



www.fox.com

Doubleclick



Executive Contact List

Please feel free to contact any of the following individuals if you have comments or questions relating to Macintosh Users East or Macintosh computing in general.

Position/Name	Phone#
Mac Evangelist Bruce Cameron	Hm: (905) 983-9205 Orono Email: bcameron@lis2000.net
Past President Hugh Amos	Bus: (905) 683-4760 Ajax Hm: (905) 683-4320
Meeting Coordinators Mark Fenton Jim Foster	Hm: (905) 430-8234 Email: fenton@idirect.com Hm: (905) 432-0921 Courtice Email: jfoster435@home.com
Treasurer Membership Chairman Doug Kettle	Hm: (905) 683-3214 Ajax
BBS Administrator Jim Foster	Hm: (905) 432-0921 Courtice Email: jfoster435@home.com
MaUsE BBS - The Source Courtice	(905) 404-987456k
Special Events Chris Greaves	(705) 887-2508 Fenelon Falls Email: cgreaves@i-zoom.com
Executive at Large John Field	Hm:905-885-8718
Mary McCarthy Greeter/Blithe Spirit	
MaUsE Message Line	(905) 433-0777

Double Click

<http://hottub.ca/mause>

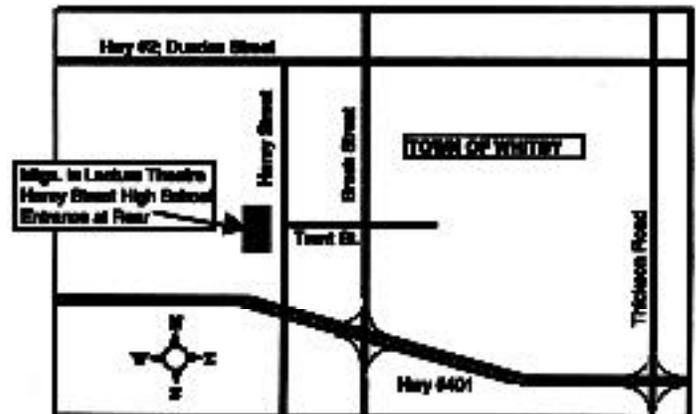
Double Click Editor Michael Shaw	Hm: (905) 576-2097 Oshawa Email: mikeshaw@idirect.com FAX: 905-576-5527
Printing & Distribution Doug Kettle	Hm: (905) 683-3214 Ajax
Cover Design Sean Murphy	

From the Editor

February is the shortest month. Honest. Check your calendar. For this month we have the usual smorgasbord of offerings: software, hardware, upgrades & repairs. At long last I've got a few suggestions for things you can stick into your favourite pitifully slow PowerPC to bring it up to speed. And, speaking of this month, if you aren't burning CDs yet you've still got time to catch up to the biggest craze of the new millennium: rolling your own utility CDs.

Another thing in this issue is a selection of great Bargoons. If you have one of these models there is a lot you can do with it, but if you don't have one and see it for sale for a good price you will see reasons why it would be a good buy to pick up and fix up.

The next Mac User Group Meeting will be at 7:00 P.M. February 28th at Henry Street High School in Whitby. Enter through the rear doors from the west parking lot behind the school.



Contents

PhotoVista...	Page 3
QuickEditor...	Page 4
Toast 4.1.1...	Page 5
Toast Bootable CDs ...	Page 6
G3/G4 Upgrade Cards...	Page 9
LaserWriter Fix...	Page 12
Bargoons Macs ...	Page 13
January Meeting...	Page 19

PhotoVista

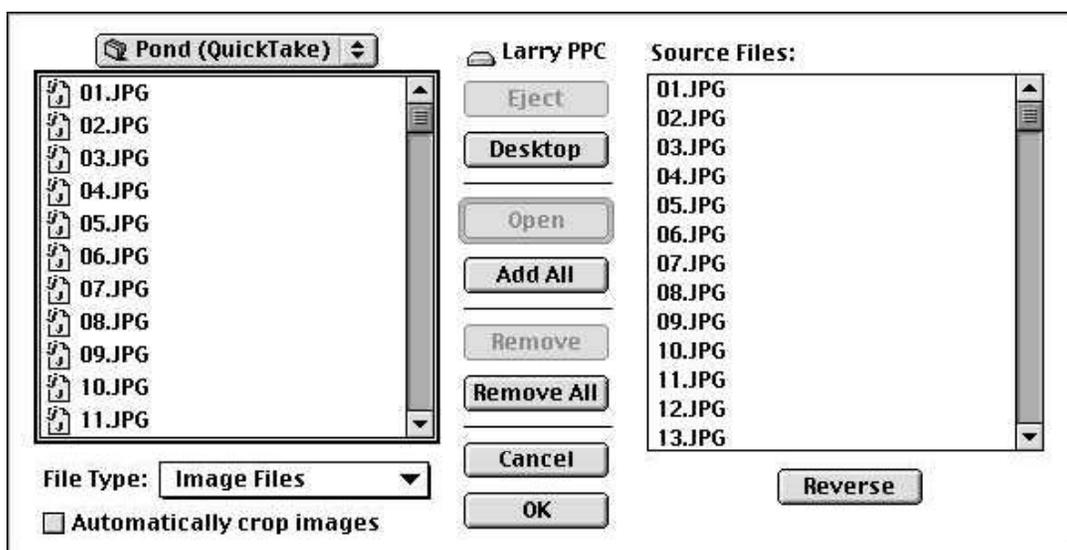
This little gem was for sale at a computer show for \$3.95. At that price I picked it up just on spec. Imagine my surprise when I found that it is a wonderful program on CD that works on Windows 95/NT and PowerPC platforms and has the ability to magically stitch together multiple images into a seamless panorama.

The collection and collation of photo resources takes place in one background window, below, that lets you gather the pictures that you want to use and put them into numerical or alphabetical order from left to right or vice versa. (There is also an advisory window accessed through the Camera button that offers a lengthy selection of cameras and lenses and suggests the number of photos to be taken by each combination in landscape and portrait orientation to ensure that enough picture resources are available for the program to work properly).

The reduced picture above shows the first three of 16 pictures taken in portrait orientation with



an Apple QuickTake camera. (I didn't take these. This is one of the example picture sets that comes with the program.) If you could scroll to the right you would find the rest of the pictures all side by each with the expected slight variations of colour and shade that occur naturally in any uncontrolled outdoor setting. You will also notice some slight variations in elevation in the 16 pictures. When you click on the bottom button the PhotoVista program shifts and aligns the 16 images one by one to the left merging them with the rest of the pictures and smoothing the overlapping edges and pictured elements until there is no discernable indication of where each begins



or ends. The darker images are made lighter and the images are all blended into one long picture that can be viewed as either a QTVR file or a scrollable landscape. The quality of the imaging is extraordinarily high. This program works like magic, shifting and melding the images right before your eyes.

QuickEditor for Macintosh (v6.3)

QuickEditor is a strictly PowerPC QuickTime video editor designed to perform common editing operations in the quickest and easiest way. It is a great tool for creating small, nifty movies you can publish on your web page, digital family album, and so on. A search for QuickEditor on the internet will take you to any number of possible download sites where you can get a copy.

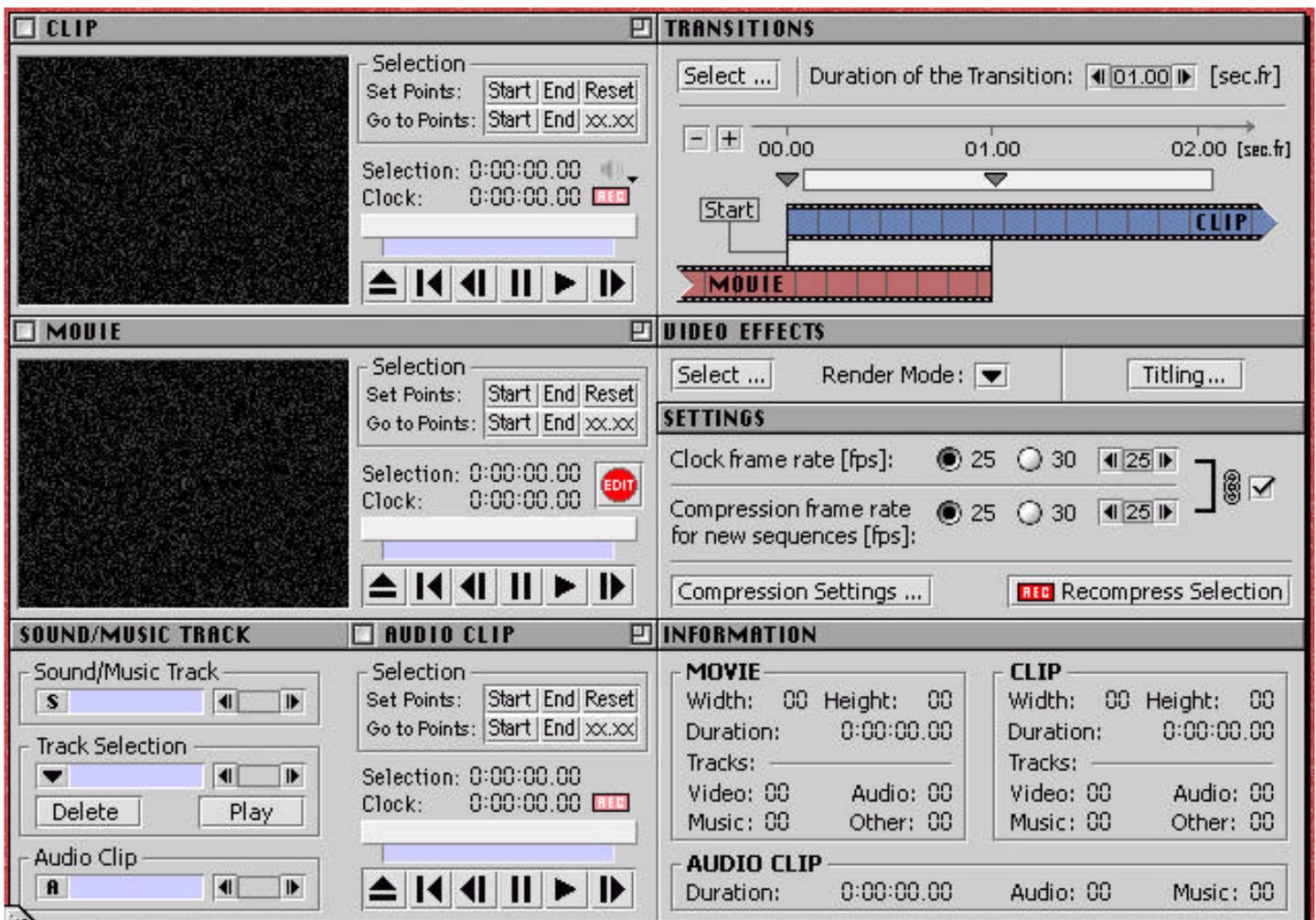
Some of QuickEditor main features are:

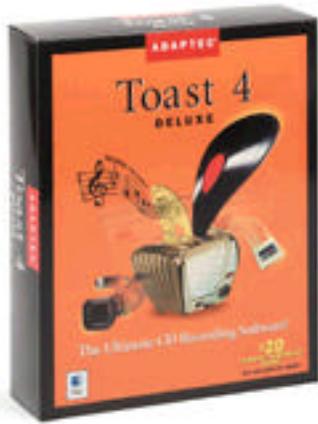
- Simple, "all-in-one-window", scalable interface.
- Support for a variety of movie, sound and image formats (including .mov, .avi, .mpg3, .aiff, .wav, .au, .bmp, .jpg, .gif, ...).
- More than 100 Transitions and Filters to choose from.

- Advanced Titling Tool.
- Support for Sound and Music (QuickTime Midi) tracks.
- Video and Audio digitising support.
- 100 levels of Undo/Redo
- Optimized for Mac OS 8.6 (support for Navigation Services' improved Open/Save dialogs)
- Support for Drag & Drop from the Finder
- Balloon Help
- 'Live' window dragging
- Fully functional shareware, 35 US \$ registration fee to access all the features.

Distribution of QuickEditor:

Everyone is allowed to distribute unregistered versions of QuickEditor, as long as the original package is not altered. QuickEditor must always come with the bundled documentation. Please feel free to distribute it on CD-Roms, Web sites, and FTP sites. I'll put a copy on the Source BBS.





Toast 4.1.1

One of our most recent Macquisitions was a LaCie external USB CD player that doubles as a CD-ReWriter. With it came a copy of Toast 4.1.1, the Adaptec software for Macintosh that controls how the CD burner works and

controls the variables so you can make the right choices when recording different types of audio and data files to create different types of CDs. As this type of optional equipment becomes more common we may all soon find ourselves writing 700 Meg CDs the way we used to make 1.4 Meg floppies 'way back in the 1990's. The blank CD-ROM media discs cost about \$1.70 Canadian each (\$1.00 U.S.) and are reputed to offer stable data storage for up to 100 years. Compare that to the cost of media for Iomega and SyQuest drives and remember that CD-ROM drives are CHEAP.

Hints and Tips on using Toast

It is always recommended that you run a simulation prior to actually burning a CD. From the Toast Menu bar this action is always available to allow you to do a practice run before committing your files or songs to plastic. Should there be an issue either with simulation or actual recording try the following suggestions:

Reduce the record speed. CD recorders are very time sensitive. If data is not presented to the drive at the correct time the burn will fail. Reducing the record speed allows more time for the hardware and software to present the drive with the proper data at the proper time.

Increase the Cache size. There is a Preferences menu item under the Edit menu that allows the user to increase the RAM cache used by Toast. The higher the cache, the more data Toast can load into memory before it actually starts recording.

The audio recording format sends more data per second than other formats. If you are able to correctly burn disks in other modes but fail while writing an audio CD, obviously your hardware is OK but your data is not being presented properly. Increase the cache size or decrease the record speed as described above.

If you experience any problems using your CD recorder to read CDs, you can check Adaptec's web site for an update of the Toast CD Reader.

If you experience any other issues its a good idea to check Adaptec's web site and check with the manufacturer of your recorder for firmware updates.

System Compatibility Notes

Adaptec Toast has been tested on a wide range of Macintosh models running various versions of Mac OS System Software. Adaptec recommends using a 68040 or PowerPC based Macintosh computer running Mac OS 8.6 to 9.0.4. For those customers with FireWire or USB drives, they recommend using a PowerPC based Macintosh computer running Mac OS 9.0.4 and FireWire 2.2.2 or later. Because older PowerBook computers do not support SCSI Manager 4.3, only the following PowerBook computers are supported by Toast with SCSI CD recorders: PowerBook 2400, 3400, PowerBook G3 Series, PowerBook G3 Series (Bronze), and PowerBook G3 Series (FireWire).



Making a Macintosh Bootable CD Using Toast

The trick here is that you can now produce a personal bootable utilities CD that you can use to help you recover from your own emergencies. Sometimes bad things can happen to your software or hard drive that you simply can't fix with Disk First Aid. Some of these types of problems can't be fixed while running from the drive on which they occur, so you will have to start up off a utility disk or CD and take your hard drive "off line" to either work on it or restore the system software. The early Macs that came without a CD-ROM drive as standard equipment, (like the Mac II family), came with no system CD but now you can make a CD that will boot any Macintosh model. To do this you need to create a CD with a System Folder on it that your own particular Mac, (or, if you so choose, any Mac) can run off of, with all the rescue and formatting utilities, hard-disk repair programs, resources, software repair applications and any extraneous documents that you feel will help you the most. Each bootable CD can hold up to 700 Megs of files and can either be chosen as your StartUp disk in the StartUp Control Panel or put into your CD-ROM drive where it will take over your Mac if you restart while holding down the "C" key. There just isn't enough room on a 1.4 Meg StartUp floppy utility disk to put a System folder and a full suite of disk repair diagnostic programs but 700 Megs is room enough for any system and dozens of applications.

With Toast 4.0 or Later:

- 1 Toast version 4.0 or later
- 2 Apple CD-ROM driver 5.4 or later but not version 5.4.1 (including all versions of the Apple CD/DVD Driver)
- 3 A valid System Folder

The option to make a CD bootable is available when you write a CD using the Mac Files Folders or Files & Folders format. To create a bootable CD follow these steps:

- 1) Make sure Toast is open and the main window is active.
- 2) Choose Files & Folders (or Mac Files & Folders) from the Format menu.
- 3) In the Toast main window, click Data.
- 4) Click the New CD button.
- 5) Drag the appropriate System Folder into the data window.

Note: Make sure you have the correct System Folder for the computer you plan to boot from on the CD. Apple places different items in the System Folder, according to the specific computer where it is used. The best System Folder to use is one found on an Apple System installer disc.

With Toast 3.5.4 or Later:

- 1 Toast version 3.5.4 or later
- 2 Apple CD-ROM driver 5.4 or later but not version 5.4.1 (including all versions of the Apple CD/DVD Driver)
- 3 A valid System Folder

The option to make a CD bootable is available when you write a CD using the Mac Volume format. There is a checkbox labelled 'Bootable' (select Mac Volume from the Format Menu, then click the Data button to see this). To make a CD bootable, select the source volume where your data to be copied to the CD is, check the Bootable checkbox and click OK. Then write the CD. This is the easy part. The hard part is making sure the data to be copied to the CD is properly prepared before-hand. Below are some of the best tips and suggestions for preparing the data for a bootable CD.

Format	Recorder	Utilit
✓ Mac Volume		⌘1
Files & Folders		⌘2
ISO 9660		⌘3
Mac/ISO Hybrid		⌘4
Audio CD		⌘5
CD-i		
Video CD		
Enhanced Music CD		
Disc Copy		
Disc Image		
Multitrack CD-ROMXA		
Audio Tracks		⌘A

Toast makes a bootable CD by copying an entire HFS or HFS Plus volume to a CD and using the Apple CD-ROM driver to 'build' bootable code onto the CD to make it bootable. Along with the boot code, there must be a valid System Folder too. However, just having a System Folder on a CD is not sufficient to make a CD bootable.

When you prepare your volume to be copied, the best choice is to have a hard drive or partition or even a removable media cartridge like a Jaz or Zip cartridge that you can create the System folder on and then test by starting up from it. As an alternative you can create a temporary partition using Toast but then you will not be able to 'test-drive' the volume by actually starting up from it before burning it to CD.

When creating a System Folder to be written to CD it is important to note that Extensions and Control panels that work fine on your hard drive might not work at all when run from a CD. Since a CD is locked, any extensions that need to update their own preference files or make any other writes to the startup volume will fail. This can result in freezing during startup or outright crashing. If you do make a disc that does crash during startup, check to see if the disc will start-up with the shift key held down to disable extensions. If it starts up this way, then you almost certainly have written some Extension(s) or Control Panel(s) to the disc that can't be run from locked media. To avoid the problem, try to make your System Folder as basic as possible. Limit your third party extensions to those you really need. Even limit your Apple created Extensions (A CD made from a 'MacOS 8.1 All' extensions set (using Apple's Extensions Manager) isn't necessarily 'trimmed down' enough to startup properly from a locked disc).

Another note about System Folders: If you're trying to make a disc that starts up on any Mac, make sure that the System is a Universal System. If you're unsure, get your System installer disc and make a new System Folder from scratch and choose Universal System when installing. If you just copy the System Folder from your Mac's

internal hard drive it may not work on any but that particular style of Mac.

Once you've created the System Folder to your liking and you've copied whatever other data to the CD that you want, you should test the volume to make sure it actually starts up your Mac. In addition to seeing if the System Folder actually works, this will cause any last minute preference files to be created when the volume starts up. The desktop may also be rebuilt.

As stated previously, Toast builds the boot code for the CD by reading the Apple CD-ROM driver. You need to have this file available even if you normally use some other CD-ROM driver on your Macintosh. The most convenient place to put the Apple CD-ROM driver is in the System Folder of the volume that will be copied. This is one of two locations where Toast automatically looks for it. Toast also looks in the currently running System Folder. If Toast finds a copy in both places, it compares them to find out which is newer. There is a special case which happens if Toast finds version 5.4.1 in either location. This version, if used, will create CDs that will only Startup in IDE based CD-ROM drives so if Toast detects this version in either place (the current System Folder or in the System Folder of the volume being written to CD) it will choose the copy in the 'other' location even if it's an older revision. If it finds version 5.4.1 in both places it will warn you and ask you to manually choose a different copy of the Apple CD-ROM file. Toast will also prompt you to locate the Apple CD-ROM driver file if neither the current System Folder or the System Folder to be copied has it. You can then simply navigate to wherever it is and click Open.



Note that you don't actually need the CD-ROM driver in the System Folder being copied to CD. The driver file is essentially turned into boot driver code and embedded onto the CD. It therefore will load even if the CD-ROM driver 'file' is not on the CD (just like a hard drive doesn't need a driver 'file' to startup. It's embedded onto the disc). Note that since the driver is embedded on the disc, you should NOT put any third party CD-ROM driver in the System Folder to be copied. You can put the Apple driver there if you want but as shown above it actually doesn't need to be there (it just has to be 'somewhere' so you can show Toast where it is).

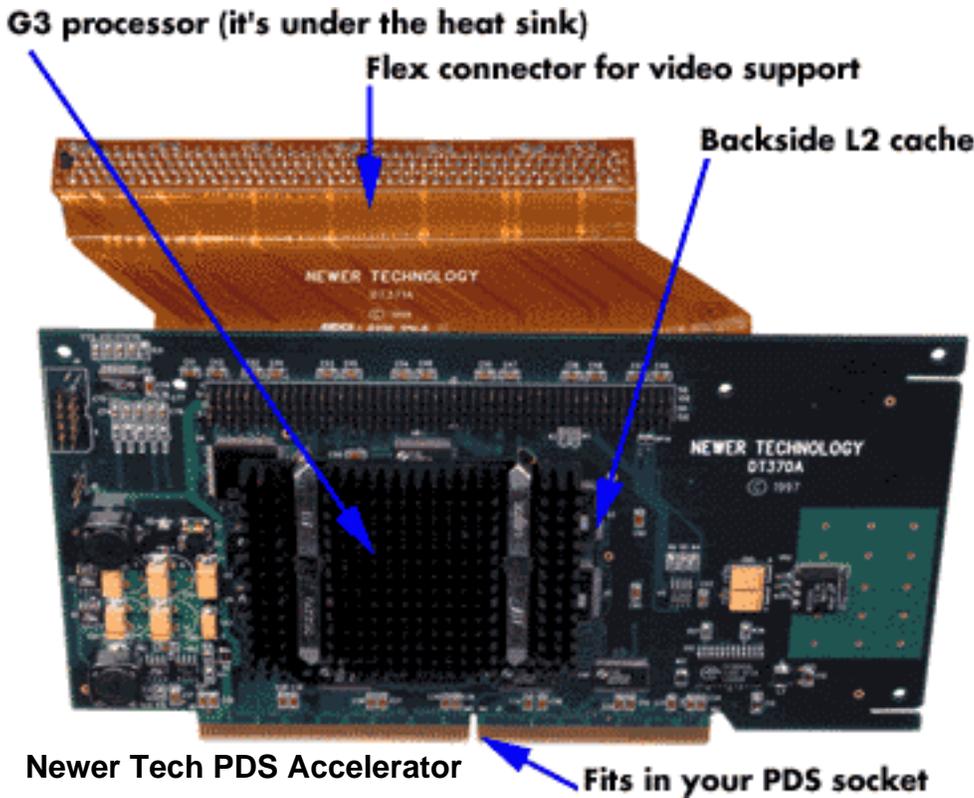
Occasionally you may want to store other installers or programs on a bootable CD that have their own System Folders in them. This can get rather confusing to the Mac since it can sometimes lose track of which System Folder you actually intend to startup from. Whenever you copy another System Folder to a volume there's a chance that the System will switch to starting up from that System. The easiest way to make sure that the volume is starting up from the volume you want it to is by using a utility program designed for just this thing. One such utility is called System Picker, which can be found on the internet. After you've copied everything to the volume that you plan on writing to CD (including multiple System Folders) run this utility and it will show you all the System Folders. Choose the one that you want to be the actual Startup System and click Restart. Verify that the System starts up from the desired System Folder.

An excellent example of the bootable utilities CD is the DiskWarrior 2.0 CD that comes equipped with no less than **three** different system

folders to ensure that it will be able to start up just about any 680X0 or PowerPC Mac model you will ever need to put it into. When you select the DiskWarrior CD as the StartUp disk it magically boots your Mac from the System most compatible with your hardware configuration. I have no idea how the Mac knows which system folder to boot from when the DiskWarrior CD is selected as the startup disk. It may be magic.

Of course the System folders are very bare-bones for this type of bootable utility CD: the only extensions that you need to have load are QuickTime, AppleScript and the ones necessary for the utility on the CD. The only control panels will be AppleTalk and the StartUp disk selection cdev. A fonts folder with the 9 or 10 System fonts suffices. Added to these you will need a compatible System file and Finder. As expected, the more complex newer Systems have bigger System Folders: a minimal OS 7.6 System Folder will be about 13 Megs but a minimal OS 8.1 System Folder will be about 24 Megs and a minimal OS9 System Folder will take up about 50 Megs.





Newer Tech G3/G4 PDS, PCI & iMac Acceleration, MetaBox JoeCards, XLR8 ZIF Carriers, & Sonnet G3/G4 Processor Upgrades

So you're sitting at your old PowerPC Macintosh computer and you're waiting, watching as the progress bar slowly moves across your screen (at least, you think you saw it move once) and you're thinking to yourself about how much you need a

faster computer or how much you need to speed up the computer you already have.

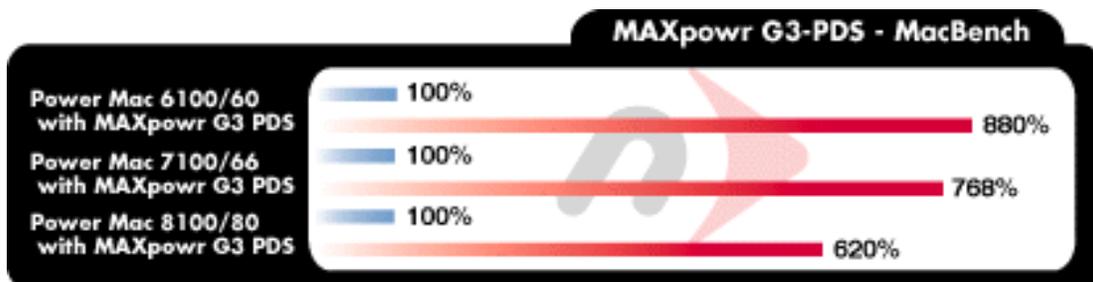
You're toying with the idea of buying one of those shiny new machines but you don't really want to part with that much cash. Besides, you like your computer... it's done so well for you. You know you want the latest technology in processors but you don't want to pay an arm and a leg. Even with the recent plunge in G3 and G4 prices maybe you just can't justify the outlay of a few thousand Canadian pesos for a new system. Or maybe there just isn't room on your desk for the new G4 you so richly

deserve. Does anyone have a solution?

Newer Technology, MetaBox and Sonnet are three companies that have a solution to the problem of slow old PowerPCs. We'll look at a few of their products for specific early Mac PPC models:

Lets look at Newer Tech's MAXpowr G3 PDS, capable of bringing your old PPC Mac into the present with a new G3 processor and 1MB of L2 backside cache. With this enhancement, you're looking at up to an 880 percent performance improvement over your existing machine. Now you won't be afraid to load the latest games or use your favourite graphics applications.

The installation is painless. The manual that accompanies each upgrade card walks you through the installation as you open the case and



install your new processor. And you don't have to replace anything in your system for the card to work, which means if you have an investment in RAM or NuBus cards you get to keep them! Nice. Do you have an AV card in your 6100 series? No problem! Newer Technology is the only company able to manufacture cards which allow you to continue using your PDS video card. In fact, all MAXpower G3 PDS upgrades for the 6100 series have a built in pass through allowing you to continue to use your AV card.

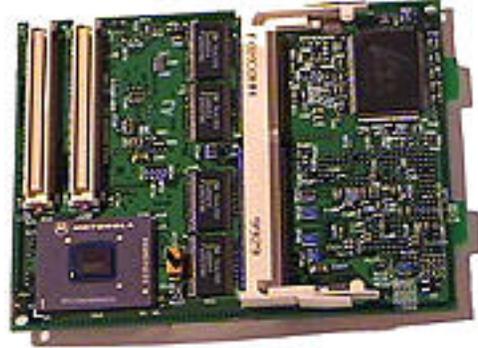
Do you have a PDS video card in your 7100/8100 series? No problem! The MAXpower G3 PDS is sold with a "flex" connector. If you have a PDS video card you will still be able to use it after upgrading it with a MAXpower G3 PDS.

The MAXPower PDS upgrade card is designed to work with the following early PPC Mac models:

- Power Macintosh 6100/60
- Power Macintosh 6100/60AV
- Power Macintosh 6100/66
- Power Macintosh 6100/66AV
- Power Macintosh 6100/66 DOS Compatible
- Power Macintosh Performa 6110
- Power Macintosh Performa 6112
- Power Macintosh Performa 6115
- Power Macintosh Performa 6116
- Power Macintosh Performa 6117
- Power Macintosh Performa 6118
- Power Macintosh 7100/66
- Power Macintosh 7100/66AV
- Power Macintosh 7100/80
- Power Macintosh 7100/80AV
- Power Macintosh 8100/80
- Power Macintosh 8100/80AV
- Power Macintosh 8100/100
- Power Macintosh 8100/100AV
- Power Macintosh 8100/110
- Power Macintosh 8100/110AV
- Power Macintosh 8115/110AV

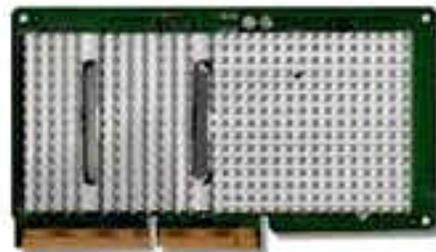
Newer Tech also makes a full line of PCI G3 and G4 upgrade cards for the PPC7300, PPC7500, PPC7600, PPC8600, PPC9500, and the PPC9600 as well as a series of G3 Upgrade L2 Cache cards for the 5500 and Performa 6360, 6400 and 6500

For those of you who have the good fortune of owning iMacs Newer Tech has created a pair of "iMaxPower" upgrades for the 233, 266, and 333 Mhz iMacs that will provide them with either a 466 Mhz G3 or a 433 Mhz G4 processor. Both iMac upgrades are Mac OSX compatible.



433 Mhz Newer Tech iMaxPower for the iMac

Sonnet makes several different lines of upgrade cards for the older Macs. The most common are the "Crescendo" PCI cards, which allow the insertion of a 400 or 500 Mhz G3 processor or a 450 Mhz G4 processor into the PPC7200, PPC 7300, PPC7500, PPC7600, PPC8500, PPC8600, PPC 9500 PPC 9600 and into the 7350, 8550, 8650, and 9650 Work Group Servers. Sonnet also makes G3 and G4 Upgrade Cards for some of the NuBus



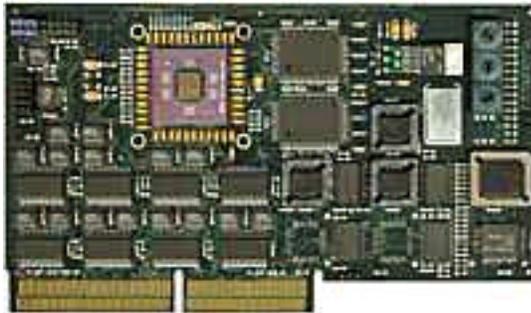
Sonnet Crescendo PCI Card

PowerMacs, (the PPC6100, PPC7100, PPC8100, PPC8150, PPC9150 and the Performa 611X series). For the PowerBook 1400 series Sonnet makes a pair of G3 upgrades to pick it up to either 333 or 400 Mhz.



Powerbook 1400 Card

MetaBox makes the JoeCard series of PCI upgrade cards. These are very similar to the Newer Tech and Sonnet cards for the PCI Macs BUT they are not compatible with the PPC 9600 or the Work Group Server 9650, and they are generally lower in price than the Newer Tech or



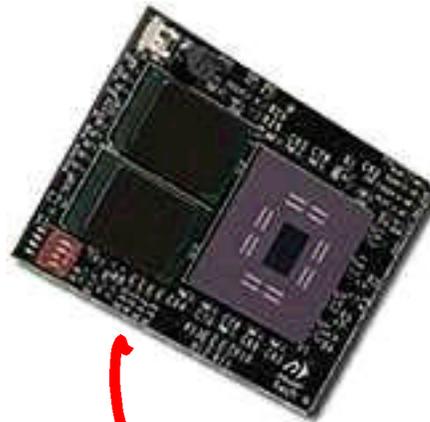
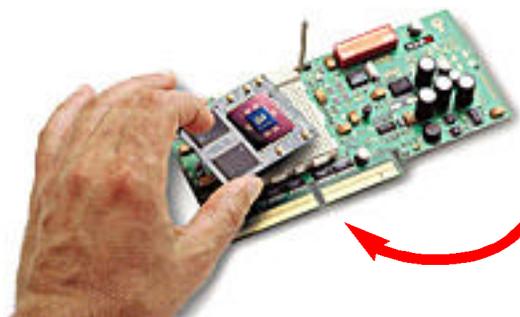
MetaBox JoeCard PCI

Sonnet cards when compared by identical processor type, speed and cache size. They also market ZIF upgrades G3 and G4 Macs.

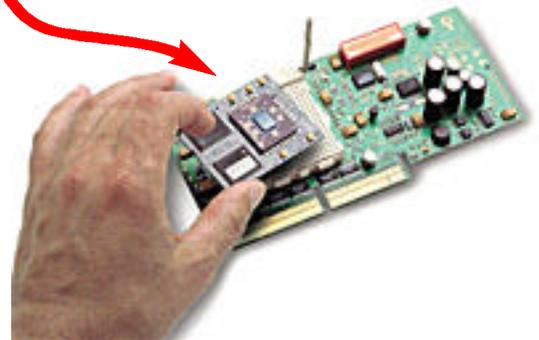
ZIF stands for Zero Insertion Force. MetaBox and Newer Tech both make these ZIF Upgrades that can be inserted onto the motherboard of the Beige G3, the Blue & White G3 or the "Yikes" G4



Here's a ZIF G4 Upgrade, above, as it appears ready to go into a G3 and here is the same upgrade below, being installed onto a carrier to be put into an early PowerPC.



The G3 ZIF Upgrade card goes here on the carrier so it can be re-used in an old PowerPC

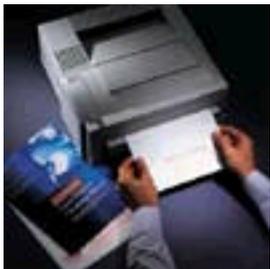


PowerMacs to basically replace the processor that came with it when new with a faster processor. With a ZIF installation you can put up to a 500 Mhz G4 with 1 Meg cache into your already fast 300 or 350 Mhz G3 to make it even faster. What do you do with the processor that you pull out when you put in a faster one ? There is a manufacturer called XLR8 that makes a ZIF Carrier (see above and left) that will allow you to take either of the MetaBox or Newer Tech processor upgrades, or the one you removed, and plug them directly onto the motherboard of your PPC7300, PPC7500, PPC7600, PPC8500, PPC8600, PPC9500, PPC9600 or into one of the Work Group Servers 7350, 8550, 8650, or 9650.

With the drop in price of last years G3 and G4 machines, and the inevitable speed boost coming over the next year, it will soon be possible to pick up a G3 or G4-upgradable PowerPC for next to nothing if you don't already have one. Like the once-desirable Quadras they will soon be available for a pittance and I for one will be avidly assessing them to determine which old PowerPC will displace my Quadra 950, and which G3 or G4 or G5 processor card will power it.

Fixing a Dirty LaserWriter Cartridge

Right in the middle of printing up the last issue of the Double Click in January the LaserWriter Pro 630 started to develop a bit of a problem: too much black on the pages. If the toner cartridge runs out of toner, which happens to them all eventually, the text goes streaky and pale and the black parts get grey and faint. What happened to me was very different. I got every page out of the LaserWriter with a dark vertical grey line along the right side of the document and a paler vertical grey bar through the body of the document just to the right of centre. I priced a new LaserWriter toner cartridge at MacWarehouse and checked out the number of pages that the printer had printed. The first number was quite high and the second quite low so I mentioned this LaserWriter affliction to Bruce Cameron and he suggested that there is a possible solution that I



could try myself. The same thing happened to him once and he used a simple piece of special sticky paper to clean off the excess toner. Definitely worth a try!

I picked up a package of Kensington Paper Guardian Paper Path Cleaning Sheets at Business Depot and followed the instructions included with them:

- 1/ Insert a single cleaning sheet into the paper path feeder in the direction of the arrows printed on the paper.
- 2/ Print a blank sheet.
- 3/ Repeat procedure 4-5 times and discard the cleaning sheet.

The user information on the package says that Paper Guardian™ Paper Path Cleaning Sheets 8.5 x 11 inch sheets are for cleaning laser printers, laser fax and copy machines. One-step process safely removes dust and debris from paper paths to help keep images sharp and clear. 12 sheets per pack. The process of cleaning the paper path peri-

odically will prolong the life of the equipment and help prevent costly repairs. The suggested use is once per month or more often whenever streaks or smudges appear on the output.

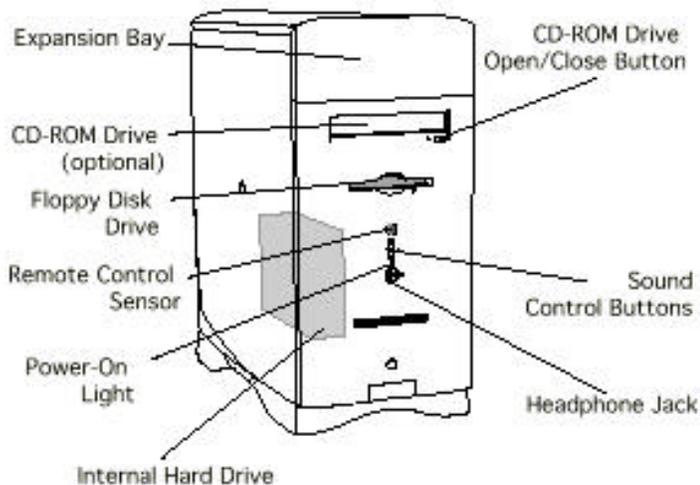
I ran one cleaning sheet through the LaserWriter five times as outlined in the instructions, which made it pretty dark in the places where the dark vertical grey lines were. Then I ran another paper through five times and compared it to the first. For each sheet I printed an identical blank page from a Quark document. The second sheet was noticeably lighter in colour than the first after five passes. Then I turned off the LaserWriter and waited a few minutes before starting it up again. This forced the printer to spit out another startup sheet that I could compare to the one that preceded the cleaning. Although there was a noticeable improvement in the quality of the printing, and the pale grey bar got a bit paler, I'd have to say that the problem had not completely gone. I then put in a third sheet and ran it for five printings of the blank sheet. The improvement seems to have reached its limit and the third sheet had no discernable effect on the grey bar. I suspect that the problem with my LaserWriter toner cartridge is beyond the restorative powers of sticky paper.

The MacWarehouse catalog lists the LW Pro replacement toner cartridge at \$157.95 Canadian. The LaserWriter Pro Service Manual describes the printer engine in the LaserWriter Pro as a Canon LBP B270. Business Depot store in the Walmart Plaza carries the Ko-Rec-Type toner cartridge suitable for the Canon LBP B270 engine for \$79.95. (The same toner cartridge fits lots of Anzac, Apple, Brother, Canon, Dec, Decision Data, Hewlett-Packard, Lee Data, Siemens, Tandem & Troy LaserWriter printers.) I decided that a new cartridge was in order and went over & picked one up. Ko-Rec-Type replacement cartridges are original equipment manufacturers cartridges that have been recycled, cleaned, inspected and re-manufactured using original components and new parts and filled with premium Ko-Rec-Type Toner. Works like a charm and I'm back in business.

Bargoon Macs Part 1

PowerMac 6500 or Performa 6400

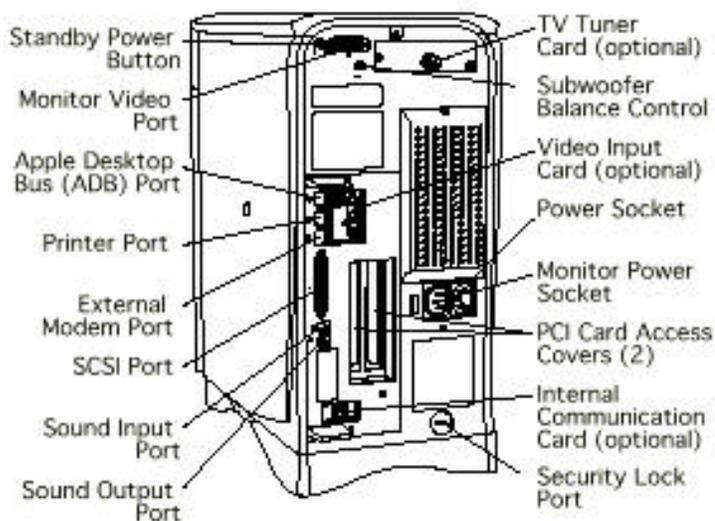
Front View



This is the first part of five about the best used Macs to acquire and why. I'm presently trying to pick one of these gems, a PPC 6500, on eBay and I'll tell you what makes this model desirable, besides the fact that they can be picked up cheaply.

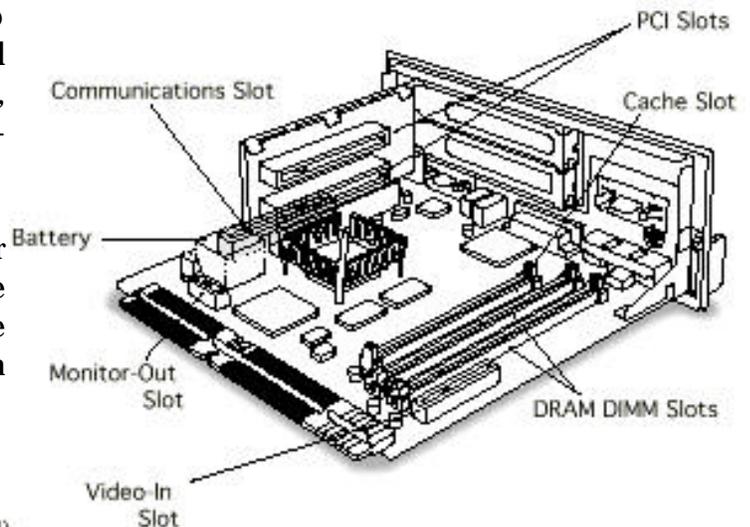
If you check back to the article about Newer Technology and Sonnet G3 upgrades. You'll see there that there is a "L2 Cache" card for these models that replaces the Level 2 cache module on

Rear View



the logic board. A quick look at the latest MacAddict reveals a Newer Tech L2 upgrade card with a 400 Mhz G3 processor and 1024k of cache for \$299.00 American. That's not cheap BUT the 6500 and 6400 models have so very much going for them that they are worth upgrading. They have expansion slots for two 7-inch PCI cards, so you can put a firewire and/or USB connectivity card into one of them to get access to all the new USB and Firewire stuff that Nubus macs can't get at and a PCI video card into the other to cancel out the anaemic on-board VRAM. These models have a built-in SCSI bus that will accept up to six external peripherals, and a expansion bay for an internal SCSI device. To enhance the sound output they have a wonderful adjustable sub-woofer in the bottom of the case. To make upgrading even easier they are equipped with cheap IDE hard drives so the small original drive can be replaced with a new fast low-cost ATA

Logic Board



drive. And these models will accept the wonderful Apple TV/Video System as an upgrade so you can have S-Video and Composite video in as well as being able to watch TV on the screen while running other apps.

If you already have a 6500 or 6400, console yourself with the knowledge that for a very reasonable fee you could have an extremely desirable G3 with great sound and performance. If you don't have one but would like to, keep your eyes open and you might get lucky.

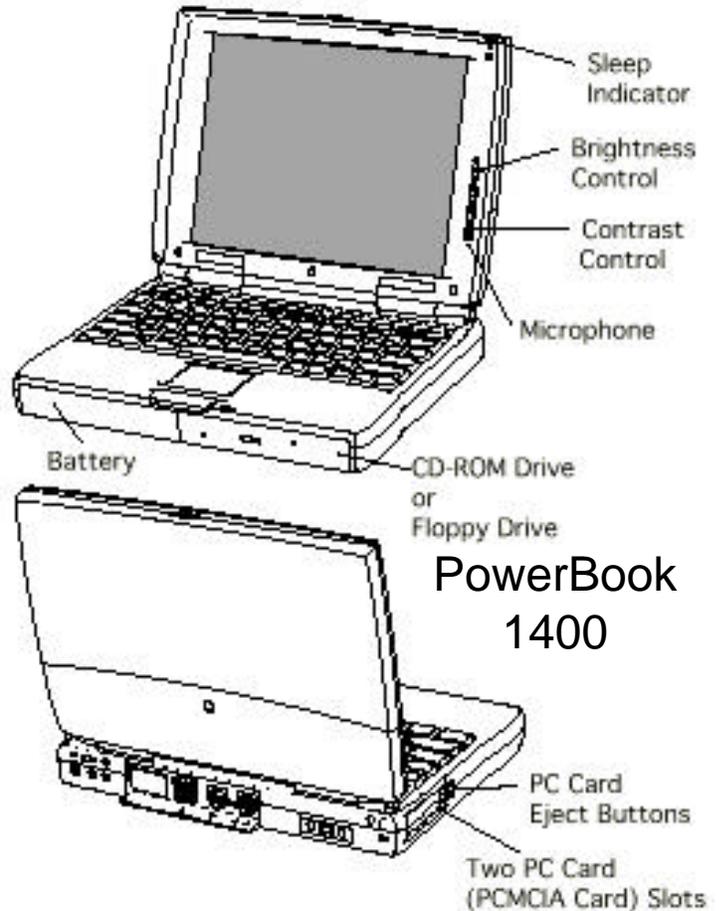
Bargoon Macs Part 2

PowerBook 1400

There has always been a penalty for going portable. The portable models always cost a lot more for a lot less: smaller screen, smaller hard drive, less DRAM, fewer drives and features. Despite this inequality the chic PowerBooks have always commanded a higher price than similarly equipped desktop models because of the cool allure of portability.

If you already have one of these early PPC 1400 PowerBooks or get the chance to pick one up cheap, you have a potentially wonderfully upgradable Mac. If you trot back to page 10 of this issue you will see a picture of a Sonnet G3 processor upgrade card in the bottom right corner, one of several that are designed to boost the processor speed of the PowerBook 1400 to either 333 or 400 Mhz. Checking on eBay may get you a slower G3 upgrade for less money that still gives a serious performance boost.

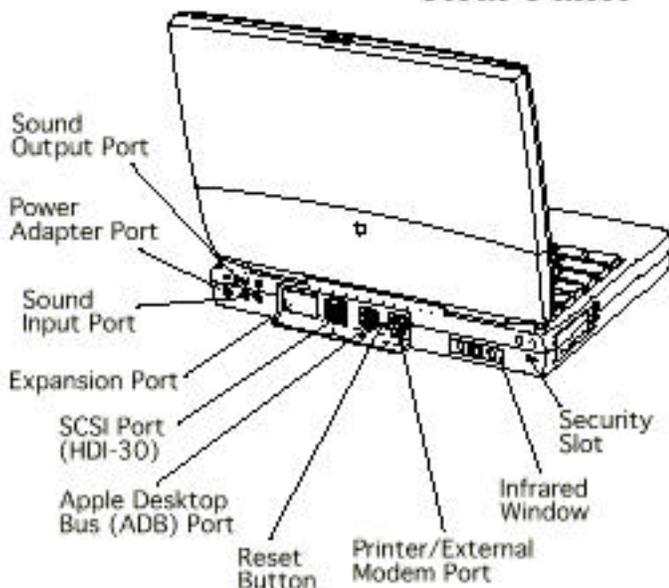
Optional installed components like hard drives and memory upgrades for PowerBooks are particularly pricey so if you are contemplating purchasing a PB 1400 try to get the one with the most RAM and the biggest hard drive. It will put you further ahead in the long run than buying a



model for much less without the RAM and storage you know you'll need eventually. Some of the PowerBook models had faster processors but don't pay extra for one of those. The idea is to replace whatever it is with a G3 upgrade card.

There are lots of bonus things to watch for when buying second-hand PowerBooks like the expensive add-ons and optional equipment that take advantage of the expansion bays, that you may pick up with it at a fraction of their original cost. The PowerBook 1400 can accept a CD-ROM drive, floppy drive or Zip drive, internal modem, Ethernet capabilities and video cards: all features that make it a natural recipient of a G3 transplant. The only limit to expansion is the 64 Meg RAM ceiling but if you can live with that the PowerBook 1400 with the G3 upgrade can be a cheap route to getting a G3 PowerBook without giving up your ability to connect to your AppleTalk network, use all your SCSI equipment, and slip in a floppy disk whenever the notion takes you.

Rear Panel

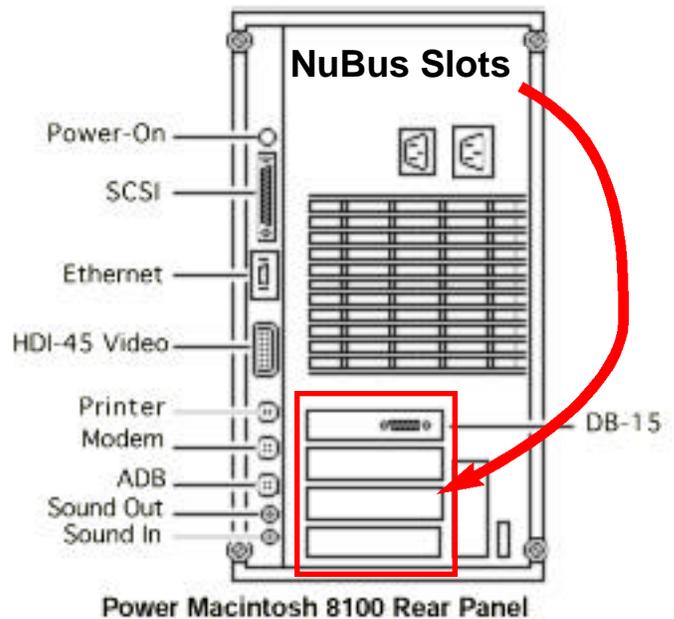


Bargoon Macs Part 3

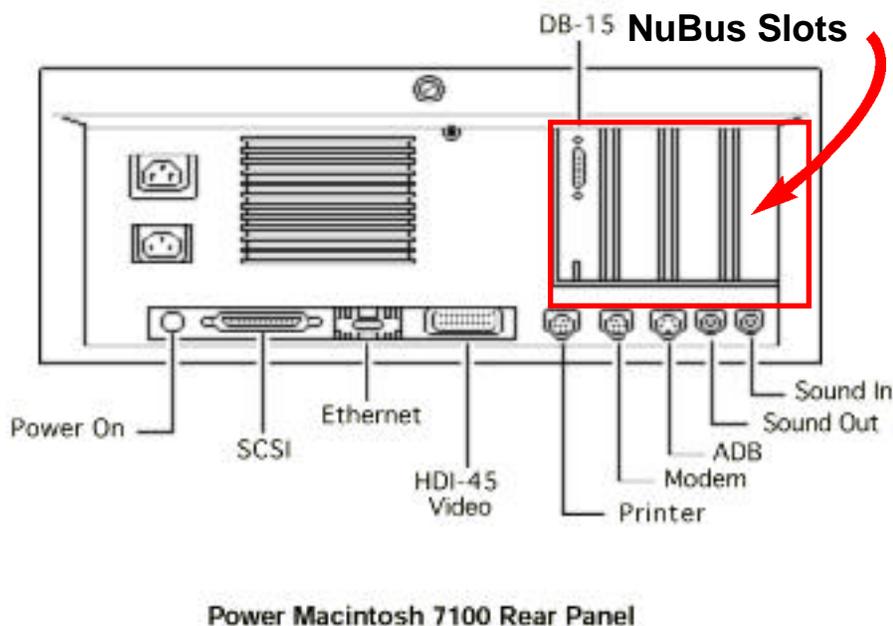
PowerPC 7100AV & 8100AV

Cheap. Cheap. Cheap. These slow old PowerMacs shipped with 66 to 110 Mhz 601 processors and are definitely the best slowest PowerPC Macs with wonderful NuBus expansion possibilities. They tend to be cheap because plentiful, and the upgrades for them are also low-cost now compared to when they were new. If you already have one of these you quite probably aren't using it any more but don't want to sell it because it isn't worth anything like what you paid for it. Nobody seriously considers an 80 Mhz machine as a serious computer anymore, (except people like me who still use 68040 33 and 40 Mhz Macs for everything).

With my NuBus Mac IICI, Mac IIfx, Quadra 840AV, and Quadra 950 I have struck it rich with wonderful NuBus cards on eBay that have enabled me to install into my favourite models a wide choice of extra powers and abilities far beyond those of stock Macs. My NuBus RasterOps MoviePak Presenter, 24STV, and 24XLTV, SuperMac SpigotPower, DayStar Charger and Radius Color Pivot Interface would all work in a PPC 7100AV or 8100AV.



The 80 Mhz 8100 is the most desirable 8100 model, as it has a faster system bus than the later 8100/100 or 8100/110. This will maximise the effects of any processor upgrade that you happen to install. The 8100AV can accept G3 and G4 upgrades and both Sonnet and Newer Tech make upgrades for this model that will accept the connection from the AV card if there is one installed. The February, 2001 MacAddict magazine has an advertisement on page 86 offering a Sonnet Crescendo 300 Mhz G3 upgrade for the PPC7100 and 8100 models for \$249 U.S. The video can be easily upgraded with NuBus goodies from eBay and the 72-pin SIMMs are coming down in price. The 8100 can take up to 256 Megs of RAM and can run any system up to System 9.1.



With a modest boost in RAM, a bigger SCSI hard drive, a G3 or G4 processor card and any trick NuBus video card that has S-Video capability, the lowly 7100AV or 8100AV can become a very powerful low-cost server machine and router (with multiple slots for Ethernet cards) and a nice multimedia machine with AV in. If you have one of these NuBus PowerMacs do something with it. They have nothing but potential.

Bargoon Macs Part 4

PowerMac 7500

What you have here is an ugly flat beige box that looks EXACTLY like a 7300 or 7600 PowerPC but with a much slower 100 Mhz Motorola 601 processor instead of the faster and more powerful Motorola 604 processors that they got. This is a good thing because you want to pick one of these up for as little as possible and toss the processor.



Like the other Macs it resembles the PPC 7500 does have some very impressive features inside: eight DIMM slots for up to 512 Megs of RAM, two SCSI DMA buses supporting up to eight SCSI devices, three PCI expansion slots, one Digital Audio Video (DAV) slot, built-in AUI and 10Base-T Ethernet, video-in support via external ports, two GeoPort Serial ports, built-in CD-ROM, and CD quality stereo sound in and out. What it lacks in processor power makes it a very likely candidate for upgrading.

All of the major companies produce seriously potent G3 and G4 upgrades for daughtercard-based Macs like the PPC 7500 at very reasonable prices. Its possible to find G3/300 Mhz

upgrades for as little as \$150.00 U.S. and G3/400 Mhz upgrades for as little as \$250.00 U.S. from Sonnet and Newer. Check out the ads in any recent Mac magazine for surprisingly low prices or check out the vendors at the computer show in Toronto later this month.

If you already have a PPC 7500 you will find lots of other goodies available for it once you turn it into a G3 rocket including more RAM, PCI expansion and video cards, bigger hard drives, and other neat stuff. Maxtor has started selling its 30 Gig EIDE hard drives with a FREE Ultra ATA PCI card so they can go into PCI computers with ease. Since the basic 100 Mhz PPC 7500 shipped with 2 Megs of VRAM, 8 or 16 Megs of RAM, and a 500 SCSI Meg drive you will need to upgrade these deficiencies before doing any serious computing.

If you don't have a PPC 7500 but would like to get one check out eBay and other computer auctions and you might get lucky. Try to get one that has been improved by the previous owner but even with a bigger hard drive and more RAM you will find that the extremely slow 601 processor will keep the price down to what you can afford, probably less than a Mac IIci with a DayStar 66 Mhz PPC upgrade card in it.

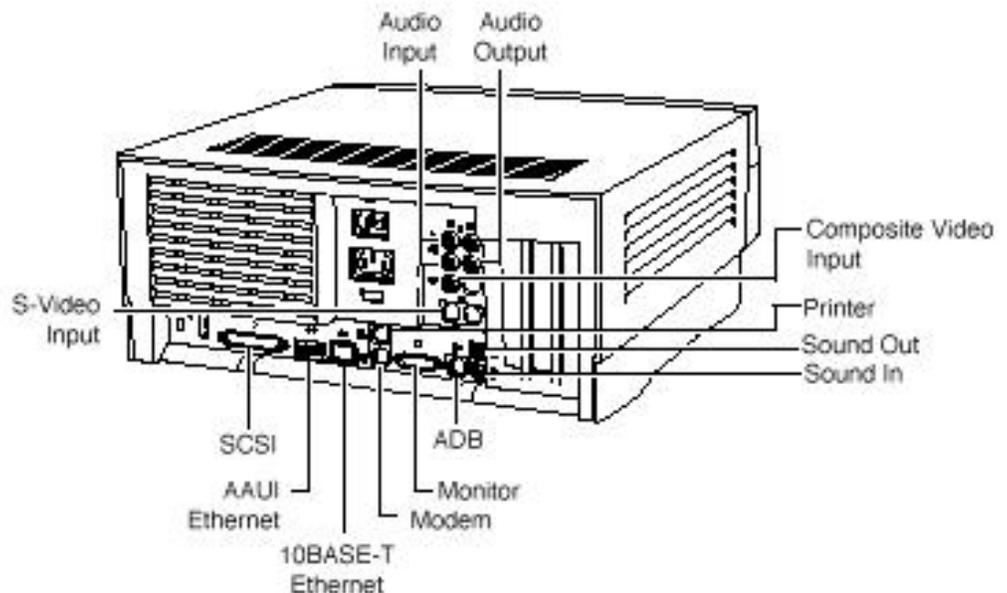


Figure: Rear Panel

Bargoon Macs Part 5

PowerMac 9600

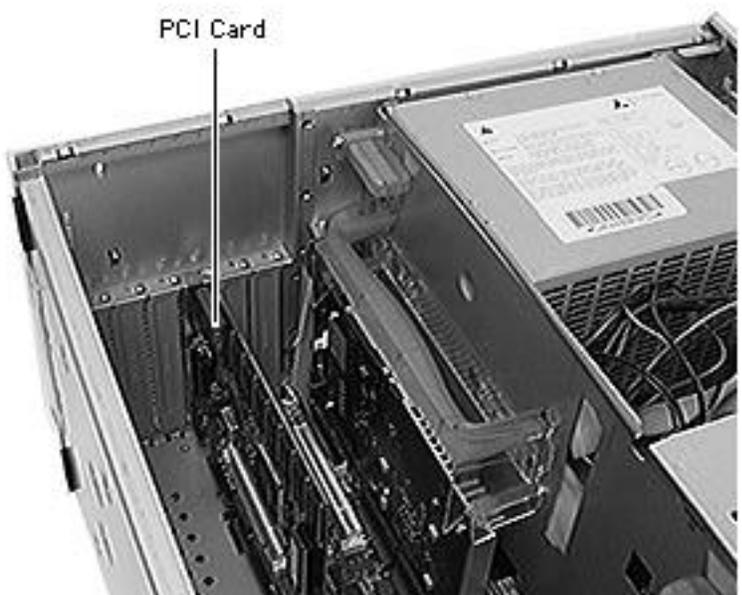


You can bet I've saved the best for the last. The PPC 9600 is not your typical bargain PCI Mac. You won't find this one for a song anywhere. Hopefully this is the Mac that you may already have and may want to accelerate.

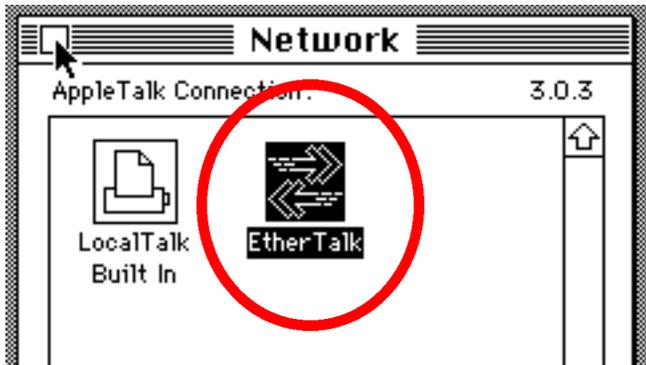
Recently I put a Maxtor 80 gig ATA 100 hard drive into Irma's Yosemite G3. The B&W G3 shipped with one 6-Gig ATA drive and no way to add another without either replacing the 6-Gig drive or installing a ATA interface PCI card in one of the three "usable" PCI slots. I put in the Sonnet UltraATA 66 PCI card to connect the Maxtor drive to...beside the Adaptec SCSI interface PCI card...beside the ATI graphics card that came with the G3 as original equipment ...and now I have only one PCI slot unused. Perhaps I'd like to install a second video card, a high-end digital audio card, or a USB/FireWire card and a TrueVision DC30plus card for analog-to-digital video but I can't. Even the biggest & best new dual-processor and single-processor Mac models that can ship with over 700 Mhz processors, 1.5 gigabytes of RAM, 300 Gigabytes of storage sport only 3 usable PCI slots. One solution for those who really need PCI expansion is a four-slot or 6-slot Magma external PCI chassis which can cost almost as much as a new G4 CPU.

Unfortunately the PPC 9600 already sports an impressive Motorola 604 processor of its own, possibly running at up to 300 Mhz and so commands a big price if you can find one second hand but if what you really need is a workhorse Mac with six PCI slots, two 5.25 inch internal bays, 12 DIMM slots supporting up to 768 Megs of RAM, capable of running OS 9.1 and even the new OSX, and the ability to take a 400 Mhz G4 daughtercard, you can wind up spending a lot less for a PPC 9600 and G4 upgrade card than you would for a less endowed new G4 and the external PCI chassis. (I've been to the <www.magma.com> site to check out those PCI external chassis things and the price starts at about \$1,100.00 U.S. and goes up to about \$2,000.00 U.S. for better ones.)

As you can see from the picture below, the 9600 opens from the side to reveal a huge storage compartment at the bottom with lots of empty and available space for your six PCI cards if you have them. This is really a Mac to grow into for a dedicated professional in any field. With a G3 or G4 upgrade you'll have lots of speed and power as well as lots of expansion options into graphics or video with so many terrific PCI audio and multimedia cards out there to choose from as well as the PCI cards that will create more SCSI connectivity, and others that allow all the new USB and FireWire digital video devices to connect externally. A wonderful Mac could get even better.

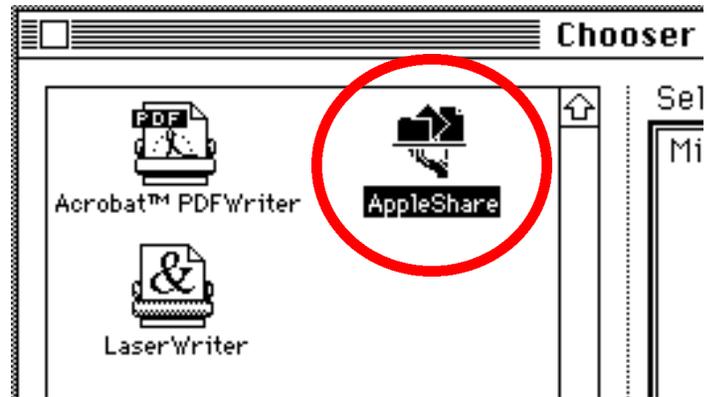


Tiny EtherNetWorks



For this look at the tiniest Ethernet network involving just two Macs I created a File Server of my Mac IIci and accessed it over an ethernet network that was comprised of one single cable between it and my SE/30. There were no hubs or EtherWaves used, just one 8-foot ethernet crossover cable connected to the RJ-45 port in the ethernet card in each Macintosh. Ethernet cards for most PCI and Nubus Macs are available second-hand on eBay auctions for about \$10 to \$15 each and the crossover cable was found on the internet for about \$6.00. There are several types of ethernet connection cards available but for best results and universal compatibility its best to get the cards with the RJ-45 connector that looks like an enlarged telephone connector.

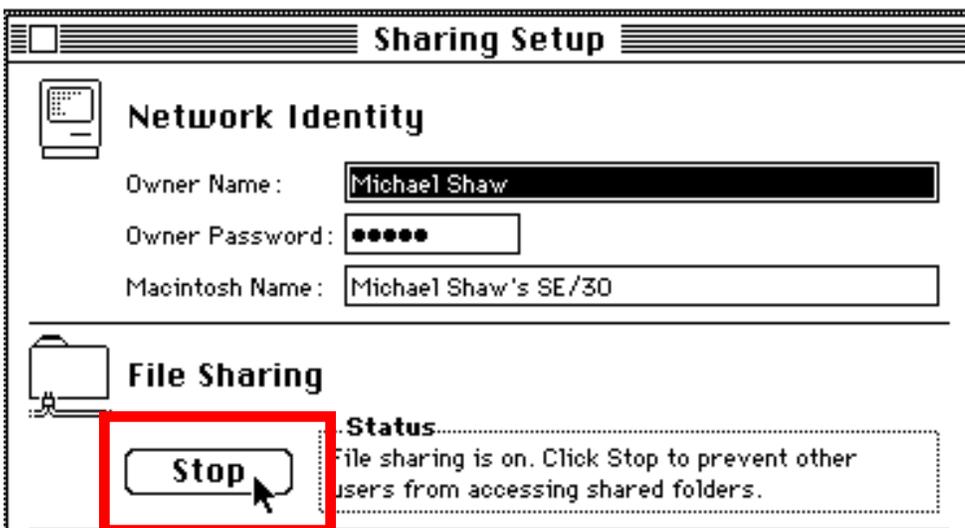
To make this little network operate it only requires that you start up both Macs and turn the networking to EtherTalk in the Network control panel (System 7) or in the AppleTalk CDEV (OS8). Then decide which Mac will be the File



Server and open its Sharing Setup or FileSharing Control panel, depending upon which system you're running, and turn on the file sharing option. I'll be setting the IIci to act as file server. Once the File Sharing is started the Mac IIci server is set up and I can go to the Chooser of the SE/30 and select AppleShare from among the listed Chooser extensions. The Chooser acknowledges that the Mac IIci is available to share files and asks for a password to access it and asks which hard drives in it are to become shared. When this information is supplied and entered an icon of the selected Seagate 520 Meg hard drive in the IIci appears as if by magic on the Desktop of the SE/30 and programs and documents can be moved from one drive to the other with ease. The

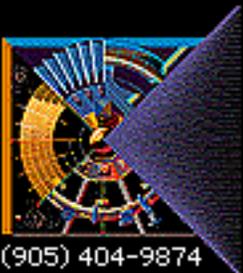


server's hard drive icon appears as a tray with tiny Folder, Application and Document images on it just below the Quantum 105 hard drive installed in the SE/30. When the files have all been moved and I want to end the sharing session I just click Stop in the Sharing Setup window to shut down the server and a warning goes to the SE/30.



This same activity could have been achieved with the Printer ports connected with Apple LocalTalk or with Farallon PhoneNet connectors but the speed with which files can move would have been drastically reduced.

Welcome To ... **The SOURCE**
 CENTRAL LAKE ONTARIO'S
 FIRSTCLASS BBS (905) 404-9874



SPONSORED BY:
MaUse
 Macintosh Users East
 CLUB & BBS MEMBERSHIPS
 CALL: (905) 433-0777

Chris Greaves came with his better half, Mary, who objected to my picture of her in last month's newsletter taken at the annual MaUse Exec Dinner so I took another picture of her at the January Meeting. Chris also brought a box of old and not

so old Mac magazines with CDs and some modems to sell.

Be sure to check your email for details of next month's meeting on the last day of the month. Mark February 28th on your calendars.



January Meeting Report

The MaUse meeting in January was held on the 17th of the month instead of the 24th because of a schedule conflict at Henry Street High School which made our customary fourth Wednesday of the month impractical. Our own Jim Foster presented the topics, which were an overview of the new hardware offerings announced recently by Steve Jobs, and a review and demonstration of our local First Class client BBS, of which Jim is the Administrator. Jim actually connected to the BBS for the demonstration, a feat made possible through the use of the phone line in the lecture theatre. For those of us who still use the BBS regularly it was a welcome review of the features of this excellent Soft Arc product. For new members Jim and Bruce had some CDs on hand to simplify the installation of the Source software.

Speaking of new users, we had one new member join the MaUse club at the meeting. On behalf of all of us I've already welcomed Byron Rich to the Club. Byron recently acquired his very first Mac, one of the 350 Mhz G3 iMacs.

POWER CHARGE

(1000691 Ontario Inc.)

Toner Cartridge Remanufacturing
 and Imaging Supplies

APRIL NABEEH

Tel: (905) 433-1106 Fax: (905) 579-1469

FREE PICK UP & DELIVERY

MicroImage
...plus

We know Mac...

- iMac, iBook, PowerBook, Power Mac G4
 - RAM, Ethernet, AirPort, video
 - USB, Firewire, SCSI devices, adapters, cables
 - CD-R, CD-RW, Zip, Jaz, Orb, DAT, Travan
 - scanners, printers, speakers, software ...
- Great prices too!

MicroImage Plus, Inc.
 1675 Heathside Crescent,
 Pickering, Ontario,
 L1V 5V6

Tel: (905) 831-0699

Fax: (905) 831-7585

mipplus@home.com

Authorized Value Added Reseller