

12/14  
9/22/94

# Computer and Information Services Newsletter

This newsletter is an information resource for the University of Minnesota.

Volume 4, Number 3

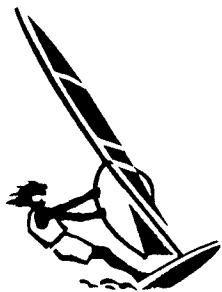
## September 1994

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## Gopher Surfer

*Server Software for Macs*



Want to become an outpost on the information highway? We are pleased to announce Gopher Surfer, software that turns a Macintosh into a Gopher server, the part of Gopher that publishes information that people access using Gopher clients. So if you have a Macintosh and want to make information available to others through Internet Gopher, this software enables you to do so.

### Features

Gopher Surfer offers the complete Gopher+ protocol. You can create links to other Gopher servers, gather information using electronic forms, and post alternate representations of data documents, such as providing information in word-processing, graphic, movie, or other language formats. You can also use the System 7.x *Users & Groups* feature to set access permissions and the System 7.x *Alias* feature to link files stored on different hard disks and file servers to your Gopher server.

### AppleSearch

If you wish to add searching capability to your Gopher Surfer, you must purchase AppleSearch software, set it up on a 68040-based Macintosh, and use Gopher Surfer to establish a link to the AppleSearch resource. (The AppleSearch server then appears as a Gopher search engine to Gopher clients.)



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### Obtaining the Software

AppleSearch is software that you purchase separately. The Williamson Book Store's price is \$1065 for kit M2136Z/B. This kit includes AppleSearch server software (for 68040 Macs, Power Macintoshes, and Workgroup Servers) and a server admin guide. (The kit also includes five client guides and a license to make up to five copies of the client software. Since Gopher Surfer is also an AppleSearch client, this separate client software is not necessary to let folks access the Gopher server.)

You can get a free copy of the AppleSearch Trial CD by calling 800-892-4651, extension 200. Ask specifically for the *AppleSearch Trial CD*.

### Requirements and Caveat

To set up a Mac as a Gopher server you need:

1. System 7.x. and a Mac SE or later model Macintosh (Macintosh Plus computers cannot be used with Gopher Surfer). AppleSearch requires at least a 68040 processor Mac.
2. Thread Manager installed (included in Gopher Surfer sea.hqx files).
3. MacTCP installed and configured with a static IP address; a SLIP connection cannot be used for a Gopher server.
4. Macintosh registered with your local domain name system (nameserver) administrator. At the University of Minnesota, you would contact University Network Services at unet@unet.umn.edu.

The latest version of Gopher Surfer is a beta-test version, hence you may run into some bugs.

### Where to Get Gopher Surfer

You can get the latest version (1.0b8) of Gopher Surfer by either gopher'ing or ftp'ing to boombox.micro.umn.edu.

Via Gopher you connect to port 70 and follow this path:  
gopher/Mac\_server

Via ftp connect as user 'anonymous' and follow this path:  
pub/gopher/Mac\_server

In either case you will see the files listed below.

GopherSurfer1.0b8\_68K.sea.hqx

For Macintoshes with 68xxx CPUs.

GopherSurfer1.0b8\_68K\_AS.sea.hqx

For Macs with 68xxx CPUs running an AppleSearch server in conjunction with Gopher Surfer.

GopherSurfer1.0b8\_PPC.sea.hqx

For Macs with the Power PC CPU. This version does not have AppleSearch or System 7 *Users and Groups* support. If you need these features, you can run the 68xxx version on a PowerMac, although, in emulation mode, it is somewhat slower.

GopherSurfer-Examples.sea.hqx

A binhexed, self-extracting archive that can be used for testing the Gopher Surfer application.

### World-Wide Web: Available via the New Mail Shell



The World-Wide Web is a grouping of network-accessible information that incorporates hypertext and multimedia (images, sounds, and movies). Documents are written in HTML (HyperText Markup Language).

Like Internet Gopher, WWW is a client-server information system, with documents stored on various servers throughout the Internet. The hypertext model of information representation allows any viewable item to serve as a hyperlink to another re-

source (e.g. other Web documents, images, Gopher, FTP, or Usenet News). Clients can browse the Web by selecting hyperlinks, navigating from document to document, each of which may contain many more links to other documents anywhere on the Web.

To access the Web you need client software, a browser. The new mail shell on gold and maroon provides a text-only browser, Lynx, so that all University of Minnesota E-mail users can connect to the Web's resources. Lynx displays a limited menu of commands onscreen, as well as online help.

Mosaic is a popular Web browser that has full multimedia capabilities. Versions of Mosaic are available for X Window system users, Macs, and PCs running Windows. The X Windows version of Mosaic is available on the maroon and gold systems for users accessing via X Window terminals (which support graphics, sounds, and animation).

For more information about the Web, select World-Wide Web from the mail shell (shown in Figure 1).

# New and Improved Maroon & Gold Mail Shells



A new and improved version of the mail shell or "interactive session" was recently installed on the maroon and gold E-mail systems. This change will not affect those who use microcomputer applications such as Minuet and POPmail.

## A New Mail Shell

The mail shell provides a single entry point to account management tools and on-line resources, and it features several enhancements. When you log in to the mail shell, you'll see a screen like the one shown in Figure 1.

## Improved Organization

We're reorganized the menu items into three groups. Items 1 and 2 relate to E-mail. Item 1 is used to read and send mail, and item 2 is used to find E-mail addresses of University staff and students. Items 3-6 are entry points to various on-line information sources. Items 7 and 8 are used to manage your account and set various preferences.

## Preferences Shown in Brackets

Since various mailers, Web browsers, and news readers are available through the mail shell, the brackets at the right of the screen provide a way

of seeing at a glance which mailer, browser, and news reader is currently selected for your account. Figure 1 shows that this account is currently using the pine mailer, the Lynx Web browser, and the nn news readers. These are all default settings which can easily be changed using the *Special Utilities* menu. For more information on changing the default settings for your account, see the section of this article titled *Account Management Tools* and read the on-line help for Special Utilities.

## Context Sensitive Help

Pressing [?] while viewing the main menu (shown in Figure 1) gives you a brief description of each menu item, help line phone numbers, and rules for using E-mail. Pressing [?] from within each menu provides more complete information about the functions of that particular menu item.

## Web Browsers

World-Wide Web (WWW) browsers are now available through the mail shell; the default browser is Lynx, a simple text-only browser. A browser with multimedia capability, XMosaic, is also available for users who have Xterminals.

Lynx displays a limited menu of commands on screen, as well as on-line help. For more information about browsing the Web with Lynx, select Lynx from the mail shell to see the University of Minnesota Web Home Page. For more information on the Web and browsers, see the related article on the facing page.

## Account Management Tools

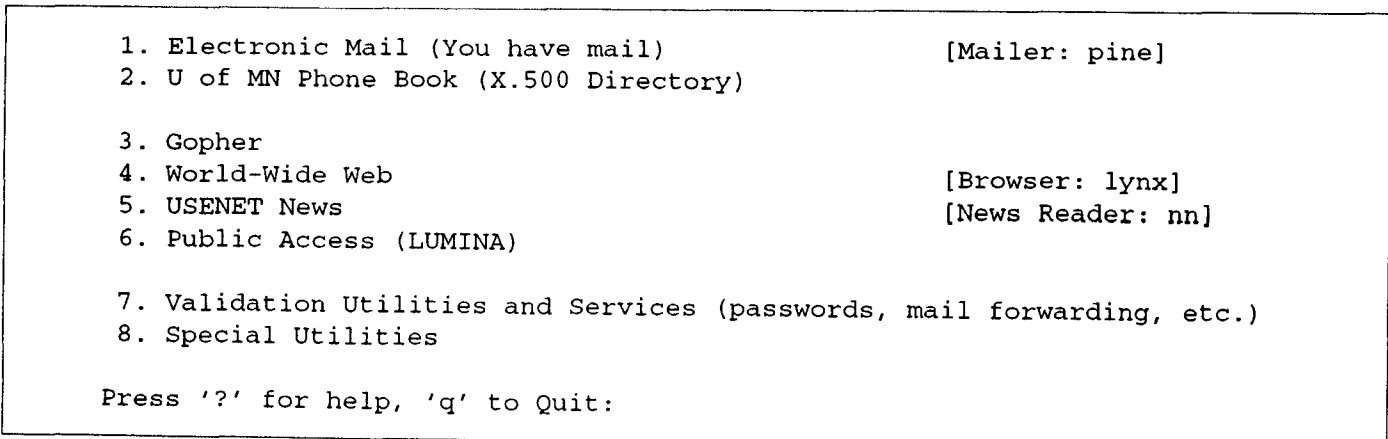
The *Special Utilities* menu helps you easily manage your E-mail account, files, and directories without knowing UNIX commands; it includes the menu options listed below.

- *File Management* enables you to view, create, edit, and delete files and/or directories on your account.
- *Preferences* helps you to easily change the default settings for your mailer, news reader, Web browser, text editor, UNIX shell, page viewer, and erase character.
- *Shell Access* takes you out of the mail shell and into UNIX.

## Additional News Reader

A new USENET news reader, tin, is now available, along with nn and trn. Tin provides a fill screen, easy to use text based interface with on-line help.

Figure 1: New and Improved Mail Shell



# Online Indexes and Abstracts Available through LUMINA

Connie Hendrick, University of Minnesota Libraries

The University Libraries' LUMINA gateway provides access to selected on-line indexes and abstracts.

## PubInfo Access



From the University's Public Access Information Service menu ([pubinfo.ais.umn.edu](http://pubinfo.ais.umn.edu)) select option 1 for the University Libraries/LUMINA, then choose the

### INDEXES

option on the new Library menu. These databases are available to University of Minnesota students, faculty, and staff via designated terminals on the Twin Cities campus. Remote access requires log on using a valid University of Minnesota E-mail ID and password.

After passing through the authentication process, you receive a menu listing, shown in Figure 1, with several options.

This article describes two of the options currently available: FirstSearch and BRS Search.

## FirstSearch

The University Libraries subscribes to 16 FirstSearch databases:

- AGRICOLA (Agricultural Sciences)
- Applied Science and Technology Index
- ArticleFirst (current index to over 9,000 journals)
- Arts and Humanities Citation Index
- Art Index

- Biological and Agricultural Index
- ERIC (Educational Resources Information Center)
- INSPEC (Physics, Electronics, and Computing)
- MicroComputer Abstracts
- MLA (Modern Language Association, Language and Literature)
- Newspaper Abstracts (25 U.S. daily newspapers)
- PAIS Decade (public policy literature)
- PsycFirst (Psychological Abstracts)
- Social Sciences Index
- SocioAbs (abstracts of sociological literature)
- WorldCat (catalog of books and other materials in libraries around the world).

The FirstSearch Catalog is produced by OCLC Online Computer Library Center, Inc, a nonprofit membership organization that serves libraries and educational institutions worldwide. The interface is designed to provide easy access to a variety of databases and indexes using on-screen instructions to guide the user through searching and printing results.

## Using FirstSearch

To initiate a FirstSearch session, select INDEXES from the main LUMINA menu, pass through authentication if required, and choose 1 for FirstSearch. You are presented with a list of 16 databases that the University Libraries has subscribed to for 1994/1995.

When you type the number for the desired database, you are automatically scripted into that FirstSearch file. To select another database, type

BQ

Figure 1: Indexes Options

1. FirstSearch	-Indexes to articles and books in most subject areas
2. BRS Search	-Indexes to articles: academic, business, and engineering
3. Legi-Slate	-Federal legislation and regulations (restricted hours)
4. Current Contents	-Tables of contents and abstracts of current journals
5. RLIN/Eureka	-RLIN and indexes to architecture, Hispanic-American studies, and history of science books and articles

from any FirstSearch screen. To return to the LUMINA menu, type

XQ

from any FirstSearch screen. In addition to on-line help, the University Libraries has copies of *FirstSearch QuickSearch Guide* available near selected public access terminals.

Searches by subject, author, title, and keyword are supported and terms can be combined using AND or NOT. If you do not use a search type label with your search term, FirstSearch processes your term as a subject search. Search results are printed in a numbered list of records in brief format. A full record is retrieved by typing the record's number.

Although the interface is specifically designed for beginning searchers, complex searching tools are available for expert searchers. Features such as set limits and scans of wordlists are available.

In some FirstSearch databases, each full record lists the libraries that own the item described. The record heading shows that our library has cataloged an item or indicates that libraries owning the item are listed at the end of the record. Libraries in Minnesota that own an item are listed first. Check MNCAT to see the current status of items owned by the University of Minnesota Libraries.

## BRS Search

An additional group of databases is mounted locally at the University of Minnesota and presented using the BRS Search interface.

Four databases are available:

- Expanded Academic Index (journals and other periodicals heavily used for undergraduate research)
- Business Index Database (index to 300 trade and business periodicals, 1982 to date, plus business-related articles in over 1,100 magazines)
- COMPENDEX/Engineering Index (citations to significant engineering literature from over 4,500 world-wide sources)
- Company Profiles (directory listings for over 140,000 private and public companies)

## Using BRS Search

To initiate a BRS Search session, select INDEXES from the main LUMINA menu, pass through authentication if required, and choose 2 for BRS. You are scripted into the local interface and presented with the names of the four available databases. When you type the label for the desired database, you are automatically logged into that file.

To select another database, type BQ from any BRS Search screen. To return to the LUMINA menu, type XQ from any BRS Search screen. Like FirstSearch this interface provides extensive on-screen instruction and tutorial screens. Handouts describing tips for searching the BRS databases are available at main library reference desks.

## Enhanced Indexes: Academic & Business

On May 10, 1994, the University Libraries enhanced the Expanded Academic Index and Business Index to include full-text for selected articles. These articles are licensed from Information Access Company through the MINITEX Library Information Network. The University Libraries contracted with BRS to provide links between the citation and full-text databases and allow the user to easily link out to view the text and then return to the citation list.

The coverage dates for inclusion of full-text articles varies depending on the individual publication and specific copyright arrangements with the publishers of the journals. A highlighted message alerts you when full-text is available for a citation and instructions for linking out to the article are also highlighted on the screen.

At this time, the full-text articles are ASCII text. Images, charts, and complex mathematical formulas are excluded with a note of the omission. This project is just one step in the Libraries plans to offer access to electronic texts and provide information to the University community in a convenient format, anywhere and anytime that campus computer systems are available. A desirable, but technically challenging, development will be providing images of the articles instead of the plain ASCII text.



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## Bargain ↪ Apple System Update 3.0

For Users of Macintosh System 7.X



If you use system 7.1, 7.1.1 (System 7 Pro), or 7.1.2 (Power Macs), you should install System Update 3.0. Like most updates, it provides enhancements and improves your computer's performance and reliability. This is true regardless of which computer you're using, even if you've installed earlier updates. (The System Update 3.0 includes all the enhancements of System Update 2.0, which we announced in our October 1993 newsletter.)

Below are excerpts from the *ReadMe* document.



### Update 3.0

Corrects a problem that potentially allowed the system to become corrupted during a power failure or a crash. This corruption would prevent the Macintosh from restarting.

Updates the Standard File package to include many fixes and enhancements. The most significant fix corrects a crash problem when more than 20 volumes are mounted. The most significant enhancement is the use of color icons.

Fixes the "About This Macintosh" box so the memory usage line does not get drawn outside of the box's bounds.

#### Network Launch

Corrects a problem that caused some programs to quit unexpectedly or caused the computer to freeze when you attempted to open programs over the network. This includes/replaces all of the func-

tionality of Network Launch Fix (and the Installer will delete it).

#### Remote File Sharing

Prevents the potential file/media corruption that can happen when working with a file that is on a remote volume and the connection to that volume is lost.

Increases reliability for remote file saving when the client is running System 7.1 or greater and the server is running a pre-7.0 system and using pre-3.0 AppleShare.

#### AppleShare

Fixes a problem with throwing away folders that are on an AppleShare volume.

#### PowerMac, Quadra 840AV or 660AV

Fixes a problem where a Power Macintosh, Quadra 840AV, or 660AV may hang if a CD-ROM disk is inserted when file sharing is on and a large file is being transferred.

#### PowerBook

Prevents a PowerBook from trying to spin up its hard drive when the system needs to warn the user that there are only 10 seconds of battery power remaining.

#### Mac Plus

Fixes a problem that prevented the Macintosh Plus from using any system software newer than 7.1. Users wishing to upgrade to newer system software must also delete the Finder Preferences file from the Preferences folder and restart.

#### Simple Text

Replaces TeachText with SimpleText version 1.0. Among other improvements, SimpleText allows multiple documents to be opened simultaneously.

#### Apple HD SC Setup 7.3.1

Includes Apple HD SC Setup version 7.3.1. This new version fixes a crash problem version 7.3 has when run on Macintosh models that do not support virtual memory.

#### Duo 230: Battery DA 7.1.1

Updates the Battery desk accessory to version 7.1.1. This new version provides better support for the Duo 230.

### Control Panel Updates

#### Memory Control Panel 7.3

Updates the Memory control panel to version 7.3. This new version prevents a potential crash during boot if the RAM disk was set too large. Also, this control panel now opens with 32-bit addressing on.

#### Easy Access 7.2

Updates the Easy Access control panel to version 7.2. This new version allows Sticky Keys to remain active after waking up if it was active when the PowerBook or Portable went to sleep. Also, Easy Access now remembers whether sticky keys, mouse keys, and slow keys were on or off between restarts.

#### PowerBook: Updates 3 Panels

Updates the PowerBook control panel to version 7.3.1, the PowerBook Setup control panel to version 7.3.1, and the PowerBook Display control panel to version 1.1. This package of related control panels reorganizes and simplifies several controls.

**Mac DOS Compatibility Card**

Updates the PC Setup control panel to version 1.0.2. This version provides a fix for users of the Macintosh DOS Compatibility Card that are experiencing interference when using a single 14" display and the PC is in the foreground. If you are experiencing an interference problem, make sure the "Fade Screen" option is selected in the updated PC Setup control panel. With this option selected, switching to the Macintosh will be slightly slower but the video interference will disappear.

**TV Setup Control Panel 1.0.1**

Updates the TV Setup control panel to version 1.0.1. This new version supports HRC cable systems. This version also fixes a problem that would sometimes cause the screen to darken after returning from TV mode.

**Mac LC 575:****Screen Control Panel 1.0.4**

Updates the Screen control panel to version 1.0.4. This new version corrects a problem on the LC 575.

**Enabler Updates****LC III**

Updates System Enabler 003 to version 1.1 for use with the LC III.

**PowerMac 6100, 7100, 8100**

Updates the PowerPC Enabler to version 1.0.1 for use with the Power Macintosh 6100, 7100, and 8100. This new version fixes a problem with some large monitors connected to the AV video card, improves Energy Star compatibility for certain monitors connected to the built-in video port, updates the Communications Toolbox, fixes an occasional memory manager problem, improves the serial port performance, improves the video quality of the High Performance Video card in certain situations, and preserves the "Playthrough" and "CD Audio In"

settings in the Sound Control panel across reboots. The PowerPC Enabler also supersedes the files "TYC" and "PowerAV Update" (and the Installer will delete them).

**Quadra 610, 650, 800 and Centris 610, 650**

Updates System Enabler 040 to version 1.1 for use with the Quadra 610, 650, and 800 and the Centris 610 and 650. This update also adds support for the Quadra 610 and 650.

**Quadra 605, LC475, LC575**

Updates System Enabler 065 to version 1.2 for use with the Quadra 605, LC475, and LC575. This new version removes some minor unnecessary components.

**Quadra 840AV and 660AV**

Updates System Enabler 088 to version 1.2 for use with the Quadra 840AV and 660AV. This update fixes some serial communication problems and delivers improvements to the Resource Manager and other system components that increase system performance.

**Color Classic II, LC520, LC550**

Updates System Enabler 403 to version 1.0.2 for use with the Color Classic II, LC520, and LC550.

**Duo 210, 230, 250, 270c**

Updates the PowerBook Duo Enabler to version 1.0 for use with the PowerBook Duo 210, 230, 250, and 270c. This new version allows the use of type II batteries. It also incorporates the Duo Battery Patch for all PowerBook Duo models except the Duo 270c, which does not need it.

**PowerPC Upgrade Card**

Updates the PowerPC Upgrade Card Enabler to version 1.0.1 for use with the PowerPC Upgrade Card installed in the Centris 610 and 650 and the Quadra 610, 650, 700, 800, 900, and 950. This new

version updates the Communications Toolbox and fixes an occasional memory manager problem.

**Installing The Update**

If you use a Macintosh II, an SE, or a Plus, you need the version of System Update 3.0 that comes on an 800K floppy disk...If your computer has been upgraded with a 1.4 MB floppy disk drive, then you can use the version of System Update 3.0 that comes on the high-density (1.4 MB) floppy disks.

If you have any Macintosh computer other than these three, you must use the version of System Update 3.0 that comes on two high-density (1.4 MB) floppy disks.

**Step 1****Install the System Software Update**

1. .... If you currently have the Connectix Enabler Patch on your hard disk, remove it from your hard disk before proceeding with this installation.
2. .... Insert System Update 3.0 Disk 1 in your floppy disk drive.
3. .... Double-click the Installer icon.
4. .... Read the Welcome screen, and then click OK.
5. .... Click the Install button. The Easy Install process for System Update 3.0 automatically determines what elements of the updated system software your computer needs.
6. .... When you see a message that installation is complete, click the Restart button.
7. .... When you finish, continue with "Step 2: Update Your Apple Utilities" below.

NOTE: None of the packages on System Update 3.0 are removable, so they will all be dimmed if you select "Custom Remove" in the pop-up menu.

## Step 2

### Update your Apple Utilities

The "Utilities D" folder on the System Update 3.0 Disk 1 contains Apple HD SC Setup version 7.3.1 and Apple Disk First Aid version 7.2. These updates are intended to permanently replace the copies of Apple HD SC Setup and Apple Disk First Aid on your System 7.1, 7.1.1, or 7.1.2 Disk Tools disk. This update is recommended even if you have already installed System Update 2.0.1.

Follow these steps to update your utilities:

1. .... Insert the System Update 3.0 Disk 1 in your floppy disk drive.
2. .... Choose Eject Disk from the Special menu.
3. .... Insert the Disk Tools disk in your floppy disk drive.
4. .... Click the "Utilities D" window to make it active.
5. .... Drag the HD SC Setup and the Disk First Aid icons to the Disk Tools disk.
6. .... When your Macintosh warns you that the files on your Disk Tools disk have the same names as the items that you are moving, click OK.
7. .... Insert specific disks as requested until the files are fully copied.
8. .... When you finish, continue with "Step 3: Update Your Apple Drivers" below.

## Step 3

### Update your Apple Drivers

System Update 3.0 also contains a driver update for Apple hard disk drives. You should install the driver update even if you have already installed System Update 2.0.1.

Follow the steps below to install the driver update on each Apple hard disk drive you own:

1. .... With your computer off, insert the Disk Tools disk in your floppy drive.
2. .... Turn on your computer.
3. .... Double-click the Disk Tools icon.
4. .... Double-click the Disk First Aid icon in the Disk Tools window.  
(NOTE: If you completed "Step 2: Update Your Apple Utilities" above, the Disk First Aid utility on your Disk Tools disk should be version 7.2)
5. .... Click the driver icon that corresponds to your Apple hard disk drive. If you have more than one Apple hard disk drive, hold down the Shift key and click each icon for the drives that you will be updating.
6. .... Click the Repair button. Disk First Aid will now run some diagnostic tests and make any necessary repairs on your drive. This may take a few minutes depending on the size of your drive.
7. .... Open the File menu and choose Quit.
8. .... Double-click the Apple HD SC Setup icon in the Disk Tools window.

(NOTE: For more information on Apple HD SC Setup, see your Macintosh user's guide. If you completed "Step 2: Update Your Apple Utilities" above, the HD SC Setup utility on your Disk Tools disk should be version 7.3.1)

9. .... Click the Drive button until the name of the hard drive you want to update appears.
10. ... Click the Update button.
11. ... Repeat steps 9 and 10 for any other Apple hard disk drives you own.
12. ... Click the Quit button.



## Obtaining the Update

You can obtain the from the two locations listed below.

- Mac Information Server. Follow this path:

Mac Information Server  
System Software  
The System Update v.30

- Internet via TurboGopher. Point your Gopher at

[info.hed.apple.com](http://info.hed.apple.com)

or follow this path from the University of Minnesota's Home Gopher Server

\Computer Information\Apple  
Computer Higher Education  
gopher server)\Apple  
Support\Apple Software Updates





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During Spring, Winter, and Fall quarters the Computer Store in Williamson Hall on the East Bank campus is open Monday-Saturday for these hours • Monday-Thursday 8:30-6:30 • Friday 8:30-6:00 • Saturday 10-4.

### Free E-mail Updates

To get product and price change bulletins for the products sold through the Computer Department sent to you electronically, subscribe to the *Bookstore prices* list by sending E-mail to:

request@boombox.micro.umn.edu

### Use Gopher for 24-hour Service

Use Gopher to search the Computer Department's database to find out part numbers, prices, and product availability. "Electronic Ordering" options are available at these two Gopher locations:

University of Minnesota Campus Information  
Department and College Information  
Minnesota BookCenter Electronic Desk

Computer Information  
U of M Microcomputer Prices  
BookCenter Electronics Desk

### ▼ Apple Hardware Specials

The Back to School Bundles offered by the Computer Store includes some "old" Apple computers and these new ones: the Performa 636 and PowerBook 150. Table 1 lists their prices and compares some features.

### ☉ Test Drives

These machines are available for test drives in the Micro-computer HelpLine in Shepherd Labs:

- PowerMac 7100/66  
(with Apple Multi-Scan 15-inch display)
- PowerBook 150
- Performa 475 (with Performa Plus Display)
- Performa 636

### ☉ PowerBook 520 Back Ordered

Although you can order the PowerBook 520, you probably will not be able to pick up the machine during the back to school promotion.

### ☉ A 475 Comparison

The Performa 475, which was introduced in October 1993, is similar to the Macintosh LC 475. You'll find more detailed information about these machines on Gopher by following this path

Computer Information  
Apple Tech Info Library

and searching on the keyword 475.

Note: the 2400 baud modem that comes with the back to school Performa 475 bundle is slow. To get started using the Internet resources that are available to University of Minnesota students, we strongly recommend that you have a 9600 or 14,400 bps modem.

### 🍏 PowerBook 150

The PowerBook 150 is Apple's newest entry in their 100 series. It comes with ClarisWorks 2.1, software that runs in RAM and combines word processing, spreadsheet, graphics, and database capabilities.

#### PowerBook 150 Features

- 5.5 pounds
- one 3.5-inch 1.4MB floppy drive and IDE hard drive
- screen: 9.5-inch backlit, passive-matrix, gray-scale
- slot for an internal modem and additional RAM
- AC adapter and battery that provides 2-4 hours of use before recharge
- ports: RS-422 serial, SCSI (HDI-30), power adapter, LocalTalk
- built-in adjustable keyboard, a trackball, and mono speaker
- electrical: 100-240 volts, 50-60 Hz

#### PowerPort Gold Modem Update

The PowerBook 150 does not work with many internal modems. It does work with the PowerPort Gold modem sold by the Computer Store, provided the PowerPort 2.0.8a update is installed. Many PowerPort Gold modems have not been packaged with this free update. The update is available on the Mac Information Server. To copy it follow this path:

```

information
  Communications
    Modem Software
      PowerPort 2.0.8a
  
```

### 🍏 Performa 636

Unlike the other Performa series that were packaged for the home market, the Performa model 636 is configured for the higher education market. It supports video options, such as connecting a VCR or camcorder. Apple is positioning it as their most affordable multimedia system.

#### Performa 636 Features

- one 3.5-inch 1.4MB floppy drive
- ports: two serial ports, SCSI, AppleTalk, and Apple Desktop Bus for keyboard and mouse
- internal expansion slot that supports LC II/III-type processor direct cards
- sound: 16-bit CD playback; one sound-in port, front and rear headphone jacks; stereo 8-bit sound capable of driving stereo headphones or other stereo equipment through the sound jacks
- one communications slot for Ethernet or modem card
- video slot for NTSC, PAL, & SECUM video input cards
- dedicated connector for internal TV tuner
- one standard monitor port that also supports connection to external video-out (NTSC or PAL drop box)
- electrical: 100-240 volts, 50-60 Hz

### 🍏 Modems and Printers

Peripherals, such as printers and modems, are also available at (everyday) discount prices. You can purchase a 14.4K modem for \$149; this modem works with the MacSLIP software people use from home to access and use E-mail, Gopher, and other Internet resources.

**Table 1: Back to School Bundles — August 2 to October 17, 1994**

Model	Performa			PowerMac 7100		PowerBook	
	475	636	636/CD	66	66	150	520
<b>Price</b>	<b>\$1145</b>	<b>\$1379</b>	<b>\$1675</b>	<b>\$2325</b>	<b>\$2569</b>	<b>\$1239</b>	<b>\$1955</b>
CPU	68LC040	68LC040	68LC040	601 RISC	601 RISC	68303	68LC040
• Speed (MHz)	25	66/33	66/33	66	66	33	50/25
Memory (MB)							
• soldered on	4	4	4	8	8	4	4
• installed RAM	4	4	8	8	8	4	4
• SIMM/Card slots	1	1	in use	4	4	1*	1
• max RAM	36	36	36	136	136	40	36
• 72-pin SIMMs	Y	Y	Y	Y	Y	N	N
Storage							
• Hard Disk (MB)	160	250	250	250	250	120	160
• CD-ROM installed	N	N	Y	N	Y	N	N

\* to install memory on the PowerBook 150 you must also purchase a memory expansion kit; about a \$15 item.

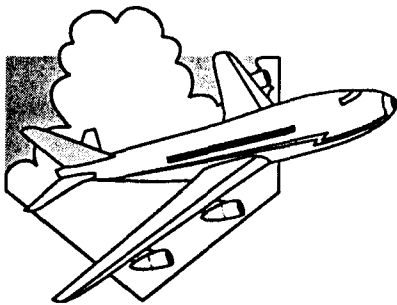
# Using Equipment Internationally

Reprint of an Apple Computer Document

## Mac and PC Tips

This article discusses the three product classes listed below and contains some useful information, regardless of which machine you use. You may want to read the *Topic*, *Universal*, *Frequency Independent*, *Frequency Dependent*, and the *Traveling Tips* sections.

1. Universal products that are self-configuring.
2. Frequency independent products that can be used with a voltage transformer and a stepdown isolation transformer.
3. Frequency dependent products that generally cannot be used internationally.



Since the rest of this article is a reprint of an Apple document, you will find Apple products, from the Apple II to Apple scanners, in their appropriate classes. However, the names used in the "tables" of Apple products were shortened to fit into our newsletter format.

*Article Created: 21 September 1984*

*Article Reviewed/Updated: 24 January 1994*

## Topic

This article outlines which U.S. Apple products, when used away from their native power sources, either need transformers or are "universal" to operate.

In the following context, using a product "internationally" means using it in a country with electrical current different from that of the country of manufacture. In determining whether a particular product can be used internationally, there are three classes, depending on whether a product accepts a range in voltage, frequency or both:

### 1) Universal.

These products can be used internationally out of the box. Some of Apple's products are self-configuring devices or "universal" within a certain range. They can accept a range in both voltage and frequency, and only require a plug adapter for the specific locale.

Example: The Quadra 800 accepts 100-240 volts, 47-63 Hz.

### 2) Frequency Independent.

These products can be used internationally with a voltage transformer. Generally they are geared for U.S. 120 volt current, but are flexible as to the frequency they accept (for example, 47-63 Hz), and are known as "frequency independent." These products need a stepdown isolation transformer to adapt the voltage, and will handle the different frequency on their own.

Examples: The U.S. Performa 200 accepts 120 volts, 47-63 Hz.

Performa Displays use a switching power supply which works independent of the input frequency. The European input frequency standard of 50 hz will not adversely affect these monitors. You can use the Performa Displays overseas with a voltage converter (isolation transformer.)

### 3) Frequency Dependent.

These products generally cannot be used internationally. These are products that can work only within a narrow range in frequency; they are "frequency dependent."

Transformers only transform voltage, so if the product requires a certain frequency, there's no practical way to convert both voltage and frequency.

These products can *only* be used internationally in countries with the same frequency as the country for which the product was manufactured. Further, a voltage transformer will be required if the destination country has a voltage different from the home country.

Example: The U.S. Apple Color OneScanner accepts 108-132 volts, 58-62 Hz.

NOTE: Computers with power outlets for peripherals do not condition the current as it passes through. So, for example, a monitor requiring 120v-60Hz current could not be used in a 220v-50Hz environment even if the computer from which it gets its power is able to accept the local current.

This article also includes transportation, service, repair, and warranty tips.

**Contents**

- 1) Universal Devices
- 2) Voltage-dependent Devices
- 3) Frequency-dependent Devices
- 4) Voltage/Frequency-dependent Devices
- 5) Service and Repair Tips
- 6) Traveling Tips

**Discussion**

**1) Universal Devices**

The following devices are self-configuring or "universal" within the given range. To use them in countries within the range, a plug adapter should be all that is needed. Note that some Apple products have a voltage selector to select between 110 or 220 volts.

Device	Range Frequency	Voltage RMS
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Universal Macintosh systems

Macintoshes

SE	47-63	85-270
SE/30	above	above
Color Classic	47-63	90-240
II	48-62	90-140 & 170-270
IIx	above	above
IIcx	48-62	100-240
IIci	above	above
IIfx	47-63	90-140 & 170-270
IIsi	50-60	100-240
IIvi	48-62	85-270
IIvx	50-60	100-240
LC	47-63	90-240
LC II	above	above
LC III	47-63	100-240
LC 520	47-63	90-264

Centris 610	47-63	100-240
Centris 650	50-60	100-240
Centris 660AV	above	above

Quadra 700	50-60	100-240
Quadra 800	above	above
Quadra 840AV	above	above
Quadra 900	above	above
Quadra 950	above	above

Performas

400/405/430	47-63	90-240
450	47-63	100-240
600	50-60	100-240

Mac Portable 48-62 70-270

PowerBooks

100	50-60	100-240
140, 145 145B	above	above
160, 165c	above	above
170, 180, 180c	above	above
Duo 210 & 230	47-63	85-270
Duo Dock	above	above
Duo MiniDock	above	above

*Universal Macintosh II Monitors*

Color Displays

AppleColor Hi-Res RGB	50-60	100-240
Mac 12" RGB	50/60	100-120
Macintosh 16-Inch	47-63	90-270
AudioVision 14"	47-63	100-240

Monochrome Displays

Apple Hi-Res	50-60	100-240
Macintosh 12"	above	above
Apple Two-Page	above	above
Apple Mac Portrait	above	above

*Universal Storage Devices*

HD20	47-64	85-270
HD20 SC	above	above
HD40 SC	above	above
HD80 SC	above	above
HD160 SC	above	above
AppleCD SC	48-62	85-270
AppleCD SC Plus	50-60	100-240
AppleCD 150	above	above
AppleCD 300	above	above

**2) Voltage-Dependent Devices**

The Apple products listed below are designed to operate at a line voltage ranging from 107V to 137V at 50 or 60Hz (cycles per second). If the destination country uses a line voltage of 220v, and the product only accepts 120v, you'll need a 220v to 110v stepdown isolation transformer. This type of transformer is the only one known to give a clean signal. Although converters are available in the U.S., there are reports that these devices have damaged some Apple products.

The transformer's wattage should be 150% of the total wattage of the system (computer, monitor, hard disk, printer, and so on). For example, if the system pulls 250 watts of power, use a transformer rated for a minimum of 375 watts. A 500-watt unit should be sufficient for an entire Apple system (CPU, monitor, and printer). The unit must have a third prong for a grounded outlet. Electrical shock to you or damage to the hardware may occur if the units are not grounded.

Non-universal Apple power supplies function correctly with voltages between 107V and 132V. If line voltage fluctuates outside these specifications, you'll need to use a power conditioner to ensure uninterrupted operation of your Apple equipment. Operating without the conditioner will probably not result in damage to the hardware, although the voltage fluctuation may cause your system to crash. In such an event, you'll lose any data in memory and may even lose data stored on the disk.

#### **Voltage-Dependent Computers**

- Apple II, II Plus, IIc Plus
- Apple IIGS (The Control Panel has a 50Hz setting.)
- Lisa, Macintosh XL, Macintosh, Macintosh 512K, Macintosh Plus, Macintosh Classic, Macintosh Classic II, Performa 200

#### **Voltage-Dependent Printers**

- StyleWriter & StyleWriter II
- ImageWriter II INTERNATIONAL  
(Note: The international ImageWriter II is voltage/frequency independent (50/60Hz). Parts are available through service providers to convert domestic (U.S.) ImageWriter II printers to international power supplies.)

#### **U.S./Japan: 110/115VAC, 50/60Hz (+/-2Hz):**

- LaserWriter II
- Personal LaserWriter SC and NT
- Personal LaserWriter LS
- Apple LaserWriter Select 300 & 310
- Personal LaserWriter NTR

#### **U.S./Japan: 90-126VAC, 50/60Hz (+/-2Hz):**

- LaserWriter IIf and IIg

#### **Voltage-Dependent Hard Disk Drives**

- ProFile

#### **Voltage-Dependent Monitors**

- Monitor II, Monitor IIc, Monitor III.  
(These work with NTSC composite video only; screen may flicker at 50Hz.)
- Macintosh 21-Inch Color Display
- Apple Basic Color Monitor
- Macintosh Performa Display
- Macintosh Performa Plus Display

#### **Other Voltage-Dependent Devices**

- AppleFax Modem  
(Japan: 100VAC +/-10%, 50/60Hz)

### **3) Frequency Dependent Devices**

If the country uses a line frequency other than 60Hz, then all AC-powered devices attached to your computer system (monitors, printers, plotters, hard disks, and so on) must be "frequency independent." That is, they must be able to operate on a line frequency of either 50 and 60Hz. Most products made by Apple are frequency independent EXCEPT those listed below.

If you want to connect your Apple computer to a device that is not manufactured by Apple, find out from the device's manufacturer if it is frequency independent. If it is, you can use the device with your computer (after you compensate for the voltage differences, if any).

#### **Frequency-Dependent Computers**

- Apple IIe, IIc, III, III Plus (Video output is compatible with NTSC standard only.)

#### **Frequency-Dependent Printers**

Use 60Hz only. Damage may occur with a 50Hz source:

- LaserWriter
- Scribe
- Apple Color Plotter
- Apple Color Printer
- Domestic (U.S.) ImageWriter II and LQ  
(Note: The international ImageWriter II is voltage/frequency independent (50/60Hz). Parts are available through service providers to convert domestic (U.S.) ImageWriter II printers to international power supplies.)

Use 50 to 60 Hz (Using these printers on a 50Hz source can noticeably affect spacing between characters):

- Daisy Wheel
- Dot Matrix
- ImageWriter

**Europe/Australia: 220-240VAC 50Hz (+/-2Hz ONLY):**

- LaserWriter II
- Personal LaserWriter SC and NT
- Personal LaserWriter LS
- Apple LaserWriter Select 300 & 310
- Personal LaserWriter NTR

**Europe/Australia: 198-264VAC 50Hz (+/-2Hz) ONLY:**

- LaserWriter IIf and IIg

**U.S./Japan: 90-110VAC, 58/62Hz, 103.5-126VAC, 58/62Hz; Europe/Australia: 194-265VAC, 48/52 Hz:**

- LaserWriter Pro 600 and 630

**Other Frequency-Dependent Devices**

- AppleFax Modem (U.S./Canada: 120VAC +/-10%, 60Hz)
- Apple Scanner (120VAC +/-10%, 58-62Hz)
- Apple OneScanner (120VAC +/-10%, 58-62Hz)
- Apple Color OneScanner (120VAC +/-10%, 58-62Hz)

**4) Service and Repair Tips**

As of April 5, 1993, an Apple warranty is valid in any country in which Apple sells products. A defective unit may be returned to any Authorized Apple Service Provider worldwide for service under warranty.

There are advantages to buying the products where they'll be used. Although mouse devices, external drives, digital boards, and similar modules are the same as distributed in the U.S., the software and keyboards are different for each country. Further, having the entire workstation dependent on a single transformer is risky. If it fails and passes native current through to voltage and/or frequency dependent products, serious damage will result.

If you intend to take your Apple product with you, it is advisable that you buy and use the product well before your departure. Heavy use often turns up any problems that would have come up at more inconvenient times while traveling.

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**If the risk in losing software is too high,  
plan your travel logistics  
after you find out which ports will  
hand-check the computer.**

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**5) Traveling Tips**

When traveling with a computer in the U.S. or overseas, protect it from shock, heat, moisture, radiation, and theft. Special hard-shell shipping cases are advertised for most Apple systems and these protect the machines from environmental abuse. They often do not look like computer cases, and as such usually escape the notice of thieves.

X-rays and other magnetic radiation associated with X-ray machines are only a potential danger; there have been no reports of ROM damage and only isolated reports of software media damage from these causes. Some ports X-ray all luggage; if the risk in losing software is too high, plan your travel logistics after you find out which ports will hand-check the computer.

**Article Change History:**

24 January 1994 - Added an example of Performa Display under frequency independent

30 July 1993 - Added new products. Reorganized into Universal, Voltage-dependent, and Frequency-dependent sections.

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00129: TI

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**Available on Gopher**

The information about using equipment internationally is available on Internet Gopher. To find it follow this path

`\Computer Information\Apple Tech Info Library`

To find this article you can search on these keywords: 00129 TI

# Free Help: Computing and Information Technologies

Phone Help Line Hours

## Central Systems

These systems require a user name and password, which you get when you open an account.

Qualified users can apply for grants to cover some computing related costs.

- EPX (Unix), NVE (NOS/VE), UZ (Ultrix), VX and VZ (VMS) ..... 626-8366 ..... M—F ..... 9 am to 4 pm
- VM1 (IBM/CMS) 99B Coffey Hall walk-in consulting hours may vary.... 624-6235 ..... M—F ..... 9-11 am, 2-4 pm
- MEDLINE (MinnesotaMEDLINE on NVE) ..... 626-8366 ..... M—F ..... 9 am to 4 pm

## Distributed Systems: Microcomputers, Workstations, LANs

Software, hardware, peripherals, local area networks ..... 626-4276 ..... M—F ..... 9 am to 4 pm

- East Bank ..... 152 Shepherd Labs ..... above ..... above ..... above
- West Bank ..... 93 Blegen ..... above ..... above ..... 1 pm to 4 pm
- St. Paul ..... 58 Biological Sciences Center ..... above ..... above ..... 1 pm to 4 pm

## E-mail and LUMINA

- E-mail: call for help using your University account ..... 626-7676 ..... M—F ..... 9 am to 4 pm  
 Forgot your password? Staff: call 626-8366. Students: go to any Computer Facility – e.g., 14 Folwell, 26 Lind, 305 McNeal, HHH 50. Troubleshooting: if Maroon or Gold are down, you'll hear a status report at 626-1819.
- LUMINA: call if you have trouble connecting ..... 626-7676 ..... M—F ..... 9 am to 4 pm

Computer Services Information ..... 625-1555 ..... any day .. any time

## General Information

### Williamson Hall Book Center

Computer Dept ..... 625-3854  
 (inventory and prices also available on Internet Gopher)

### University Computing and Information Services

- Administrative Information Svcs. (AIS) Help desk ... 4-0555
- Biomedical Graphics, various locations ..... 6-3939
- Central Computing Services, 100 LaudCF ..... 6-1600
- Accounts: EPX, NVE (incl MEDLINE), UZ, VX, VZ .. 6-8366
- Data Entry ..... 6-8351
- Statistics Services ..... 5-2303
- System Status ..... 6-1819
- Tape Librarian ..... 6-1838
- Computer Facilities (also call individual facilities) .. 5-1300
- \_FolH 5-4896 \_Lind 6-0856 \_McN 4-5367 \_HHH 4-6526 +more
- Disability and Computing Services, voice/TTY ..... 6-0365
- Distributed Computing Services, 190 Shep Labs .... 5-1300
- Engineering Services, 103 LaudCF ..... 5-1595
- Equipment Repair and Warranties ..... 5-1595
- Faculty Resource Center (for appointment) ..... 5-1300
- Gopher Hotel (server set up for a fee) ..... 5-2303
- Kodak Printer Service ..... 6-1661
- St. Paul Computing Services, 50 CofH ..... 4-7788
- Accounts: VM1 (IBM/CMS) ..... 4-7788
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- Statistics Services ..... 4-6235
- Software Services (contract programming) ..... 5-2303
- Supercomputer Center Help, 3030 SCC ..... 6-0808
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## Access Information

SLIP: 2400/14,400 ..... 626-1920  
 SLIP: ADI-100 and ITE (with MKO) ..... 3-0291

- Terminal settings for these systems are 8-1-N (8 data bits, 1 stop bit, no parity) unless otherwise noted. The number you dial may depend on the modem's bps or baud rate.
- Internet addresses.
  - Dial-in Server: 626-0300, -1200, -2400, -4800, -9600
  - At 9600 Telecomm supports V.32 and MNP level 5 error correction.
  - On campus ADI-100 and ITE setups use 626-2400.

- LUMINA: 300/1200/2400 ..... 625-6009
- V.32 ..... 4-7539
- Telnet & tn3270 \_\_\_ PUBINFO.AIS.UMN.EDU
- E-mail and Internet Service and Servers, Twin Cities
  - \_\_\_\_\_ GOLD.TC.UMN.EDU
  - \_\_\_\_\_ MAROON.TC.UMN.EDU
- Gopher, alternate access (log in as gopher)
  - 300, 1200, 2400, 9600 ..... see Dial-in Server
  - \_\_\_\_\_ CONSULTANT.MICRO.UMN.EDU
- Consulting via E-mail: low priority Central System ques
  - Format \_\_\_ CONSULT@MACHINE.NAME.UMN.EDU
- AIS SecureID V.32 ..... 626-1061
- 300/1200/2400 ..... 6-7770
- tn3270 & Telnet \_\_\_\_\_ ADMIN.AIS.UMN.EDU
- EPX, NVE (includes MEDLINE), UZ, VX, VZ
  - 300, 1200, 2400, 9600 ..... see Dial-in Server
  - EPX or UZ or VX or VZ or NVE.CIS.UMN.EDU
- EPX, NVE: 300/1200/2400 ..... 625-1445
- up to 19.2 campus data phone ..... 3-2400
- VM1 (IBM/CMS) at 7-1-even
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Distributed Computing Services

Mary Kelleher, Editor, [cisnews@maroon.tc.umn.edu](mailto:cisnews@maroon.tc.umn.edu)

— This publication is available on Gopher (Computer Information, CIS Newsletter). Alternative formats available upon request.