Printers, Monitors, and Other Hardware

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What some RAID levels?

- RAID 0: RAID 0 sacrifices fault tolerance for raw speed. It doesn’t store parity information, but with its small stripes, it can work with large files much faster than any other RAID. Because it is not fault tolerant, RAID 0 is inappropriate for the storage of critical data.

- RAID 1: RAID 1, also known as disk mirroring, makes use of neither striping nor parity information. Instead, each RAID 1 array consists of two disks that duplicate each other’s data and are treated as one drive. A computer can read from both disks and thus access data faster. However, because the entire contents of a disk are duplicated, RAID 1 uses space less efficiently than RAID levels that store parity information.

- RAID 2: In RAID 2, some drives are striped while others hold error checking and correcting (ECC) data. Because nearly all modern drives have ECC built-in, RAID 2 is infrequently implemented.

- RAID 3: In RAID 3, all but one of the drives in the array are striped. The final disk is devoted to the storage of parity information. RAID 3 stripes are small, so all the disks work together when reading and writing large files. This greatly increases performance, but as each task accesses all the disks, it is not possible to overlap I/O (i.e., do two tasks at the same time). For this reason, RAID 3 is inappropriate for multi-user environments.

- RAID 4: RAID 4 is identical to RAID 3, except that it uses large stripes instead of small ones. Because files usually only span one drive, it is possible to overlap I/O. Unfortunately, because each access must update parity information, the parity drive becomes a bottleneck that increases in severity as the number of drives increases.

- RAID 5: RAID 5 is similar to RAID 4 except that, rather than devoting a single device to parity information, it divides it among all the drives. This eliminates the bottleneck created by RAID 4’s parity drive.

- RAID 6: RAID 6 is like RAID 5 except that it adds a second parity scheme. It is slower than RAID 5, but offers greater protection of data.

- RAID 7: RAID 7 is a proprietary solution offered by Storage Computer Corporation. It is a very expensive, high-speed option that relies on caching and an embedded operating system that manages I/O.

- RAID 10: A RAID 10 (i.e., RAID 1+0) array uses several RAID 1 arrays and stripes them to form a single unit. RAID 10 is very fast and highly fault tolerant, but also extremely expensive.

- RAID 53: RAID 53 is similar to RAID 10, but each segment is a RAID 3 array rather than a RAID 1. Like RAID 10, it is fast but expensive.

- RAID 0+1: A RAID 0+1 array is essentially a RAID 1 array built from RAID 0 array units. It offers very fast performance and good fault tolerance, but it is very expensive.

When I print my pdf files, only a portion of my document gets printed and is magnified to fill the entire sheet or paper. How do I fix this?

When this happens, open up the print window and under the Page Scaling dropdown menu, select “None” or “Fit to printer margins.” Then press print again.

Who manufactured the LCD panel on my Dell UltraSharp?

If you have a Dell UltraSharp LCD monitor, and would like to check which company made the LCD panel, follow these steps:

1. Make sure that the monitor is connected and is displaying an active video signal (e.g. the Windows Desktop, the BIOS, etc.)
2. Power off the monitor.
3. While holding down the Menu and + buttons on the monitor, power it back on.
4. After the video signal reappears, release the buttons, and press the Menu button once more.
5. In the menu that appears, look for a three-letter code on the top left area, to the left of “Dell”.

Dell Laptop Battery Recall

If you have a Dell laptop model:

- Latitude: D410, D500, D505, D510, D520, D600, D610, D620, D800, D810
- Inspiron: 500M, 510M, 600M, 700M, 710M, 6000, 6400, 8500, 8600, 9100, 9200, 9300, 9400, E1505, E1705
- Precision: M20, M60, M70, M90
- XPS: XPS, XPS Gen2, XPS M170, XPS M1710

purchased between April 2004 and July 2006 please remove the battery and check the serial number. Potentially affected batteries under rare conditions can overheat and could pose a risk of fire.

If your model is included in the recall please go to this url:

Dell Battery Program

Dell has step by step instructions on how to verify if your battery needs to be replaced.

Changing LCD Monitor Settings

In general, digital LCD monitors are sharpest at their native resolutions, which sometimes makes images on the screen too small for some people. Unfortunately, if you select a non-native resolution, the text can look fuzzy or jagged. The only way to tell is to try various Display settings and determine which looks best to your eye (even if too small or too large). These are accessible from Control Panel > Display > Setting tab.

Then you can adjust the size of the objects on screen by changing the DPI setting. This is accessed via the Advanced button. Typically this needs to be increased — 120% has been a popular setting on our 19" monitors. Unfortunately, this requires admin rights to your PC and a reboot to take effect.

Finally, if the text doesn’t look as sharp as you’d like you may wisho to adjust your ClearType settings in Windows. You can not only change this under the Effects button on the Appearance tab but also fine-tune it further at http://www.microsoft.com/typography/cleartype/tuner/1.htm.

How can I find a dead or stuck pixel on my LCD monitor?

You can use a free utility called UDPixel.

Check it out

I have an old computer. How do I recycle it?

Private Computers

For residents of of the City of Los Angeles and the County of Los Angeles a privately owned, non-university computer, UCLA and the City of Los Angeles have an eWaste program at UCLA for “Residential Special Materials and Electronic Waste”.

LA County also operates a **household** waste program. See http://ladpw.org/general/enotify/Calendar_Template/Calendar.aspx.

Best Buy Electronic Recycling Program
As Sustainability becomes the hot topic on campus, we would like to also provide a program, offered by Best Buy, that allows you to eWaste or recycle electronics from your home. This program is open to everyone, does not cost anything, and accepts up to two items per household per day. For more information on this program, please visit http://www.bestbuy.com/recycling or for more information on Sustainability on campus, visit http://www.sustain.ucla.edu.

University Computers

UCLA Facilities Management will collect eWaste for a small fee. Submit an FSR. Information about their recycling programs is available at https://www.facilities.ucla.edu/services/recycling-waste-management and https://www.ehs.ucla.edu/hazwaste/types/electronic.

UCLA Equipment Management offers the Dollar $aver program. Campus departments may place free advertisements for the sale of surplus equipment including computers.

Lastly, any minor computer salvage can be done through our Preferred Surplus Dealers: http://www.equipment.ucla.edu/pdf/DollarSaver/PreferredSurplusDealers.htm

For large volume of surplus try state-approved Off Lease Clearinghouse (661 729-2677) as they only charge $25 for the lot and will take just about anything electronic. Other vendors will charge $25 for each monitor, for example.

- System Recycling With Xubuntu – Linux Magazine article April 4th, 2007By Jason Perlow

Alternative Electronics Recycler

Here is an alternative electronics recycling company based in Fresno. The company will pick up e-waste in bulk free of charge. Additionally, they will certify the destruction of obsolete hard disks. See contact information below:

Kevin J. Dillon
Co-Founder, Chief Marketing Officer
Electric Recyclers International, Inc.
1-800-RECYCLING
d: 559.442.3990
f: 559.442.3999

http://www.electronicrecyclers.com

Another Electronics Recycler

Here's another free recycler who is state approved:
Off Lease Clearinghouse
824 West Ave L-6, Unit D
Lancaster, CA 93534
(661) 729-2677

Earth911 is an environmental services company that addresses solutions for products' end-of-life for both businesses and consumers. They maintain a directory of recycling locations at

http://earth911.com/

Electronics Recycler who offers free Pickup

This company is based in CA and they will come and pick up items in your area if you schedule with them beforehand. They will also give you a certificate afterward.

Electronic Recycling Solutions

http://ers2recycle.com

Contact info:
Tracy Taggert
info@ers2recycle.com

Easy Configuration of Bonjour (formerly Rendezvous) Printers Using Safari for OS X

Easy Configuration of Bonjour (formerly Rendezvous) Printers

If your printer supports Rendezvous, you can administrate it through Safari! Who would have thought? Try it out...

â€¢ Launch Safari.
â€¢ Go into Bookmarks > Show All Bookmarks.
â€¢ On the left side click Bonjuor (or Rendezvous).
â€¢ Your printer will be listed there. Double-click it and test out that admin page!

How do I get my Scantron Machine serviced?

The Scantron machine itself should have a 1-800 number listed on them. The best bet is to call the number and work with the vendor.

Is there a way to connect a laptop with only HDMI outputs to a projector with only VGA inputs?

I would recommend using a different laptop, but you can probably try using a HDMI to VGA cable or USB to VGA:

http://www.usb-ware.com/usb-2-vga-adapter.htm

Auto discovery of networked HP printers on local subnet using HP Diagnostic Home Network Utility

If you need to discover all the network HP printers on a local subnet, you can download the HP diagnostic home network tool to discover all the HP networked printers.

HP Diagnostic Home Network Tool

*The The Advanced Tools Screen
The Advanced Tools window displays a list of network printers similar to what was shown on the Network Diagnostic Screen, with the added ability to open a selected printer's Embedded Web Server page (uses your default web browser to open and display the printer settings page).

The Advanced Tools Screen also provides the following buttons for access to other information and functionality useful for advanced troubleshooting:

- Display Detected Network Devices – Shows all devices connected to your network.
- Test URL – Allows you to check if your computer can connect to a specific URL on the internet.
- Renew Network – Renews your computer's IP address from the network DHCP server.
- Display Detected Wireless Networks – Shows other wireless networks detected by your computer's wireless network adapter and highlights the network you are connected to.
- Display Detected Firewalls – Shows a list of firewalls detected on your computer and the current status of each firewall. Buttons are provided to autofix, enable, or disable a selected firewall, and a help button provides additional information to help you with firewall configuration, including trusted application filenames and ports used to communicate with the printer.
- Configure Detected Router – Shortcut for opening a browser window to the default page for your router. If you have previously password protected your router configuration page, the username and password will be required for access.

- Retrieve WPA/WEP Key – Click this button to display the network security information.
- Stop HP Services or Start HP Services – Clicking this button allows the user to stop or start HP network services, which can correct some problems. The utility checks for the proper installation and operation of HP services required for network communication with the printer. If all services are running properly, the Stop HP Services button is displayed; conversely, if any of the HP services are not running properly, the Start HP Services button is displayed.
- Save Diagnostic Information – Clicking this button displays information gathered by the utility and saves it to a text file. This information can be useful troubleshooting information when contacting HP for support.

What is hard drive degaussing?

Here is a short explanation of hard drive degaussing:

http://www.veritysystems.com/degaussers/whydegauss.asp

Be very careful of SSC's Proton 8000

How do I reset a malfuctioning Motorola Pager (American Messaging)

1. Take out AA battery
2. Put in the battery in reverse direction
3. Wait 10 seconds
4. Put battery back in the normal direction
5. This will reset the pager

Squeeze More Life Out of Your Battery

YouTube Video – Maximize Battery Life Video

Before You Buy

- Check the specs for battery life but also read actual user reviews for a reality check. Specs often read something like “up to X – X hours.” The “up to” covers a lot of ground. “Up to” is standard advertising lingo. They lie.
- Make sure your battery is fresh—that is buy your laptop from a reputable source with high turnover. Lithium Ion batteries lose approximately 20% of their capacity every year – even just sitting on a shelf.
- Buy a decent amount of RAM; 2 GBs at least. The less the laptop has to use virtual memory, the less juice is wasted on writing stuff out to disk.

Once You Have Your Laptop

- If you don’t plan to use the battery for a while, charge it to about 40 percent , remove it and put it in a cool dry place. Do not put it in the fridge or you family will question your drug habits.
- Don’t completely discharge your battery – it’s not good for lithium ion batteries.
- Use **Power Options** in the **Control Panel** to adjust your power management scheme. Select the **Power Savings** setting for best battery performance.
- Use the correct power adapter for your laptop. A mismatch in wattage could cause an overload and damage both your laptop and battery.

Physical Devices

- Reduce the number of external devices you use – USB devices (including your mouse) use up energy.
- Disable Wifi if you are not using it. Wifi uses energy simply searching for signal. Many laptops have a manual method (a switch, sometimes function keys, normally labeled with an icon that looks like a radioactive tower).

- Dim your screen. Brighter screens use more energy. Usually you will find screen dimmer keys on your function keys, the top row of your keyboard.
- Single-task. Multi-tasking uses more energy.
- Skip the CD/DVD drive. Transfer your movies and stuff to the internal hard drive and run them from there.
- Keep the temperature cool and keep your laptop well-ventilated (look for air vents on your laptop and make sure they aren’t blocked – or dirty).
- Keep your work area and laptop clean. Dirt and dust in the vents or in the guts of the machine makes your laptop heat up and work harder.
- Keep the battery contacts clean. Note the metal contacts on your battery and clean them with rubbing alcohol on a soft cloth.
- Hibernate rather than standby. Standby does save power but Hibernate saves more and will also preserve your PC’s state.

LaptopRepair.com

LaptopRepair.com will service most out of warranty PC laptops – also warranty repairs on select brands. They pick up daily, and deliver through the ASUCLA Computer Store.

- see also, **http://www.laptoprepair.com/ucla**
- or, http://www.laptoprepair.com/ and choose “Universities” > “UCLA” in the horizontal navigation bar

Is it possible to connect a DVD burner to a video recorder such as the Kodak Playsport?

I found my answer, I’m providing the information here in case it helps someone else:

I found a DVD burner that can be connected to a digital camcorder. This will allow a person to burn a video directly to a DVD without a computer.

However, the DVD burner I found is only compatible with certain models and the Playsport and other small Flip-type cameras are not compatible.

Personally, I’ve decided that it’s easier for me to purchase an older model camcorder that can record directly to DVD’s without a computer. (newer models don’t seem to have this feature anymore).

Ultrabook Hard Drives

The ultrabook specification uses thinner than usual laptop hard drives. Some lightweight laptops, though not specifically ultrabooks, may also use these thinner 7mm z-height 2.5" SATA hard drives. Typically, these hard drives are single platter.

Some current options are:

- **Momentus Thin**, http://www.seagate.com/internal-hard-drives/laptop-hard-drives/momentus-thin/
- **Travelstar z-series**, http://www.hitachigst.com/internal-drives/mobile/travelstar/travelstar-z7k500
- **WD Scorpio Blue** (“L” models), http://wdc.com/en/products/products.aspx?id=140

HP USB 3.0 SuperSpeed PCI-e x1 driver

HP USB 3.0 SuperSpeed PCI-e x1 add-in card commonly found in HP desktops, circa 2010 and 2011 driver.

Common low-profile add-in card found in HP 8200 Elite CMT (convertible mini-tower), HP 8200 Elite SFF, HP Z400 workstations, and other HP systems.

Identified as part number *BU994AV* in many price quotes and configurations. Sticker on rear of card may say:
CHI314PCB-2 Rev 2.3
PN: 607782-001
SPN: 608151-001

For some reason this driver is inordinately hard to find on HP's site and online. HP evidently uses multiple 2-port USB 3.0 PCI-e x1 cards with similar specs. This card uses an NEC chip for two USB 3.0 ports, a SATA connector for additional power from the system power supply (PSU), and a has a PCI-e x1 interface.

Supported OSes: Microsoft Windows 7 Enterprise (32-bit), Microsoft Windows 7 Enterprise (64-bit), Microsoft Windows 7 Professional (32-bit), Microsoft Windows 7 Professional (64-bit), Microsoft Windows 7 Ultimate (64-bit), Microsoft Windows XP Professional, Microsoft Windows XP Professional x64 Edition

http://h20000.www2.hp.com/bizsupport/TechSupport/SoftwareDescription.jsp?lang=en&cc=us&prodTypeId=12454&prodSeriesId=3718668&prodNameId=3718669&swEnvOID=4053&swLang=13&mode=2&taskId=135&swItem=wk-99464-1

Mac OS Printing on Dell 2130cdn

1. Download and install the following (order matters!)
   - http://www.openprinting.org/download/printdriver/macosx/gplgs-8.64so-ub.dmg
   - http://www.openprinting.org/download/printdriver/macosx/foomatic-rip-4.0.2.211.dmg
   - http://www.openprinting.org/download/printdriver/macosx/pxlmono-1.6.dmg
   - (EDIT:) Updated packages for the above are at http://www.openprinting.org/download/printdriver/macosx/

1. Go to printer menu
2. Add +
3. Select LPD
4. Address
5. Printer Using → Select a diver to use (You might have to repeat this step if the option closes automatically)
6. Select Generic PCL 6/PCL XL Printer Foomatic/pxlcolor
7. Add the printer
8. In your browser type: http://127.0.0.1:631/printers/
9. Click on Set Printer Options for the new printer
10. Change Printing mode: Normal
    - If you have duplexer and would like to use it by default: Change Double-Sided printing: On (Flip on Long/Short Edge)

from,

http://nipone.blogspot.com/2010/04/how-to-install-dell-2130cn-on-my-mac.html

Changing HP motherboard system IDs

When performing a motherboard swap in an HP system, to ensure proper system functionality, the system IDs will need to be reprogrammed from the product SKU label(s) on your system.

Entering the BIOS/UEFI on your replacement HP system board and then going to system IDs will normally only reveal three or four fields, instead of the full 7 or more fields you may need to populate.

To access the additional system ID fields, when going to the sub-menu that has “system ID”, hit **CTRL-A** before entering the system ID section to expose the additional fields.

http://h30434.www3.hp.com/t5/Desktop-Hardware/invalid-electronic-serial-number-after-motherboard-swap-out/td-p/1403105

HP Laserjet 1012 and Windows 7

The HP LaserJet 1012 does not have a Windows 7 driver.

The Windows Vista driver for the LaserJet 1012 should work, or the Windows 7 LaserJet 1015 driver.

Two methods to make this work:
1) download the Windows Vista driver and extract the driver files to a temporary folder. Then when installing the printer, go to “have disk” for the driver and point to where you placed the driver files. Please bypass any errors.

This method works, however there are typically several seconds of delay between printing and printing each page.

2) when installing the printer, go to “Windows Update” for the driver on the Add Printer Wizard. This normally takes a few minutes to update the driver list. When the updated driver list comes up, go to “HP” and then select “LaserJet 1015”. The LaserJet 1015 driver should work.

Personality errors may also occur with the printer driver, in which case method #1 must be used instead.

http://h30434.www3.hp.com/t5/Printer-All-in-One-Software-Drivers-e-g-Windows-8/Windows-7-Printer-driver-for-HP-Laserjet-1012/td-p/1446867

Trouble printing from office 2010 on a xerox printer

I’m having problems printing documents in Word 2010 on our Xerox printer. A colleague found a temporary solution:

To enable printing with Word 2010, when you are ready to print, select printer properties . From the window that opens, select Advanced Options. In that window there will be two lines labeled True Type Fonts. On the first one select, “download softfont” and on the second, select “download as bitmap”.

That should fix the problem. Unfortunately, you have to do it for every document.

Has anyone experienced the same issue, found a permanent solution, or perhaps knows of a cause? I think I’m the only one in my office experiencing this and we are trying to do some further trouble shooting.

thanks!

Switching from the PCL driver to the Postscript driver for your printer may also work.

http://forum.support.xerox.com/t5/Printing/WorkCentre-7435-Error-codes-116-324-amp-016-720/td-p/8240

http://support.microsoft.com/kb/2592142

http://answers.microsoft.com/en-us/office/forum/officeversion_other-word/office-2010-word-calibri-font-printing-issues/8fbd59b0-5682-43cc-8476-e7dbed314f1e

http://support.microsoft.com/kb/2479426

Per the Xerox link:
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Therefore our recommendation would be any of the following as noted above:
1. Install the necessary fonts on the printer servers directly (as in KB 2512013)
2. Install Office 2010 on the server and then remove or keep the application installed
3. Send fonts as bitmaps
4. Disable Advanced Printing Features (which may cause loss in functionality such as Booklet and Watermark functions)

Strongly looks like disabling Advanced Printing Features might help if the font change doesn’t help.

—
When working on the “Advanced” tab of your printer properties in the Windows “Printers and Faxes” dialog, unless you check “Print directly to printer” (which is normally not recommended), Windows will spool data to your printer. Since most printers accept data much slower than the printing application can process it, “spooling” can make life easier by capturing the data going to your print driver, putting it in a holding area (temp files on your hard drive), and then spooling it in the background later, at a transfer rate that the printer can handle. In a sense, the spooler is the middleman between your printing application and the printer and it sits in the background “feeding” the printer as fast as it can take the data.

Windows employs two methods of feeding the printer via the print spooler: raw and EMF (enhanced meta-file). Let’s take a look at both spooling methods.

EMF: “Enable Advanced Printing Features” ON

If there is a check in “Enable Advanced Printing Features”, you have turned EMF printing on and have told Windows that it can defer some of the print processing until late

[…]

EMF: “Enable Advanced Printing Features” OFF

If “Enable Advanced Printing Features” is turned off (unchecked), Windows will create a spool file in the raw format. That is, the driver is invoked up front (as your printing application is processing the data/pages) and the raw data that is ready for the printer to receive is spooled into file(s)

[…]

Simply put, raw printing with “Enable Advanced Printing Features” turned off is more reliable
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Reset drum light on Brother HL-2270dw

After replacing the drum on a Brother HL-2270dw printer, the drum replacement light may still be flashing on and off indicating replacement is needed.

To reset the drum replacement LED:

1. Open the front door to the printer
2. Press and hold the “Go” button until all four status LEDs turn on (Toner, Drum, Error, Ready).
3. Release the “Go” button.
4. Close the front door of the printer

This may work for other Brother models, but please double-check.

Reference:

Shareyourrepair:http://www.shareyourrepair.com/2014/09/how-to-reset-drum-on-brother-hl-2270dw.html

HP Laserjet 1012 and Windows 10

HP Laserjet 1010 and Laserjet 1012 series printers are not supported in Windows 10.

However, the HP Laserjet 3055 PCL5 driver does seem to work.

Plug in the printer to the computer, and turn on the printer.

In the legacy Control Panel (not the new one!), go to *View Devices and Printers*.
Hit the *Add a Printer* button, then select *The printer I want isn't listed*.
At the Find a printer by other options screen, select *Add a local printer or network printer with manual settings*.
At the *Choose a printer port*, select *Use an existing port*, and select the *DOT4_001 port* if found. We have also found the *USB001* virtual port works.
At the *Install the printer driver* screen, select HP as manufacturer, then select *Windows Update*, so Windows gets ALL of the drivers. Please wait until the selections come back again— it could take a few minutes.
When the driver list appears again, select HP as manufacturer, then pick *HP Laserjet 3055 PCL5* (Microsoft or HP, doesn't matter?), and it should work.

Reference:

https://www.youtube.com/watch?v=bGFoxwLrXEE
Windows 7:

https://kb.ucla.edu/link/1629