

INFORMATION

Support News 

November 13, 1995

Volume II, Issue 15

**“Get Off the Highway
and Into the Alley™”**



In This Issue...

Inside Information	2
Words from the Watchdog – In the Spirit of Sharing	3
A Description of UUencode and UUdecode	4
CD-ROM Setup 5.1.1 & the Macintosh DOS Compatible	6
Screen Resolution Set Too Low on a Power Macintosh 8500	7
Why You May See a Black & White Self View QTC Image	8
Why the Apple Video Player Volume Control Has No Affect On Input	9
A Technical Description of IDE Hard Drives Used in Macintosh Computers	10
Open Transport 1.0.8 Network Compatibility	13
Trouble Switching Between Ethernet PC Cards	16
Using an External Microphone with a PowerBook 190, 500, or 5300 Series	16
Apple HD SC Setup Supports Blind Transfers	17
Creating and Printing Watermarks	18
New Apple Software Updates Posted Online	19
Which Newton OS Version for My MessagePad?.....	19
Tell Us What You Think	20

Inside Information...

About the *Information Alley*

The *Information Alley*™ is a publication of Apple Computer, Inc., Support Information Services. The goal of the *Information Alley* is to help you get full use of your Apple computers, peripherals, and software. We make every attempt to include articles that have the broadest audience possible. However, we do sometimes print articles that do not apply to our international readers.

Where to Find the *Information Alley*

The *Information Alley* is available through a variety of online services and via an Internet list server.

For a complete list of where to find the *Information Alley*, call the Apple Fax line at 1-800-505-0171 and request document #20720. You can also get an index to back issues by requesting document #20719.

Optionally, you can search the Technical Information Library; use "information alley" as the search string. Available articles are:

- *Information Alley: Where to Find Online*
- *Information Alley: Index of Vol I Issues*
- *Information Alley: Index of Vol II Issues*

Information Alley Formats

The *Information Alley* is available in these formats:

Adobe Acrobat

Requires the Macintosh, DOS, Windows, or UNIX Acrobat Reader. The free Readers are available via the Adobe BBS (206) 623-6984, America Online, CompuServe, or the World Wide Web at this URL: <http://www.adobe.com/>.

Common Ground

Includes the imbedded Common Ground Macintosh MiniViewer. This format requires no external reader.

SeText

Includes no graphics or special magazine formatting. Formatted to be read with EasyView or any word processor.

Submissions and Letters

We welcome articles of general interest to Apple computer users, letters to the editor, and suggestions for future articles. Send submissions to:

Information Alley
1200 East Anderson Lane
MS: 212-STI
Austin, TX 78752

Fax: (512) 908-8018
e-mail: alley@apple.com

Please do not send us your support questions.

Copyright Notice

This newsmagazine is copyrighted, with all rights reserved. Individual articles in this newsmagazine may be reprinted, in their entirety, without prior written permission from Apple as long as full credit is given to Apple Computer and the *Information Alley* is listed as the source of the information.

You must have prior written permission from Apple Computer to excerpt or paraphrase portions of articles from this newsmagazine. For permission, contact: Diana Ezell, Editor or call (512) 908-8975.

Trademarks

The Apple logo is a trademark of Apple Computer, Inc., registered in the U.S. and other countries.

Apple, the Apple logo, APDA, AppleLink, AppleShare, AppleTalk, A/UX, EtherTalk, HyperCard, HyperTalk, ImageWriter, LaserWriter, LocalTalk, Macintosh, and ProDOS are trademarks of Apple Computer, Inc., registered in the U.S. and other countries.

Apple Desktop Bus, Balloon Help, Disk First Aid, Finder, SuperDrive, *Information Alley*, "Get off the Highway and Into the Alley", and

TrueType are trademarks of Apple Computer, Inc.


Classic is a registered trademark licensed to Apple Computer, Inc.

AppleCare is a service mark of Apple Computer, Inc., registered in the U.S. and other countries.

All other products mentioned in this newsmagazine are trademarks of their respective companies.

Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the performance of these products.

Apple Computer, Inc., products (hardware and software) described in this newsmagazine are subject to update and change. This newsmagazine makes no assurance that functions and technical information described here is not superseded by subsequent releases of the product described.

The *Information Alley* is produced using FrameMaker 4.0 on a Power Macintosh running System 7.5. 

Published bi-weekly by
Apple Computer, Inc.
Support Information Services
1200 East Anderson Lane
MS: 212-STI
Austin, TX 78752
(512) 908-8975

Diana Ezell, Editor

Regular Columnists:

Mark Aitala	Wayne Brissette
Leslie Dolan	Diana Ezell
Holli Kearns	Charlie McCabe
Sonia Siegmund	Fred Widmer



If you print the *Alley*, please share when done!

© 1994-95 by Apple Computer, Inc.

In the Spirit of Sharing

By Diana Ezell



The one thing I really love about the Internet is that I never know who I might be talking to, and moreover, what kind of computer they are using. They may be on a Sun Sparc station at a Supercomputer center, a 286 PC in someone's basement, a simple terminal at their University connected through a VAX, or a Macintosh Performa in their den. The best part is that it doesn't really matter who has what kind of computer any more, most of the time.

The one time when things get a little complicated is when people try to send me files. Often times, things are encoded or encrypted without the sender's knowledge because of their operating system or their e-mail program. However, there are ways around even this obstacle. In the last issue we had an article on Binhex. In this issue, as promised, there is an article which discusses UUencode and UUdecode.

While I hope that these articles help you to better understand what is happening "behind the scenes" on your Macintosh computer, there are some folks who would rather not be bogged down by the details. After all, isn't that why we bought Macintosh computers in the first place? It is when I get deep into the depths of the technical detail swamps that I remember why I truly enjoy my computer.

This is the time of year when many people are planning their holiday gift purchases. Maybe someone you know has decided that this year they are going to buy a computer. For me, this can be a frustrating situation. I want to tell them how great Macintosh computers are, how much easier they are to use than IBM compatible personal computers. Most of the time I just keep my mouth shut and watch as my friends are taken in by the "PCs are better, cheaper, etc." drivel spewing forth from the salesperson's mouth. The dad says, "It's what I have at work" which clinches it.

After all, who am I to force them into buying something they don't want or like? If they are already comfortable on a Windows PC, I figure I usually have no chance of changing their minds. On the other hand, if this is their first PC and they are not yet predisposed to one platform or the other, I usually attempt to sway them.

Fortunately, Apple's prices are down this year and Apple has provided me with some useful food for thought. If you are feeling evangelical about the Macintosh platform this holiday season, Apple has provided you with some ammunition on the Web. Here you'll find a well organized area which will help to get you ready to compare a Macintosh computer to a PC running Windows 95. Check it out at this URL: <http://www2.apple.com/whymac/default.html>

I guess the bottom line is that you shouldn't try to force people to eat something they just cannot stand. Some of us will never like southern-style cornbread dressing while others despise Yankee stuffing. I myself never could stomach cranberry sauce/jelly, but then again I haven't tried it since I was 10. So if you have a friend who feels a little queasy about Macintosh computers, maybe you can convince them it is time to try it again. In the spirit of sharing the wealth of your knowledge and good Macintosh-savvy taste, have a happy holiday season. 🍏

A Description of UUencode and UUdecode

By Robert Dorsett

This article describes UUencoding and UUdecoding, a popular method to transfer binary information on the Internet.

What Is UUencode?

UUencode stands for Unix-to-Unix Encode. It is a text-based binary encryption protocol in wide use on the Internet to transfer files across multiple platforms including UNIX, Windows, MS-DOS, Macintosh, and other operating systems.

UUencode is the UNIX name for the encryption program; it is normally used with another UNIX program, UUdecode, which decodes an encrypted message.

Why UUencode Files?

The basic idea behind UUencoding a file is to translate a binary representation of data--which could be a graphic image, compressed file, or other type of binary data--into an encrypted text representation of that file.

There are two reasons for doing this:

1. Many mail systems used on the Internet cannot handle binary transmissions since they are designed for text data. However, if a file is UUencoded, it can be included as text in the message.
2. Many mail systems and gateways have size limitations, often less than 50 kilobytes (K). It is sometimes necessary to use a text editor to split or combine such files. Since a binary representation of that data would make the editing of data very difficult, and since software that automatically joins these binary files is relatively rare, UUencoding a binary file allows common text editors to be used to join such files.

How Can You Tell If It Is A UUencoded File?

There is no standard file name convention, although most UNIX-based systems use a .uu as a suffix. DOS-based computers, with their standard three-digit suffixes, generally use .ue. This is one general method of telling whether or not it is a UUencoded file. Another method is actually looking at the first line of the file.



Continued on next page...

...Continued from previous page

A UUencoded file can be identified by the first line of the file:

-> begin 644 myfile.gif

This line is followed immediately by the start of the data. The first character of every line is the letter M. If the file has other characters other than M, the file is either not a UUencoded file, or has been damaged:

-> MuVAA=bal<RabzvYHyw@_cpUbzvYHyw@@zwl@xFJTzbaAhgmE=baOyBaA<gaL

The block ends with a single line containing the statement:

-> end

The first line signals the start of the block. The number is a UNIX permissions flag (in this case, giving the owner of the file full read, write, and execute permissions). The third part is the file name to which uudecode will expand the file.

What Are The Versions Of UUencode?

UUencode is a standard, but a number of implementations of the software exist. Most implementations are based upon source code from versions of the UNIX software which are in the public domain.

Macintosh and most Windows versions tend to combine both the UUencode and UUdecode functions into a single program, and simply allow you to choose if you want to encode or decode a message.

Of What Issues Should I Be Aware?

UUencoded data should be line-terminated with a single carriage return. Some mail systems append multiple line feeds or carriage returns, which can confuse some implementations of UUdecode.

UUencode is intended for use with a straight binary file. Since Macintosh files contain both a data fork and a resource fork, you should use Binhex to send Macintosh binary files. There are some types of files that you can UUencode, but you should limit these to files you know are going to other people using different operating systems.

Types of Files You Can UUencode

- Graphics (includes GIF, JPEG, and TIFF files)*
- Word processing files
- Miscellaneous non-Macintosh specific files

* PICT files are Macintosh-based, so you should use Binhex to transmit these types of graphics.

Continued on next page...

...Continued from previous page

Type of Files You Should Not UUencode

- Applications
- Control panels
- Extensions
- Fonts
- Macintosh-specific compressed files (StuffIt, Compactor)

You should use Binhex to transmit these types of files.

UUencode and UUdecode Tips

- Do not embed "white space" in the file. The first line of the file should start with the begin line and the last line of the file should be the end statement.
If you UUencode a file, the only way to determine if your file starts with begin and finishes with "end" is to open it in a text editor or word processing application and check it.
- If a message was received as multiple email messages, intervening message headers and "white space" should be removed. Some UUdecode utilities cannot handle the additional returns and headers.
- Since there are a large number of UUencoding and UUdecoding applications on various computer platforms, you may get some errors during the decoding process.

If you encounter errors decoding a file and are sure the source (input) file is correct, try a different UUdecoding utility. If the errors persist, have the sender of the data encrypt the data using a different version of UUencode. 🍏

CD-ROM Setup 5.1.1 & the Macintosh DOS Compatible

By Scott George

You may find that you cannot access a CD-ROM from DOS or Windows after you upgrade your Macintosh DOS Compatible computer to version 5.1.1 of CD-ROM Setup. Even if everything worked before you upgraded, you have not changed anything in the MS DOS environment, you could have some trouble.

In some cases, a CD-ROM disc cannot be accessed in the MS DOS unless there is a CD-ROM disc in the drive when the Macintosh starts up. This has only been tested with CD-ROM Setup 5.1.1.

Workarounds

There are two ways to work around this issue:

1. Leave a CD-ROM disc in the drive at all times so one is present when the Macintosh computer starts up.
2. Install an older version of the CD-ROM Setup software, such as version 5.0.4. 🍏

Screen Resolution Set Too Low on a Power Macintosh 8500

By Brian Fant

You can use a television as your monitor on a Power Macintosh 8500 series computer. However, you may run into some difficulty if you set the screen resolution to 256x192. When you try to reopen the Sound & Displays control panel, you get a message which says that the screen is too small to display this window and it closes.

When the Power Macintosh 8500 is using a television as its only display, the Sound & Displays control panel offers screen resolution options of 640x480, 512x384, 320x240, and 256x192. At the 256x192 resolution, you are not able to reopen the Sound & Displays control panel to return to a larger screen size. Resetting the PRAM will not return the resolution to a standard setting either.



The way to set your monitor back to a larger screen size is to use the Control Strip software that comes with the Power Macintosh 8500. Use the Resolution Control Strip module (the second module from the left) to switch to a larger screen resolution.

If you have removed the Control Strip software, you will need to reinstall it. You may need to connect a standard Macintosh monitor to reinstall the software because some of the buttons on the installer dialog boxes may not appear on the smaller screen. While you have the standard display connected, you can access the Sound & Displays control panel and set the resolution higher. It is a good idea to reinstall the Control Strip software even if you don't use it and use the Extensions Manager to disable it instead of removing it permanently. 🍏

Tips and Tidbits: DOS Compatibility Card Time Set Only At Startup

You cannot change the time on the DOS Compatibility Card "on the fly". That is, you cannot switch from Windows on the DOS card to the Mac OS, change the time, and then change back into Windows, expecting the time to change in the Windows environment.

The time and date information for the DOS Compatibility Card are set at startup. The MS-DOS/Windows clock reads the Macintosh clock once at startup, then runs on its own. This means that you must restart the DOS Compatibility Card in order for any time or date changes to take affect.

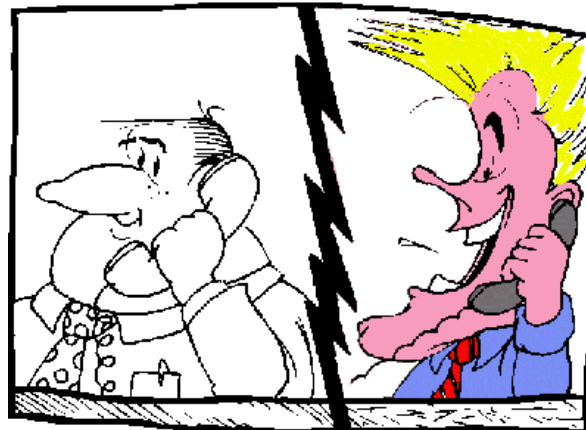
[Contributed by Reed Jackson] 🍏

Why You May See a Black & White Self View QTC Image

By Mark Aitala

Using a QuickTime Conferencing (QTC) Camera 100 with an AV-equipped Macintosh computer, the camera's video image may appear in black and white instead of color. Changing the color depth in the Monitors control panel has no effect on the image.

There are two common reasons why your QuickTime Conferencing Self View window may be showing only in Black and White: the monitor size or screen resolution selected may be set too high or the camera may be connected to the computer using the wrong cable.



Monitor Size or Screen Resolution Selected

If your screen resolution is set higher than 832x624, your Self View image will appear on your monitor and be sent to other conference members in black and white. This happens regardless of how much VRAM you have because the VRAM cannot draw that large of an image and redraw a color Self-View window quickly enough.

Lower your monitor's screen resolution to 832x624 or lower in the Monitors control panel and your Self View image will appear and broadcast in color.

How the Camera is Connected to the Computer

Three cables ship with the QuickTime Conferencing Camera 100:

- A. 1 Combination cable, S-Video to DC Power and RCA jack
- B. RCA to RCA
- C. S-Video to DC Power

You must use the appropriate cable for your computer in order for the QuickTime Conferencing Camera to work correctly.

The output from the QuickTime Conferencing Camera 100 is an NTSC composite signal, not an S-Video component signal. With the exception of the Power Macintosh 7500 and 8500, AV equipped Power Macintosh computers will accept a composite video signal through the S-Video port. The S-Video port also provides 12-volt power to the QuickTime Conferencing Camera.

Power Macintosh AV computers

For Power Macintosh AV computers other than the Power Macintosh 7500 and 8500, use cable A to connect the S-Video connector to the computer's S-Video port and the RCA and DC Power pigtail on the other end of the cable to the QuickTime Conferencing Camera.

Continued on next page...

Power Macintosh 7500 & 8500

The Power Macintosh 7500 and 8500 computers cannot receive a composite video signal in their S-Video connectors. Because of this, you need to connect cable B from the RCA jack on the QuickTime Conferencing camera to the RCA jack on the back of the Power Macintosh 7500 or 8500. If you use the S-Video port to deliver the video to the computer, you will see a black and white image. You also need to use cable C to deliver power from the S-Video port on the Power Macintosh 7500 or 8500 to the QuickTime Conferencing camera.

Macintosh Quadra or Centris 840 AV or 660 AV

If you have a Macintosh Quadra or Centris 840 AV or 660 AV, there is no S-Video port to supply power to the camera. In addition to using cable B for video, you will need to purchase a 12-volt, 1.9 Watt AC adaptor from your local Apple Dealer.

Summary Table

Computer	Cable	Video Signal	Camera Power
Quadra/Centris 660/840 AV	B	From Cable B	Separate Power Adaptor
Power Macintosh 6100 AV	A	From Cable A	From Cable A
Power Macintosh 7100 AV	A	From Cable A	From Cable A
Power Macintosh 8100 AV	A	From Cable A	From Cable A
Power Macintosh 7500	B & C	From Cable B	From Cable C
Power Macintosh 8500	B & C	From Cable B	From Cable C

For more information check your QuickTime Conferencing Camera manual. 🍏

**Why the Apple Video Player
Volume Control Has No Affect On Input**

By Conrad Klahn

Using the Apple Video Player to capture audio and video from a VCR that has very low sound output through its audio channel can cause the audio to be too low during playback of your movie. This happens regardless of how high you set the volume control in Apple Video Player during recording.

To increase the audio portion of the movie try the following:

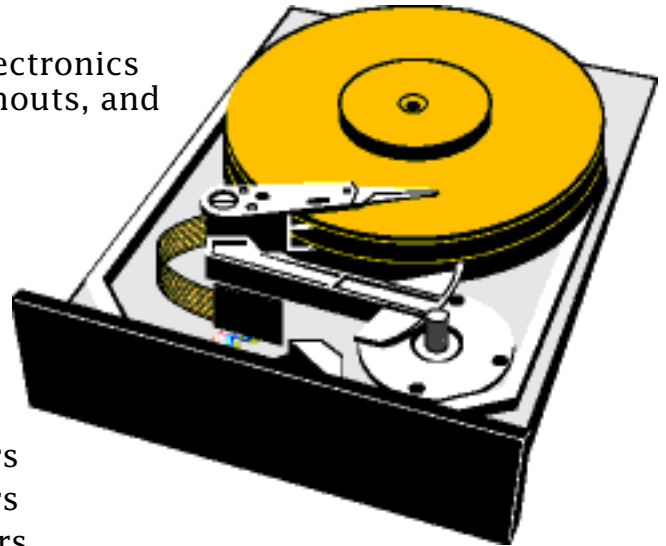
- The Apple Video Player application does not have a feature for increasing audio input volume or gain. You need to use an application, like VideoShop, VideoFusion, or Premier that allows you to increase the gain from the source you are capturing.
- If you are capturing from an external device like a VCR or LaserDisc player, you can also route the audio/video signal through a mixer to increase the gain before the signal enters the computer. 🍏

A Technical Description of IDE Hard Drives Used in Macintosh Computers

By Fred Widmer

This article describes the Integrated Drive Electronics (IDE) hard drive, the 40-pin IDE connector pinouts, and IDE signals currently used on the following computers:

- Macintosh 630 Family computers*
- Macintosh LC 580
- Macintosh Performa 5200 series computers
- Macintosh Performa 5300 series computers
- Macintosh Performa 6200 series computers
- Macintosh Performa 6300 series computers
- Macintosh PowerBook 150 series computers
- Macintosh PowerBook 190 series computers
- Macintosh PowerBook 2300 series computers
- Macintosh PowerBook 5300 series computers
- Power Macintosh 5200/75 LC
- Power Macintosh 5300/100 LC



Note: *The Macintosh 630 Family includes the following computers: Macintosh LC 630, Quadra 630, and Performa 630, Performa 635, Performa 636, Performa 637, Performa 638 and Performa 640.

The computers mentioned above all have an internal hard disk using the IDE interface. This cost-effective interface, used on IBM AT-compatible computers, is also referred to as the ATA interface. The implementation of the ATA interface on the Macintosh LC 630 and Macintosh Quadra 630 computers is a subset of the ATA interface specification, ANSI proposal X3T9.2/90-143, Revision 3.1.

An IDE drive does not have any address conflicts, specific cabling, or termination issues normally found in a SCSI chain. Performance of an IDE hard drive will be similar to a comparable SCSI hard drive.

Any hard drive utilities you may have for SCSI drives will likely have to be revised to function properly with an IDE drive. Check with the vendor of the utility for compatibility information.

Hard Disk Connectors

The internal hard disk has a standard 40-pin IDE connector and a separate 4-pin power connector. The 40-pin connector cable is part of the cable harness attached to the main logic board by the internal chassis connector. The power cable is attached directly to the power supply.

Continued on next page...

...Continued from previous page

Pin Assignments

The Table below shows the pin assignments on the 40-pin IDE hard disk connector. A slash (/) at the beginning of a signal name indicates an active-low signal.

IDE Hard Disk Connector Pin Assignments

Pin number	Signal name	Pin number	Signal name
1	/RESET	2	GROUND
3	DD7	4	DD8
5	DD6	6	DD9
7	DD5	8	DD10
9	DD4	10	DD11
11	DD3	12	DD12
13	DD2	14	DD13
15	DD1	16	DD14
17	DD0	18	DD15
19	GROUND	20	KEY
21	Reserved	22	GROUND
23	DIOW	24	GROUND
25	DIOR	26	GROUND
27	/IORDY	28	Reserved
29	Reserved	30	GROUND
31	INTRQ	32	/IOCS16
33	DA1	34	/PDIAG
35	DA0	36	DA2
37	/CS0	38	/CS1
39	/DASP	40	GROUND

Note: The IDE data bus is connected to the I/O bus through bidirectional bus buffers. To match the big-endian format of the MC68030-compatible bus, the bytes are swapped. The lower byte of the IDE data bus, DD(0-7), is connected to the high byte of the upper word of the I/O bus, IOD(24-31). The higher byte of the IDE data bus, DD(8-15), is connected to the low byte of the upper word of the I/O bus, IOD(16-23).

Continued on next page...

...Continued from previous page

The Table below describes the signals on the IDE hard disk connector.

IDE Signal Descriptions

Signal name	Signal description
DA(0-2)	IDE device address; used by the computer to select one of the registers in the IDE drive. For more information, see the descriptions of the CS0 and CS1 signals.
DD(0-15)	IDE data bus; buffered from IOD(16-31) of the computer's I/O bus. DD(0-15) are used to transfer 16-bit data to and from the drive buffer. DD(8-15) are used to transfer data to and from the internal registers of the drive, with DD(0-7) driven high when writing.
CS0	IDE register select signal. It is asserted high to select the additional control and status registers on the IDE drive.
CS1	IDE register select signal. It is asserted high to select the main task file registers. The task file registers indicate the command, the sector address, and the sector count.
/IORDY	IDE I/O ready; when driven low by the drive, signals the CPU to insert wait states into the I/O read or write cycles.
/IOCS16	IDE I/O channel select; asserted low for an access to the data port. The computer uses this signal to indicate a 16-bit data transfer.
/DIOR	IDE I/O data read strobe.
/DIOW	IDE I/O data write strobe.
INTRQ	IDE interrupt request. This active high signal is used to inform the computer that a data transfer is requested or that a command has terminated.
/RESET	Hardware reset to the drive; an active low signal.
Key	This pin is the key for the connector. 🍏

Tips and Tidbits: Internet Server For WWW Number of Connections

A limited number of users can connect through a Local Area Network (LAN) to log onto a WWW Internet Server. MacTCP has a limit of 64 sockets or simultaneous IP connections. Simultaneous IP connections under Open Transport will be limited by installed memory and processor power.

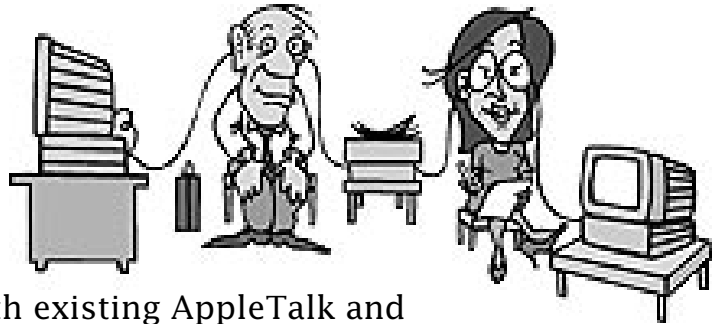
The WebSTAR server software, which comes with the Internet Server, keeps track of all connections. A log is generated which includes information on where the request came from as well as what the request was (file, image, html file), including the name of the file.

Each entry includes the DATE, TIME and RESULT (OK or ERROR) for the request made. [Contributed by Eric Crabtree] 🍏

Open Transport 1.0.8 Network Compatibility

By Garry Hornbuckle

This article is a series of questions and answers on network compatibility in Apple Open Transport 1.0.8.



Q: Is Open Transport interoperable with installed AppleTalk and TCP/IP networks?

A: Open Transport 1.0.x is compatible with existing AppleTalk and TCP/IP LocalTalk and ethernet network at the "packets on the wire" level. Organizations can introduce one, a few, or hundreds of new Macintosh systems running Open Transport into their environment without worrying about interoperability with existing networking services.

Q: Is Open Transport compatible with existing Internet Service Provider offerings?

A: As noted in "Network Interface Options" Open Transport/TCP currently supports dial-up connectivity to TCP/IP networks, including the Internet, through backward compatibility with select third party software modules known as "mdevs".

With the appropriate mdev installed, end-nodes can use either SLIP or PPP to connect to Internet Service Providers and other dial-up IP-access points. However, not all versions of all mdevs are supported by Open Transport backward compatibility services. It is important that the recommended versions of software be installed for the greatest level of compatibility.

It is also important that TCP/IP addressing and other configuration information be properly configured. As there is a new human interface provided by the Open Transport/TCP configuration utility, there are some changes in the process as compared to the older MacTCP software.

Q: Is there documentation available to assist with configuring Open Transport/TCP?

A: Yes. Although a full user's guide is planned for release with Open Transport v1.1, configuration tips for Open Transport 1.0.x are already available from various sites on the internet including:

ftp://seeding.apple.com/opentransport/OT_gen_info/TEXT/OTTCP_Config_Tips

Q: Does Apple offer a solution for SLIP or PPP dial-up to the Internet?

A: Yes. The Apple Internet Connection Kit is a selection of the most popular Internet applications from third party companies, including the Netscape Navigator and RealAudio Player from Progressive Networks, as well as Claris EMailer Lite. The kit includes MacPPP 2.1.4 along with the Apple Internet Dialer -- software designed to make it simpler for Macintosh customers to register with a qualified Internet Service Provider (ISP) and get connected to the Internet. To help users work with their Internet applications, the Apple Internet Connection Kit includes Apple Guide software for online assistance.

Continued on next page...

...Continued from previous page

Q: What is MacPPP 2.1.4? Is it available on the Internet?

A: MacPPP 2.1.4 is a derivative of the MacPPP 2.1.x SD versions of Merit's PPP. It includes code contributed by Apple engineering to enhance compatibility with Open Transport/TCP. These Apple updates have also been provided to the authors of FreePPP (the successor to the "SD" releases of MacPPP).

FreePPP 1.0.x also includes these updates, and is available for download on the Internet.

Q: Does the Apple Internet Connection Kit require Open Transport?

A: The Apple Internet Connection Kit works with either MacTCP, or Open Transport/TCP.

Q: Which mdevs are currently supported by Open Transport/TCP?

A: Open Transport 1.0.8 supports the following MacTCP Link Access Modules (mdevs).

- FreePPP - version 1.0 or later; compatible with Open Transport.
- InterPPP - use version 1.2.9 or later.
- InterPPP II - use the most current version.
- MacSLIP - use version 3.0 or later; compatible with Open Transport.
- MacPPP - use version 2.1.3 SD, or later (version 2.2.0 is not recommended).

Apple is continuing to work with developers to provide better support for existing mdevs; contact the third party developer of interest for the most recent information on compatibility.

Q: Are there known limitations to backward compatibility mdev support?

A: Yes. Due to differences in the underlying architectures (between MacTCP and Open Transport/TCP), and some current (1.0.8) shortcomings in the backward compatibility services, there are some additional limitations to mdev support:

- Some mdevs, when used with Open Transport, may not be able to auto-dial, that is, automatically connect to the service provider when launching a TCP/IP application. This is being addressed by updated versions of the mdevs.
- Once a TCP/IP application launches and uses a SLIP or PPP mdev, use of a different mdev may require restarting the Macintosh. Disconnecting from and redialing a service provider may also require restarting the Macintosh. This is planned to be addressed in Open Transport v1.1.
- Some Internet Service Providers do not strictly follow standards practices, which call for assigning end-node IP addresses on the same subnet as the router (gateway). Open Transport strictly enforces this requirement in versions prior to 1.0.7. Beginning with Open Transport 1.0.7, the TCP/IP configuration utility software will automatically generate a compatible router address to facilitate connectivity to the ISP if the user leaves the router address field empty.

Continued on next page...

...Continued from previous page

Q: If a user needs an updated copy of one of these mdevs, how can they get the software?

A: Sources for mdev software will vary, as some of the noted products are commercial and some are shareware or public domain.

- FreePPP is shareware and can be found on a variety of internet sites; typically at "info-mac" mirror sites in the comm/tcp directory. A list of info-mac mirror sites can currently be found at:

<http://www.mcp.com.hayden/iskm/info-mac-mirrors.html>

Some sites where FreePPP can be found currently include:

<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/>

<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/>

- InterPPP and InterPPP II are commercial software products. For availability and ordering information contact InterCon Systems, US 1-703-709-5500.
- MacSLIP is commercial software developed by Hyde Park Software. For availability and ordering information contact TriSoft, US 1-800-531-5170.
- MacPPP (v2.1.4) is available as a component of the Apple Internet Connection Kit, Apple Computer Inc., US 1-800-462-4396 for fax information or 1-800-538-9696 to locate an Apple authorized reseller near you.

Q: There have been reports of problems with Open Transport, PPP, and the use of Virtual Memory. Is Open Transport compatible with Virtual Memory?

A: Open Transport fully supports the use of virtual memory. However there are problems identified with MacPPP 2.1.2 SD and FreePPP 1.0 when used with Open Transport and Virtual Memory (including RAM Doubler). These problems are under investigation, with Apple engineering working together with the authors of FreePPP. Current plans call for an update to FreePPP to be available once a fix is determined. In the interim, users who experience problems with PPP and Virtual Memory are advised to turn VM off.

Q: Will Apple provide a "native" SLIP or PPP solution for Open Transport?

A: Apple is developing an implementation of PPP for Open Transport as a part of the next generation of Apple Remote Access products. This is planned to support dial-up access to both AppleTalk and TCP/IP networks.

Q: Is Open Transport compatible with PowerTalk built-in support for SMTP mail?

A: Apple recently announced that it has licensed, and will distribute and maintain, the PowerTalk Internet PMSAM formerly available from StarNine Technologies. This software provides the Mac OS with built-in support for Internet SMTP mail. The Apple Internet PMSAM is fully compatible with Open Transport 1.0.x when used on a LAN. When the PMSAM is to be used over a dial-up SLIP or PPP link, the same recommendations and limitations noted above for SLIP and PPP currently apply. 🍏

Trouble Switching Between Ethernet PC Cards

By Dan Fitch

If you need to use several different Ethernet PC (also called PCMCIA) cards with the same PowerBook computer, you may experience some trouble getting on the network when you switch between cards.

When switching between PC Cards on a Macintosh PowerBook 190 or 5300 Series computer, you must pay careful attention to any software drivers that get left behind that are no longer going to be used. The Ethernet drivers are particularly susceptible to "confusion" if not removed.

As an example of this, if you have a Dayna Ethernet card and switch to a PowerPort Platinum Pro PC Card, you will experience problems with Ethernet if you fail to remove the Dayna drivers. This is because the Mac OS only recognizes two different Ethernet driver names, and Global Village and Dayna (in this case) have chosen the same name (Ethernet Driver). The symptom will be that Ethernet will work intermittently, if at all.

Be sure to get all the parts of the old driver software (use the Installer to remove/deinstall the driver software, if possible) when removing it. In particular, be sure to remove the Ethernet driver from the System suitcase. 🍏

Using an External Microphone with a PowerBook 190, 500, or 5300 Series

By Ross Lodge

You cannot use the Apple Omnidirectional external microphone with a PowerBook 190, 500, or 5300 series computer. You need to purchase a third-party external microphone for these computers if you desire a higher quality sound input than is provided by the built-in microphone.

The PowerBook 500 series manual indicates that you can buy a "line-level" microphone from a retail store such as Radio Shack, however, no part or model number is provided. At the time we ran our tests, we were able to find two external microphones at our local Radio Shack that worked with these PowerBook computers. These microphones are line-level type devices with a pre-amplifier as part of the microphone assembly.

The two units tested were both called Tie Clip Microphones, and the Radio Shack part numbers were 33-1052 and 33-3003. These microphones may not be the only external microphones available, but they were the only ones tested.

If you want to look elsewhere for a microphone, please be sure to look for a "line-level" type device. It is also recommended that the microphone be pre-amplified. If the amplifier is not present the input volume from the microphone may be very low and unusable to most users. 🍏

Apple HD SC Setup Supports Blind Transfers

By Mark Campbell

Sometimes you may read in some third-party manuals that you should either turn on, or turn off blind transfers. The question most people have is what are blind transfers, and how do I turn them off or on?

Blind transfers refer to the way data is transferred to the hard drive by the driver software. In drive formatting software that supports turning this option on or off, a different version of the driver is written to the driver partition. Apple's Hard drive utility Apple HD SC Setup does not allow you to turn on or turn off blind transfers.

Blind Transfers

When using blind transfers, SCSI Manager (part of the system software) assumes the data can be written to, or read from the drive as fast as SCSI Manager can read it. If a slow drive is used, there is the potential for data corruption due to timing problems. If the drive cannot write the data fast enough, data is lost because of an overflow of the data buffers. If the drive cannot supply data fast enough during a read, SCSI Manager reads erroneous information from the controller because the data has not arrived yet. By using Blind transfers, the computer can significantly improve the speed of SCSI throughput.

Polled Transfers

If blind transfers are not enabled, polled transfers are used. Polled transfers are used with slow SCSI devices and/or older Macintosh computers. Older, in this case, means the Macintosh SE and Macintosh Plus. In polled transfer mode, the SCSI Manager polls the SCSI controller to see if there is data to be read before reading, or that the last chunk of data was written before sending the next chunk. This is the safest method for doing reads and writes.

Apple HD SC Setup

Apple HD SC Setup determines whether or not to install the driver which uses blind transfers based on the computer the drive is attached to when it is formatted. Apple HD SC Setup only turns off blind transfers on drives formatted while connected to the Macintosh SE or Macintosh Plus. Since Apple HD SC Setup doesn't support turning on or off blind transfers, you need to purchase drive formatting software that supports this option if your third-party software or hardware manual recommends changing the transfer mode your Macintosh computer currently uses. 🍏



New Apple Software Updates Posted Online

Contributed by Sonia Siegmund

The following Apple software updates have recently been released and posted on America Online, AppleLink, Compuserve, eWorld, and Apple's Internet sites:

- Audio Volume Installer 1.1 – This software replaces the Internal Modem Sound extension 1.0 that allows internal Global Village modem sound to play through internal speakers. Audio Volume Extension supports 16-Bit audio capable Performa 52xx/53xx/62xx/63xx computers with an internal Global Village modem.
- CD-ROM Setup 5.1.2 – This is a maintenance release of Apple CD-ROM software. This update adds support for up to 50 Photo CD sessions along with a fix to a problem to playing the "Peter and the Wolf" CD. There are 3 disk images posted, but disks 2 and 3 are actually QuickTime 2.1 and QuickTime Utilities. If you already have QuickTime 2.1, you may want to just download the first disk and perform a custom install.
- ColorSync 2.0 Photoshop Plug-ins 1.3 – The ColorSync 2.0 Photoshop Plug-In Modules provide an easy way for you to obtain high quality reproduction of color images.
- QuickDraw 3D 1.0.3 – Software to allow your Power Macintosh computer to display three-dimensional graphics, using applications designed to take advantage of QuickDraw 3D. Please see the Read Me for complete information. 🍏

Which Newton OS Version for My MessagePad?

By James Voight

This article contains a table with the different versions of the Newton OS and updates you can use on each Apple MessagePad. Use the following chart to determine which operating system and update you need.

Newton Operating Systems and Updates

System Versions	Original* MessagePad	Original* MessagePad	MessagePad 100	MessagePad 110	MessagePad 120
Intro Date	8/2/93	10/30/93	3/4/94	3/4/94	1/30/95
At Intro	1.02	1.11	1.3 (414059)	1.3 (344052)	1.3 (444217)
Without update	1.00	1.10	1.3 (414059)	1.20 (444217)	1.3
Other updates	1.03	None	1.3 (414313)	1.3 (345025)	None
Other updates	1.04	None	None	None	None
Other updates	1.05	None	None	None	None

*The original MessagePad was distributed with two distinct ROM versions: 1.0 and 1.1. 🍏

Tell Us What You Think

Tell us what you think of the **Information Alley**. We want it to be as useful for you as possible. Your feedback will help us reach this goal. Please fill out this form and fax, mail, or e-mail it to the address at the bottom of this page.

Content

Were the articles interesting and informative? YES NO If NO, please explain:

How was the technical depth of the articles? NOT ENOUGH ABOUT RIGHT TOO MUCH
Comments: _____

Did you find any specific article especially useful? YES NO If YES, list which one:

Format and Layout

Is the format and layout easy to read and follow? YES NO If NO, please explain:

Which format of the magazine do you read?

COMMON GROUND (MAC)

SETEXT

ADOBE ACROBAT

Do the graphics enhance or clutter the magazine? ENHANCE CLUTTER
Comments: _____

Did you read the magazine online or did you print a copy? ON-LINE PRINTED COPY
Comments: _____

Please describe ways in which the **Information Alley** could be improved, or give us your ideas on future articles.

Personal Information (optional)

Please let us know who you are in case we have questions about your suggestions or comments.

Name _____ Telephone _____

Company _____ Email _____

Address _____

City _____ State _____ Country _____ Zip _____

Type of computer(s) _____

Primary software applications: _____

Information Alley, 1200 East Anderson Lane, MS: 212-STI, Austin, TX 78752 – email: alley@apple.com; fax: (512) 908-8018 