
2. Use the Apple-O followed by the "ci" command to set the characters per inch to 12. That will let you fit more characters on each line on the screen.
3. Enter your BASIC program as if you were writing standard BASIC code. That is, start each line with a line number and end with a RETURN.

You can use all the AppleWorks editing features when writing your program.

4. Save the file on your disk with the Apple-S command. That will let you go back to the file later and edit it with AppleWorks. (This saves the file as an AppleWorks document on your disk, but BASIC cannot read AppleWorks format files. You'll also have to save a copy of the program as an ASCII file...that's described in the next step.)

5. Use the Apple-P command to print an ASCII version of the file on your disk.

Here are the steps necessary to save an AppleWorks document as an ASCII file:

- A. Invoke the Apple-P command to tell AppleWorks you want to print your file.
- B. Select the text (ASCII) file option from the print menu.

- C. Indicate that you want to print the entire file.

- D. Tell AppleWorks where to save the file by entering the pathname. The pathname consists of a slash followed by the name of your data disk followed by another slash followed by the name you want to assign to this file. For example, "/data/program" will store the file on a disk called "data" in a file called "program".

(If you don't know the name of your data disk, go back to the Main Menu and select option #1 (Add files to the desktop). When you get to the Add Files Menu, again select option #1 to get files from the disk. The name of your data disk will appear above the list of file names.)

*[Ed: If you're using a floppy disk system, consider naming all your disks with the same name (I use "DATA"). Then you'll always know the electronic name for each disk.]*

Be patient. It takes AppleWorks a while to save lengthy ASCII files.

6. You're done with AppleWorks. Leave your data disk in drive 2 and boot your computer with a PRODOS disk that has the file BASIC.SYSTEM (The PRODOS User's Disk or PRODOS System Disk that came with your computer should work.) and get into BASIC. (Getting into BASIC from PRODOS should be the subject of another short article.)

7. Now you want to EXECUTE the ASCII file you saved with AppleWorks. (Your ASCII file consists of lines of text you want to treat as commands to the computer. The EXEC command in BASIC says "Read a line of text and treat it like a keyboard entry.") So enter the command "EXEC filename,D2" substituting the name you assigned to the file when you saved it as an ASCII file. In my example, I would enter the command "EXEC program,D2" (without the quotation marks, of course).

The Apple will read your text file as if it were entered from the keyboard. (Ignore any error messages that appear on the screen; you'll correct your errors after you save your file in Applesoft format.)

When the cursor reappears, enter the BASIC command "SAVE filename", but be certain you assign a new name for the file. This will save an Applesoft version of the file on your disk. You can now RUN the program (it's still in RAM) and use the BASIC editor to correct your errors. (If you made too many errors or want to make significant changes to

## (USING APPLEWORKS AS A PROGRAMMING TOOL, Continued from page 4)

your program, you can go back into AppleWorks, recall the Appleworks version of the program from the disk, edit the program, and save the revised version as a new ASCII file.)

This is an introduction to a powerful use of AppleWorks. I'd like to learn about other techniques you develop to use AppleWorks as an editing and programming tool.

[Ed: You can enter the line "SAVE filename" at the end of the BASIC program (do not put a line number in front of the SAVE command). Your BASIC program will then be saved automatically during the EXEC operation.

Jules Shrager is Testing Consultant for the Wayne (Michigan) Intermediate School District.]

## GUIDELINES FOR CONTRIBUTORS TO THE NAUG Forum

by Cathleen Merritt, Editor

The National AppleWorks Users Group is a voluntary association of people with a common interest; members want to share ideas and get support for the popular AppleWorks program. The **Forum**, NAUG's newsletter, is the primary vehicle for our communications and sharing.

The **NAUG Forum** is a member newsletter that consists entirely of materials contributed by NAUG members. Our dependence on each other makes it essential that we share our ideas, thoughts, questions and expertise. The **Forum** publishes three types of member contributions:

1. **Letters:** A letter written to the editor that asks or answers a question, shares an idea or makes a statement. Send me a letter if you have a problem you can't solve, a question you want to share, or an answer to a question. I can't answer these letters individually, but letters of general interest to members will be published in the **Forum**.

2. **Notes:** A "note" is a brief article about a single theme. Most notes consist of hints, suggestions or ideas for fellow users. If you have a trick, a technique, or a shortcut that might be useful to your colleagues, please share it by sending me a "note". Notes are generally less than two typed pages long.

3. **Articles:** An "article" is...well...an article. Appropriate topics for articles include *reviews of hardware and software add-ons* that work with AppleWorks; *descriptions of techniques and shortcuts* that are useful to your colleagues and that cannot be presented in a brief note; *thematic articles* such as Keith Bernhard's piece in this issue, on the impact of AppleWorks; and other AppleWorks related articles you deem important. Articles are generally two to seven double spaced pages.

### How to Submit to the Forum:

1. Please send me paper copies of letters. It will be difficult for me to look at every disk that comes into the office if every letter arrives on a separate disk.

2. I prefer to receive both paper and disk copies of notes and articles.

3. All disk copies should be AppleWorks files on 5-1/4 inch Apple-compatible disks. (We intend to add 3-1/2 inch disk capabilities later; I'll let you know. Until then, please send 5-1/4 inch disks.) Try to send me "clean" disks; i.e., disks that contain only the files required for your submission. If you don't submit a hard copy, please tell me what's on the disk (for example: "This disk contains a note for the **NAUG Forum** in a file called 'BACKUP'. The note explains how to make quick backups of AppleWorks data disks."). That will help me stay organized.

4. All submissions to the **Forum** must include your name, address and telephone number. I'll give you credit for your work by printing your name as author of the article. I won't publish your address or phone number unless you specifically ask me to do so. (I *do need* your address and telephone number so I can contact you with questions.)

5. Mail your submission to me. The **NAUG** address is on the back cover.

Richard Lewandowski (the **NAUG** bulletin board Sysop) will set a place aside on the **NAUG** board to accommodate electronic submission of materials for the **Forum**. But for now, please mail me your disks and/or hard copies until he gets that area on the board fully installed and tested. We'll let you know when you can upload articles.

Sorry, we're a users' group and nobody gets paid for **NAUG Forum** submissions. However, if you send your contribution on a disk, I'll send you a replacement disk along with an acknowledgement.

Share your thoughts with your colleagues...send your ideas to the **Forum**.

# PRINTER PRIMER

## HOW TO CONFIGURE APPLEWORKS FOR CUSTOM PRINTERS

by Warren Williams, Eastern Michigan University

*[Ed: A significant proportion of the technical questions sent to NAUG pertain to difficulties AppleWorks users face when configuring printers to work with the program. If you have an Apple printer, an Apple interface card and don't plan to buy another printer, you probably don't need this article. But if you want help getting other printers to work with AppleWorks or want to use features that are available on your printer but not supported by AppleWorks (e.g., getting an entire page to print in boldface or printing italics), read on.]*

*This article helps you get started to add printing features to your AppleWorks program. Later articles will cover how to implement specific printer features.]*

AppleWorks offers very flexible printer support. Once you know how to configure AppleWorks for different printers, you can get almost any printer to run properly with the program. This article describes how to add a "custom printer" to the AppleWorks printer menu. It is the first of a series of articles that will appear in the **NAUG Forum** designed to help you use the printer support flexibility available in your AppleWorks program.

To AppleWorks, a "custom printer" is (a) any printer that is not on the AppleWorks printer menu, or (b) a printer that is on the printer menu but to which you want to add printing features different from the ones offered by AppleWorks (for example, you want to be able to print italics).

To use these techniques you'll need (a) a printer that is correctly connected to your Apple, and (b) the section of the printer manual that contains the printer control codes (the list of codes your printer uses to set up its special features such as underlining and different print sizes). If your printer manual only shows the decimal or hexadecimal values for the control codes, you will also need (c) a conversion table to convert from those values to their keystroke equivalents. (Unfortunately, the AppleWorks documentation does not include this table, but it's available from numerous other sources. Look up "ASCII Character Codes" or "ASCII Values" in the Table of Contents from a book on programming in BASIC and you should find the necessary table. Again, you need this table only if your printer manual shows the decimal or hexadecimal values of the codes required by your printer. Most printer manuals

show the keystrokes necessary to control the printer, so most AppleWorks users do not need this conversion table.)

Here's how to configure a "custom printer". I'll assume you know the basics of operating AppleWorks.

1. Make certain your printer is properly connected to an interface card in slot 1 of your Apple IIe or is plugged into the printer port on the IIc.

2. Test the printer as follows (do this even if you know your printer is connected properly...we'll need this printout later in the process):

- A. Insert paper in the printer and turn it on.
- B. Turn on your Apple with no disk in the drive.
- C. Do a Control-Reset to stop the disk drive.
- D. Type (capital letters only) PR#1 and press the RETURN key.
- E. Type HELLO THERE (it might not show on the screen) and press the RETURN key. Ignore any beeps or warnings.

If HELLO THERE and SYNTAX ERROR printed on your printer, you can continue. If nothing printed, you have a problem with your interface card, cable or printer; don't proceed until you get that problem resolved.

If you have a serial printer, the problem is frequently in the DIP switches on the serial card or in the cable configuration. The serial card manual should tell you how to set the switches for your printer. If the switches are set properly and your system still won't work, consider buying a Smart Cable from IQ Technologies (list price is \$50). The Smart Cable automatically configures the cabling connections to help the computer communicate with the printer.

3. Check your printer manual or ask your dealer if your printer is compatible with one of the printers on the AppleWorks printer menu. (For example, some of the new Panasonic printers are Epson-compatible.) If your printer is compatible with one that's on the menu and if you're happy with the printing features that are standard on AppleWorks, select the compatible printer from the AppleWorks printer menu and you're done.

For example, if your Panasonic printer acts like an Epson FX series printer, tell AppleWorks you have an Epson FX and the program should configure itself properly for your printer. If it doesn't, your printer is not exactly compatible with the Epson printer (no

matter what the printer manual says) and you'll have to join the rest of us as we configure our device as a custom printer.

4. To add a custom printer, start AppleWorks and get to the printer menu (by selecting 5 (Other Options) from the Main Menu and 7 (Specify information about your printer) from the Other Options Menu.)

5. Select choice #3 and remove all printers you don't own from the system. You can always add them back if you need them and there is no reason to have them on your menu every time you want to print something.

6. Select choice #2 (Add a printer) from the Printer Information Menu and choice #12 (Custom Printer) from the Add a Printer Menu.

7. Type a name for your printer and press RETURN.

8. Your printer is probably in slot 1 (yes, even if you have an Apple IIc without slots), so press RETURN.

9. You are now at the Add a Printer Menu.

Look at the printout of HELLO THERE and SYNTAX ERROR that you generated in step #1. Note how many blank lines appear between those two lines of print. If there are one or more blank lines between HELLO THERE and SYNTAX ERROR, leave choice #1 (Needs line feed after each RETURN) set to "NO". If there are no blank lines between HELLO THERE and SYNTAX ERROR or if HELLO THERE and SYNTAX ERROR printed on the same line, change the setting to YES.

10. Check the control codes in your printer manual to see if there is a control code labelled "form feed" or "end of page" (or anything else that implies there is a command that tells your printer to skip to the next page). If you find that command, change the "Accepts end of page command" option to YES. If you don't find that command or if you're uncertain, leave this option at NO. AppleWorks will work correctly with most printers when this option is left at NO.

11. If you have a tractor feed mechanism on your printer and plan to use continuous feed paper even occasionally, leave the "Stop at end of each page" option set to NO. If you'll only use single sheets of paper, set this option to YES.

12. Leave the "Platen width" setting at 8.0 inches (yes, even if you have a wide carriage printer). When you are finished configuring your printer and

are using it for actual work, check to see if your printouts are correctly centered on the page. If they're not:

A. return to this menu and change the "Platen width" setting to 8.5 inches, and

B. start each of your documents with a "Platen width=8.5 inches" command available from the "options" menu (Apple-O command).

13. We're now going to test the initial setup. Your printer should be able to print properly but it won't underline, do boldface, or offer many of the formatting features you'd like; we'll install those features later.

To test the printer, press the ESCAPE key until you get back to the Main Menu. Create and print a small document without underlines, boldface, superscripts or subscripts. A typical letter to a friend is a good test. The printer should print this letter correctly. If it doesn't you'll probably need to change the initialization string going to the printer interface card. That's covered in the "Printer Primer" column in next month's issue of the *Forum*.

### **ADDING FORMATTING FEATURES:**

14. Now let's add formatting features such as underlining, boldface and the like to our AppleWorks printer setup. Return to the Printer Information screen (by going through the menus) and select "Change printer specifications" for the printer you added to the system. Then select "Printer codes" from the Change Printer Menu.

All printer codes are added the same way. We'll walk through the procedure and add a couple of codes; you can then generalize those procedures to the remaining codes.

Remember that you only have to add the codes for the features you want to implement. For example, you might not use superscripts and subscripts. If you don't need those features, don't bother to put in those codes.

We'll add the codes for characters per inch (cpi) and for underlining.

15. Select 1 (Characters per inch) from the Printer Codes Menu.

16. Let's enter the code to set the printer for 10 cpi. AppleWorks wants to know which print size you're defining. Enter the number 10 and press return.

**(PRINTER PRIMER, Continues on page 8)**



(**PRINTER PRIMER**, Continued from page 7)

17. Now we must enter the keystroke combination that defines 10 cpi. That information is in your printer manual, but here is where things can get tricky. Your printer manual gives the codes in one of three forms. It will tell you either:

- A. the keystrokes you need to get the different print sizes (for example, your manual might say that the code for 10 cpi is "ESCAPE, Control-O"),
- B. the ASCII decimal codes you need to get the different print sizes (your manual might say the code for 10 cpi is 27,15), or
- C. the ASCII hexadecimal codes you need to get the different print sizes (your manual might say the code for 10 cpi is \$1B,\$0F). The dollar sign and the "numbers" containing letters are both indicators that you're working with hexadecimal numbers. However, you don't need to understand hexadecimal numbers to install your printer.

All three systems are ways to represent the same information.

If your printer manual describes the control codes in keystrokes (option "a" above) you're in luck. If not, you will need a table to convert from ASCII decimal or hexadecimal codes to keystrokes. The table usually has two or three columns including (a) the keystroke, (b) the decimal value, and (c) the hexadecimal value. Here's part of a typical conversion table:

Key	Decimal	Hexadecimal
Control-A	01	\$01
Control-B	02	\$02
Control-C	03	\$02
.	.	.
.	.	.
.	.	.
Control-O	15	\$0F
Control-P	16	\$10
.	.	.
.	.	.
.	.	.
Escape	27	\$15
.	.	.
.	.	.
.	.	.

In our example we want to enter the keystrokes for 10 cpi. The codes required to set your printer for 10 cpi is found in the control code chart that came with your printer. If the printer control code chart in our manual gives the codes in keystrokes, it will list each

function and the keystrokes necessary to engage that function. For example:

Function	Keystroke
Pica type (10 cpi)	ESCAPE, Control-O
Elite type (12 cpi)	ESCAPE, Control-P
Condensed type (17 cpi)	ESCAPE, P, Control-O
Underline on	ESCAPE,-,1
Underline off	ESCAPE,-,0
.	.
.	.
.	.

If the control code chart in the printer manual gives the codes in decimal and/or hexadecimal values, it will look like the following:

Function	Decimal	Hexadecimal
Pica type (10 cpi)	27,15	\$15,\$0F
Elite type (12 cpi)	27,16	\$15,\$10
Condensed type (17 cpi)	27,80,15	\$15,\$50,\$0F
Underline on	27,45,49	\$15,\$2D,\$31
Underline off	27,45,48	\$15,\$2D,\$30
.	.	.
.	.	.
.	.	.

We now have the information needed to configure the printer.

[Ed: Unfortunately, the manuals that come with some printers list incorrect codes. If your printer will execute some of the functions you configure but not others, check with the printer manufacturer to determine if the control codes published in the manual are correct. For example, the early Epson printer manuals published the correct code for "underline on" but an incorrect code for "underline off". If you used those codes to configure AppleWorks, the program would turn underline on properly, but once turned on, could not turn underline off because it did not know the correct code for underline off.]

18. In step 16 we told AppleWorks we're defining the control codes for 10 cpi. AppleWorks presents us with a screen where we enter the keystrokes associated with those codes.

The default value of "None" is probably on the screen, so tell AppleWorks you want to change that value. If your printer manual tells you the keystrokes to enter, press those keys AND ONLY THOSE KEYS now. When you're done, hold down the shift key and press the number 6.

If you make a keystroke error, don't bother with the DELETE, left arrow, or ESCAPE key...they won't do what you expect. Just enter a Shifted-6 and start again. This happens to all of us...regularly.



In our example, the printer manual says that ESCAPE, Control-O sets the printer for 10 cpi. So we would press the ESCAPE key followed by a Control-O. Then we would enter a Shifted-6 to get the caret mark (^) to indicate we're done entering commands.

If your printer manual gives the codes in decimal or hexadecimal form, you must look up the associated keystrokes in the ASCII conversion chart and enter those keystrokes. As indicated earlier, AppleWorks needs the keystrokes, not the decimal or hexadecimal values.

In our example, if our printer manual gave decimal or hexadecimal values of 27, 15 or \$15, \$0F respectively for the control codes, we would look up the decimal or hexadecimal numbers in the conversion table and find that the decimal 27 and hexadecimal \$15 both signify the value of the ESCAPE key. The decimal 15 and hexadecimal \$0F both signify a Control-O. So we would enter an ESCAPE followed by a Control-O followed by a Shifted-6 (a caret) to signify the end of the control codes for 10 cpi.

It should be apparent that you don't need to understand ASCII codes or decimal or hexadecimal values to make these entries; you can follow these procedures mechanically. The steps are:

- A. Look up the control codes for the option you want to install.
- B. Convert those codes to keystrokes from decimal or hexadecimal values (if necessary).
- C. Enter the required keystrokes into AppleWorks followed by a Shifted-6.

19. Now let's enter the codes for 12 cpi:

- A. Enter "12" (followed by RETURN) in response to the "Characters per inch?" prompt.
- B. Look up the control codes for 12 cpi. Let's imagine the printer manual shows only the hexadecimal values of \$15, \$10.
- C. Look up the keystroke equivalent of hexadecimal \$15 and \$10 in the ASCII conversion table. \$15 is an ESCAPE; \$10 is a Control-P.
- D. Press the ESCAPE key, followed by a Control-P followed by a Shifted-6.
- E. Press the ESCAPE key again to indicate you are done entering characters per inch command codes.

20. Here's how to enter the codes for underlining.

Let's imagine that our printer manual only gives us the hexadecimal value \$15, \$2D, \$31 for underline start and \$15, \$2D, \$30 for underline stop.

A. Select "Underlining" from the Printer Codes Menu.

B. Printers have different ways of commanding underlines. Most modern printers have a code to indicate start underlining and another code to stop underlining. Everything printed between the underline begin and underline end codes is underlined. If you find underline begin and underline end codes (or start underline and stop underline codes) in the printer manual, that's probably how your printer works, so select "Printer has start/stop underline commands" from the Underlining Menu. If you don't find underline begin and end codes, select choice #3 ("Print character, backspace, underline") from the menu.

C. Look up the keystrokes for hexadecimal \$15 (ESCAPE), \$2D (a hyphen), \$31 (the number one) and \$30 (the number zero).

D. Select the menu option that lets you enter the codes for underline start.

E. Enter the keystrokes ESCAPE followed by the hyphen followed by the number 1 (the equivalent for hexadecimal \$15, \$2D, \$31) for underline start and type a Shifted-6.

F. Indicate you want to enter the codes for underline stop.

G. Enter the keystrokes ESCAPE followed by the hyphen followed by the number zero (the equivalent for hexadecimal \$15, \$2D, \$30) and type a Shifted-6.

H. Press the ESCAPE key until you return to the Main Menu.

You can now generalize this procedure to add additional features available on your printer.

Installing your first custom printer takes some time and is typically a source of frustration. But if you have the manuals you need and once you get some practice, you can typically install any printer in 15 minutes or so.

Next month's "Printer Primer" will discuss how to configure AppleWorks for different printer interface cards and how to eliminate extra characters that sometimes appear at the top or left hand edge of AppleWorks printouts. The month after that, "Printer Primer" will cover getting rid of unwanted double spaces between lines and getting complete pages printed in boldface. Later articles will describe how to print italics and other special characters available on your printer.

*[Warren Williams is a Professor of Educational Psychology at Eastern Michigan University and a founder of NAUG. His CompuServe ID number is 71705,504.]*

# IMPACT IS IMPACT

by Keith E. Bernhard

Quiz time! Which piece of software has had the most significant impact on the widespread use of microcomputers? Tick... tick... tick...tick... bing!

Did an answer immediately leap to mind? Did you hesitate even once? If so, that's OK. The answer is, it depends.

**SOME BACKGROUND:** To many, especially IBM-PC users, the answer is Lotus 1-2-3; far and away the largest selling piece of software since its introduction in 1982. To others, those who have a somewhat longer view of personal computer history, the answer is Visicalc (1979); the granddaddy that started the whole "personal computing revolution".

Other software might come to mind. For example, WordStar, a word processing program which began as a CP/M-based program then successfully migrated to the MS-DOS world. Bank Street Writer might come to mind. Bank Street Writer was designed for children, but adults found out about it, and the rest is history.

Some people might cite pfs (Personal Filing System) as having a major impact on personal computing. After all, pfs:File was the first widely sold piece of software to help people use the sorting and file management capabilities of computers. Purists might contend that it was not really data base management software, but for most people, it did everything they wanted a data base to do, and it was done on an Apple II.

We rambled a bit here on contenders for the title of "most impact", but there were two reasons for doing so. First, the question is unclear. You might ask, "Impact in what respect?" Impact on business? Impact on home use? Impact on school use? Second, none of the software listed was compatible with the others. They all had a legitimate claim to fame, but from the outset, their application was limited.

**REPHRASING THE QUESTION:** So let's rephrase the question... Which piece of integrated software had the most significant impact on the use of microcomputers?

Why ask about integrated software? Early in the existence of the IBM-PC, integrated software was

touted as the major reason for selecting a 16-bit machine. Lotus 1-2-3 was touted as integrated software, and indeed, it had some memo writing capability, a data base mode, and could do limited graphics. But as it turned out, the real reason people bought 1-2-3 was for its spreadsheet size (256 columns x 2048 rows) and power (over 250 commands and over 50 functions).

After 1-2-3, Lotus Development brought out a truly integrated package, Symphony. Symphony emphasized its spreadsheet (surprised?) but added a more capable word processor, a larger data base, and a communications component. Opposite Symphony in the battle of integrated software, were the likes of Framework (from Ashton-Tate, the producers of Dbase II) which emphasized its data base capability (surprised again?) and Enable (from The Software Group) which was modular in its approach and more evenhanded in its program components. Then there were unique products like Desq (from QuarterDeck Software), which let you assemble combinations of existing software (e.g., WordStar, Dbase II, SuperCalc, etc.) under a fairly consistent set of command codes, and SideKick (from Borland International) that added programs in the "background" to permit extra activities (e.g., keeping a Rolodex file, dialing a telephone, keeping a calendar) without disturbing the main working program.

## THEN CAME AppleWorks

Then came AppleWorks (from Apple Computer, 1983). And "they" said it couldn't be done. Not on a 8-bit machine, they said. Not in 64K of memory, (even though they were really right). Not without emphasizing one component at the expense of the other, they said. And, besides, there really wasn't enough of a serious market for an Apple product of this kind, they said. But that was long ago...

In the IBM-dominated world of 16-bit machines, SideKick has done well (as have look-alikes). But the users of Symphony, Framework, Enable, Desq, Topview, and others are overshadowed by the number of 1-2-3 users in the world, and the sales of highly touted integrated software products for 16-bit systems has been disappointing.

So, if we look for impact on personal computing by an integrated package, the answer, ironically, is not in the world of 16-bit machines nor in the world of 32-bit machines. The answer is in the 8-bit world. The answer is AppleWorks (and the "afterworks" that have enhanced the program considerably).

As an integrated productivity tool in wide use, AppleWorks has no equal. Sales of this program have been at or near the top of the chart for two years. And there is a second irony. The success of AppleWorks has actually inspired software developers to produce new integrated products (albeit usually on other systems). Don't be surprised if you soon see an AppleWorks clone that runs on 16-bit machines. It is the veritable resurgence of a genre!

Now let's consider the one remaining problem. Users of 1-2-3 are smug, if not arrogant. They say, "I use Lotus" and people are awestruck. There is a Lotus mystique, and it is propagated by Lotus users. Some people might suggest that the Lotus mystique is the real impact of Lotus 1-2-3. So, let me humbly suggest that users of AppleWorks apply these same techniques. A little arrogance can't hurt. Besides, when we finish a project, we can say with confidence that "We gave it the 'Works!'"

*[Dr. Keith E. Bernhard is Director of the Instructional Media Center at Bowling Green State University, is Coordinator of computer courses at the Chautauqua Institution, developed the Instructional Computing program at the University of Toledo, and was a founder of the Computer League for Users in Education (NW Ohio). His three micros and two children have been known to give him "the works" on occasion.]*

## NOTES FROM APPLELINK

### INFORMATION FROM APPLE CORPORATION

by Cathleen Merritt, Editor

*[Authorized Apple dealers have access to technical support information from Apple Computer through an on-line system called "AppleLink". The NAUG Forum will publish items of interest to AppleWorks users that appears on the AppleLink system. See your Apple dealer for more information about items discussed in this column. (We appreciate the assistance of The Learning Center, a full-service Apple dealer in Ann Arbor, Michigan in providing information for this column.)]*

We anticipate that many of our members plan to take their Apples with them to use AppleWorks when they travel or work abroad. Here are some suggestions from Apple Computer about using your Apple overseas:

Apple II+, IIe and IIc computers are designed for operation at 107-137 volts, A.C. at either 50 or 60

Hertz. In countries that supply electricity at a different standard (usually 220V at 50 Hz) use a grounded stepdown isolation transformer to convert 220V to 110V.

You should plan on taking your own monitor since many foreign televisions and monitors are not compatible with the NTSC standard used in the United States. Your monitor must be capable of operating at 50 Hertz; check with the manufacturer for information. Some monitors, including Apple monitors, might have significant screen flicker when attached to a 50 Hertz power source. However, your Apple monitor should not be damaged by operating at 50 Hertz.

Apple reports that none of its U.S. market printers are guaranteed to work properly when connected to a 50 Hertz circuit. The Apple Scribe and Apple Color Plotter can be damaged if connected to a 50 Hertz power source.

Apple claims that the following Apple printers will not be damaged if operated on a 110V, 50 Hertz circuit:

Daisy Wheel  
Dot Matrix  
Imagewriter  
Imagewriter II  
Silenttype.

However, Apple reports that operating these printers using a 50 Hertz electrical current noticeably affects the spacing between characters. Plan on using your printer only to obtain draft-quality output while working in a 50 Hertz environment. However, your AppleWorks files will be stored correctly on your disks even if your documents don't print properly while you're abroad. You can either mail your data disks to the States for printing or wait until you get home for your final printout.

The Apple Scribe and Apple Color Plotter should NOT be used when connected to a 50 Hertz source. Apple warns that these devices may be damaged...they are designed only for 60 Hertz operation.

(Note: Those of you who own Apple IIc's and who want to work outside North America should consider the portable system described in "Portable AppleWorks" in next month's **Forum**. In addition, there are portable printers that work with the Apple IIc. Perhaps a member who is using a portable printer with AppleWorks will share his/her experience for publication in the **NAUG Forum**.)

# SPREADSHEET TIPS

## USING THE "ARRANGE" COMMAND

by Warren Williams

The "Arrange" (Apple-A) command in the AppleWorks spreadsheet is a powerful and useful feature of the program; I repeatedly find uses for the command that I never anticipated. For example, when I need an alphabetical list of words, phrases or lists, I call up the AppleWorks spreadsheet and type my list in column A. (I don't have to worry about making the column wider...my text runs over into adjacent columns.) Then I use the Arrange command to put the text in alphabetical order.

Unfortunately, the Arrange command can get you in trouble because there is no "Unarrange" command in AppleWorks, if you don't like the way Appleworks rearranges your spreadsheet, there is no command you can use to get the data back to its original condition. (I'll describe a procedure to help you return your spreadsheet rows to their previous status later in this article.)

### HINTS AND SUGGESTIONS:

Here are three hints and suggestions that come from a few unfortunate experiences with the command:

1. Save your work before you use the Arrange command. If you save your work and don't like the way AppleWorks rearranges your spreadsheet you can return to the Main Menu, remove the spreadsheet from the desktop and retrieve the unarranged version of the file from your disk.
2. Design your spreadsheet so you can use the Arrange command. For example, the Arrange command re-orders complete rows, not parts of rows. If you want to rearrange a series of rows, you have to be careful about portions of your spreadsheet that are off your screen. If they're in a row that's affected by the Arrange command, they'll also be rearranged.

So the rule is simple: If you're going to use the Arrange command, put all summary information at the very top or bottom of your spreadsheet, not at the left hand or right hand edge of the spreadsheet.

3. Be aware of the impact the Arrange command has on calculations down columns. Here, an example will help:

Imagine you are keeping student grades in an AppleWorks spreadsheet. The gradebook looks like this:

	B	C	D	E	F	G
3	GRADEBOOK: EDP 631--					
4	MEASUREMENT AND EVALUATION					
5						
6	Last Name	First Name	Midterm	Final	Project	Average
7	=====					
8	Williams	Lisa	84	83	85	84.0
9	Smith	Jim	90	85	80	85.0
10	Pachota	Susan	88	80	84	84.0
11	Zucarro	Frank	78	74	77	76.5
12	Johnson	Sara	50	60	40	50.0
13	Viola	Jack	76	76	74	75.0
14	Herman	Jerry	69	68	70	69.0
15	Esch	Anita	74	75	73	74.0
16	Jackson	Emily	74	86	80	80.0
17	=====					
18	Average =		75.9	76.3	73.7	75.3
19						

The Arrange command has no impact on calculations within a row. That is, it will not impact on the calculation of each student's grade. However, the Arrange command can have a significant impact on calculations down columns.

We want the formula in cell D18 (the formula that calculates the midterm average) to average the scores in cells D8 through D16. But if we want to use the Arrange command, we must specify a range of cells that is beyond the cells that will be rearranged. That is, we must use the formula @AVG(D7...D17), not @AVG(D8...D16).

If we specify the formula as @AVG(D8...D16) and use the Arrange command, the value in cell D8 will change position...and AppleWorks will adjust the formula to follow that value. Similarly, the value in cell D16 will change position and the formula will adjust to follow the movement of that cell. After we use the Arrange command, the adjustments in the formula will yield incorrect values for the midterm average.

If we anticipate the impact of the Arrange command, it's easy to design our formulae so they remain correct after the rows are rearranged. Follow these guidelines:

- A. Make certain the cell above and the cell below the numbers you want to include in your formula either is blank or contains a label. (In our example, cells D7 and D17 contain labels that consist of a

series of equal signs used to represent a line.)

B. Write your formula so it includes the cell above the range of numbers and the cell below the range of numbers. In this instance, the correct formula reads @AVG(D7...D17) because the numbers we want to average are in cells D8 through D16.

**So you didn't save your work...**If you didn't save your work, here's a technique that will let you rearrange your spreadsheet into some semblance of order after a disastrous "Arrange":

1. Create a new column. Make the column only two or three characters wide.
2. Look through your incorrectly rearranged rows and decide which row should be first. Insert a "1" in the empty cell in that row.
3. Look for the row that should be second and insert a "2" in the empty cell in that row.
4. Repeat that process until you've inserted a number in every row.
5. Use the Arrange command to sort the records on that temporary column.
6. Delete the temporary column and save the work.

This technique requires some work to get everything reorganized, but it's not as painful as starting again.

## BULLETIN BOARD NEWS

### ELECTRONIC FORUM

by Richard Lewandowski  
AppleWorks BBS Sysop  
NAUG BBS PHONE=(313) 482-8090  
(300 or 1200 baud)

I am pleased to have the opportunity to host the **NAUG Board**, the electronic forum of the **National AppleWorks Users Group**. With this medium you will share ideas with other members, post bulletins asking for help with AppleWorks problems, share tips on how to use AppleWorks, and gain access to a growing library of AppleWorks templates and support materials. I'll write monthly notes in the **Forum** about how to use the system, some of its features, useful templates and files available on the **Board** and other items of interest to members.

While the **NAUG Board** is available now, many of its features are not yet operational. I expect to implement most of the board's features by September 1st, but don't hesitate to log on before then to explore the system. Remember, this is your system.

If you're new to modems and bulletin boards, try to find a friend who can help you get started. Once you're ready, have your computer call (313) 482-8090 at 300 or 1200 baud. When you reach the board, type the word 'new' (no quotes or apostrophes) at the password prompt and you will be lead through the registration process. Use the same name that you used to register as a **NAUG** member; we will validate your registration with our **NAUG** member list. Validations are usually completed within two to five days.

On your first call you will have limited access to the system; you can only register, get your password and explore its general menus. You will not have access to the **NAUG** portion of the board until after I validate your membership. Once your account is validated, you can post messages, obtain templates or other files which relate to AppleWorks, or contribute your own designs.

Detailed help on how to use the board is available at any prompt by typing a question mark or the letter H and a carriage return. I suggest you open your buffer or leave your printer on and capture the menus and help information the first time you log on.

Send me a self-addressed stamped envelope and I'll send you a summary of the system commands.

In the next issue, this column will cover some system commands and features in more depth and highlight some of the information available from our electronic forum.

*[Richard Lewandowski is Coordinator of Instructional Computing for the Ypsilanti, MI public schools.]*

## MOVING ?

Let us know if you're moving. Either remove your address label from a recent issue of the **NAUG Forum** or send us your **NAUG** membership number that's on the label. Send your new address and phone number.

Membership Number: \_\_\_\_\_

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New Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

## DATA BASE TIPS

### CUSTOMIZING DATA ENTRY IN THE APPLEWORKS DATA BASE

by Hal Heidtman

Here's a technique I use to ease the task of entering data into an AppleWorks data base. It's based on the notion that it's easier to enter data into a computer if you match the AppleWorks input screen to the format of an existing data record (assuming that one exists, of course). If your data already exists on some form or piece of paper, why not design the AppleWorks data entry screen to match the form?

You can use this technique any time after you've started entering data into your data base. Here's how:

1. Make certain you are in the single record layout. If you are in multiple record layout, press the "Apple-Z" combination to Zoom into the single record layout. If you are in "Insert Records" mode, press the ESCape key to return to single record layout.
2. Press "Apple-L" to go into Layout.
3. Use the arrow keys to put the cursor on the first letter of a category name you want to move.
4. Hold down an Apple key and use the arrow keys to drag the category wherever you want on the screen. Be sure you have the cursor on the first character of the category name, otherwise this will not work.
5. When the screen layout is the way you want it, press the "ESCape" key.
6. AppleWorks asks you which way you want the cursor to move when RETURN is pressed. If you choose #2 (left to right, top to bottom) the cursor will move from category to category based on your new layout. That will let you type the data in the same order and position as it is on the written form and makes for easier data entry.

Arrange the categories any way you like. Just leave enough room for data entry following the category name. Here are some hints to help:

1. Move any categories that have default settings (you set defaults using an Apple-V command) to the

bottom of the screen. You don't have to fill those categories and can skip over them at the end of the record and move directly to the next record using an Apple-down arrow combination.

2. Set up your layout to minimize entry of incorrect data. Here's an example: Assume you have a category labelled "Sex" and one labelled "Age". You want to enter only a single letter into the "Sex" category and no more than two digits into the "Age" category. If you place the "Age" category near the right-hand edge of the screen you can place it so only two characters can be entered into the field. Similarly, if you place a category as closely following the "Sex" category as AppleWorks allows, you can limit entry to only one character. (AppleWorks will help you format the screen properly here. It insists that you leave room for at least one character after a category name on the input screen.)

A final suggestion: Add a few extra categories when you set up your data base (I call them X1, X2, and X3). These extra categories can be renamed later if you need additional categories in your data file and you won't lose any of your special layouts or print formats. These extra categories should be dragged to the bottom of the screen when you prepare your data entry layout.

I think you will find that this makes for quicker & easier data entry into your AppleWorks data base files.

*[Hal Heidtman is an Associate Principal at Anthony Wayne High School in Whitehouse, Ohio and is a respected AppleWorks authority.]*

## FROM THE PUBLIC DOMAIN

by John Denzer

Welcome to our first issue of the **NAUG Forum**. I look forward to helping you share your ideas about how to use AppleWorks. This is a new organization so please bear with me as I get myself organized. I'll be writing a few lines in each issue to tell you about new items that are added to the **NAUG** public domain disk library. But this month I want to describe my responsibilities and how we can help each other.

As librarian, my job is to take the files submitted by members, have them tested to make certain they work, determine whether or not to add the file to the library, and organize the files onto master disks. Every month I'll write a brief article describing new

additions to the library. I need some help testing out the templates and programs submitted by fellow members. If you can assist in that work by examining a submission from a fellow **NAUG** member, please let me know either by sending me a message through the **NAUG** bulletin board or dropping me a note. Tell me about your special interests and skills so I can send you templates that match your interests. (Wouldn't it be nice to get financial templates that are reviewed by an accountant?)

When submitting files for the library, please follow these guidelines:

1. You can submit templates two ways:

A) You can upload your file(s) electronically to our bulletin board, or

B) You can send me a disk with the template on it. Send your disk to:

**John Denzer**  
**National Appleworks Users Group**  
**Box 87453**  
**Canton, MI 48187.**

If you send your file(s) on disk, I'll gladly send you a disk from the **NAUG** public domain library. Let me know which disk you want. If you submit soon and public domain disks aren't ready, I'll send you a blank disk.

2. Please include an AppleWorks word processing file on your disk that describes (a) what your file does, (b) how to use it, (c) any special hardware or software needed to use your template or program, and (d) any other comments you think the user should know about your file. If you upload your file(s), please put this information in a file with the same name but with the suffix .DOC.

3. If you are sending a spreadsheet, you might want to protect any cells with formulas that shouldn't be changed.

4. Please include your name, address, and phone number so I can contact you if I have any questions about your submissions. We will automatically give recognition to the author of every file added to the public domain library. If you don't want to be identified, let me know.

Looking forward to hearing from you and helping you share your work with other **NAUG** members.

*John Denzer is a social studies teacher at Hartland High School, in Hartland Michigan. He has a Masters Degree in Educational Technology from Eastern Michigan University.]*

## MEMBER INFORMATION

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

### COSTS & FEES

All fees are payable only in U.S. dollars. Payment must accompany your order:

**NAUG Membership**--one year--includes

bulk rate mailing of newsletter to addresses in the U.S. and Canada	\$24
First class mailing of newsletter to U.S. and Canadian addresses	\$10*
Surface mailing of newsletter outside of U.S. and Canada - delivery not guaranteed	\$10*
Airmail delivery of newsletter outside of U.S. and Canada	\$25*
Public Domain Disk Catalog (when available)	\$7
Public Domain Disks (includes postage in U.S. and Canada):	
First disk	\$6
Additional disks	\$4
Airmail postage outside U.S. and Canada (per disk)	\$2

*\* In addition to NAUG membership*

## WISH LIST

All right, we promise not to tell Symphony and Framework users, but AppleWorks isn't perfect. Since Apple receives our newsletter, here's a chance to tell those folks things you'd like to see in the program. Send your suggestions to:

**Wish List**  
**National Appleworks Users Group**  
**Box 87453**  
**Canton, MI 48187**

## NEXT FORUM

- Δ How to use AppleWorks on a network
- Δ Using Appleworks with different printer interface cards
- Δ Using dates in the AppleWorks data base
- Δ Portable AppleWorks - Taking your Apple on the road



**NAUG:**  
*The National AppleWorks Users Group*  
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### NAUG MEMBERSHIP

*See p. 15 for more details*

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Computer type: \_\_\_\_\_ Modem type: \_\_\_\_\_

Printer type: \_\_\_\_\_ Peripherals: \_\_\_\_\_

Computing interests: \_\_\_\_\_

**NAUG** shares member's addresses with other users groups and selected vendors. If you do NOT want to receive mail from these agencies, please check here: \_\_\_\_\_

Check all which apply: \_\_\_\_\_ Membership: \$24

\_\_\_\_\_ 1st Class (to U.S. & Canada): \$10

\_\_\_\_\_ Surface Mail (outside U.S. & Canada): \$10

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**Send this completed application AND your payment. Total Enclosed: \$ \_\_\_\_\_**