

# Laptops – What You Need to Know?

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## Preamble

I must admit, I never really thought of writing an article such as this one – until a few days ago. I was discussing "need to knows" about laptops with a client when some twenty to thirty minutes later I began to see a somewhat "glazed" look on my client's face – indicative of what might be referred to "information overload". Thus, this present article...

## Introduction

This article is written for laptop users – though desktop users might glean some *interesting* information nonetheless. In particular, this article is written to owners of laptops who should have been made aware of specific items about laptops prior to and after these units were purchased. And believe me – what you are about to learn here *is important!*

## Servicing

Laptops, when compared with desktops, are serviced more than desktops – in fact, over 70% more. As you will discover in this article, laptops undergo repairs in three specific areas namely, 1) damaged screens, 2) damaged power connectors, and 3) damaged hard disk drives. Such repairs are often attributed to their design purpose – *portability* thus increasing the likelihood of *potential* damage. You will learn then, some practicable information on how you might either prevent or minimize such potential damage.

## Knowledge

When compared with desktops, laptops do require more initial familiarity – in particular, with regards to the three aforementioned points. However, this becoming familiar is also attributed to the dual-purpose capabilities of laptops as a direct result of their portability. You will discover more about the multipurpose nature of laptops here as well. So, without further ado, let us begin...

## Damaged Screens

Damaged screens, is the single most common repair for laptops. One of the reasons why screens get damaged is simply, *pressure*. An object of some sort is permitted to press-down on the lid of the laptop, causing excess pressure to be transmitted to the screen – and voila, a damaged screen. This situation is particularly common with laptops that are stored in backpacks. And, by-the-way, it is not so much that the screen itself gets physically cracked – but more so, that the panel itself becomes damaged and, as a result, produces a display similar to the following:



The average cost of repair is \$75.00 for labour, and anywhere from \$25.00 for used screen, up to \$125.00 for a new screen.

## Two Types of Power

Laptops use two different types of power sources namely, 1) AC, and 2) DC. AC is simply what we might refer to as *regular power*, as you would find on a wall and where you "*plug things in*". DC, on the other hand, *is battery power*, such as that used in a flashlight, a camera, a cordless phone, and so on.

To allow for this dual-purpose power capability, every laptop comes with a component commonly referred to as an "AC Adapter" – and which looks similar to this:



This component serves two purposes, 1) to provide AC power to the laptop, and 2) to charge the battery that is inserted into the laptop. What many users are *not told* is that though the AC Adapter component does indeed charge the battery, this component *can also overcharge the battery*. This overcharging of the battery can actually lead to premature battery failure. And with replacement batteries costing anywhere from forty to ninety dollars to replace – this can be a somewhat expensive lesson to learn. What laptop users are also *not told* is that a laptop can actually be used *without the battery*.



With the battery removed, the laptop is being powered entirely by AC power. With the battery removed, this would then also prevent premature battery failure. What is interesting to note, is that most laptop users that I know of tend to use their laptops *in a permanent environment* – similar to that of a desktop computer. Therefore, the need to have the battery *always inserted* becomes rather superfluous. If you happen to be such a user – then please remove the battery and store the battery in safe place.

- Note: This being said, anytime that you might require the use of the battery, all that will be required then is to power-off the laptop, re-insert the battery, and then let the battery have a ten-to-sixty minute refresh charge – and you should be good-to-go. When the battery is no longer required, then remove the battery as was done previously.

## Purchase Consideration

As a point-of-interest, there are some laptops that, due to their overall thickness, have a battery that is *non-removable*. Being non-removable means that the likelihood of premature battery failure increases as a result. And though it is possible to replace such a battery, the repairs costs – both in terms of parts and labour goes up as well. You just might then, keep this point in mind if you should happen to be considering the purchase of such a laptop.



### **Battery Cycling**

To prevent premature battery failure, you should become familiar with what is referred to as "battery-cycling. Due to the length of this article, this article will be provided under a separate cover. So stay tuned.

### **DC Power Cable and Socket**

Along with damaged laptop screens, damage power-sockets are the second most common repair performed on laptops. The image below should – hopefully, provide an indication as to just why this is so?



A laptop power socket can be located on the left side, the back, or the right side of the laptop *chassis*. The inherent problem with such "plugs and sockets" is that with a plug inserted into the socket, there is often two to three inches of *unsupported* plug protruding from the socket itself. An all-too-common scenario is for something, such as book, being dropped on the plug – thereby damaging the socket, the plug – or both. The average cost of repair of a socket is \$75.00, plus parts.

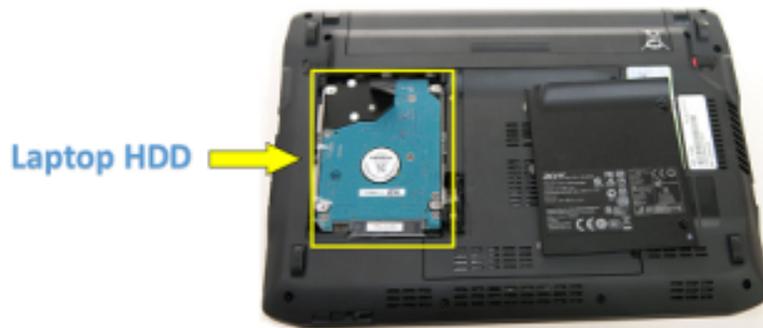


To help in preventing such damage, I strongly recommend, that you, 1) be aware of this potential damage to the socket *and* the plug, especially if the socket is on the rear of the laptop – "*out-of-sight*", so-to-speak, and 2) to provide support for the underside of the plug. A 1/2" to 3/4" piece of foam the length of the plug is particularly helpful. For example:



### **The Hard Disk Drive – or HDD**

The HDD is a component used to store the operating system, the applications and the all-important user data. The primary concern for laptop users is just where the laptop is being used.



The following are two interesting case-studies that might be helpful:

If a laptop is residing on a desk and is powered-on, and someone then takes a one pound book and drops that book from a distance of twelve inches from the desk, there is the possibility of physical damage to the HDD. Physical damage to a HDD *can lead* to permanent data loss.

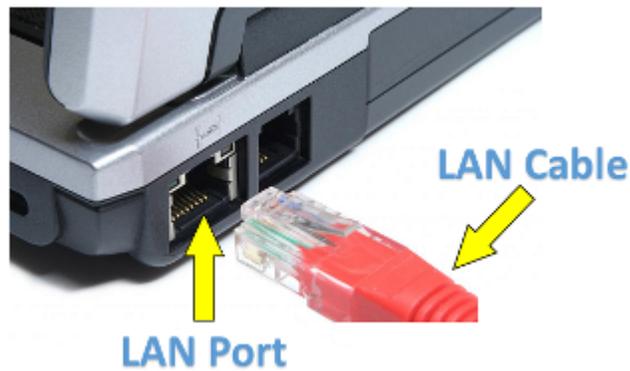
One more scenario, laptop on kitchen table, powered-on, bag of groceries lands on table. *Ouch!* To make a long-story-short, be mindful of the powered-on/off state of the laptop and just where the laptop is located. And by-the-way, if the laptop is powered-on – please do not drop the laptop on a hard surface as you would a book, and so on.

The average cost of repair for a damaged HDD is \$140.00 and up for labour and \$60.00 and up for a new replacement HDD. However, and this is an important however, if the HDD is damaged and the data located on that HDD *is important enough* – then you just might be looking at \$275.00 for data recovery services. As the saying goes, "*an ounce of prevention is worth a pound of cure*".

### **LAN and WLAN**

Laptops also provide two different methods for connecting to the Internet namely, 1) LAN and 2) WLAN. "LAN" stands for "local area network" and "WLAN" stands for "wireless, local area network". LAN is also referred to as a "hardwired connection". Another common – and must I say, *incorrect*, designation for WLAN is "Wi-Fi" – which stand for "Wireless Fidelity".

A LAN connection found on a laptop looks similar to the following:



As with a laptop power socket, the LAN port can be located on the left side, the back, or the right side of the laptop chassis. And being "protruding" as with the DC power plug, you should provide similar care to the socket and cable as you would to the DC socket and cable.

Now, WLAN on the other hand, *uses no cable*, and therefore the WLAN capabilities of the laptop are dependent on the manufacturer of that laptop. In most cases, WLAN is either enabled or disabled through the use of 1) a key sequence – such as "Fn+F8", or 2) by the use of a switch:



One final point, a LAN connection is preferable over a WLAN connection – and for the following two reasons, 1) a LAN connection is faster and simpler to connect and use, and 2) a WLAN connection often requires the name of wireless network and a passphrase in order to be able to access a wireless router. Lastly, Wi-Fi is more prone to *disconnections*.

### Dual Function Keys

One final point with regards to the dual-purpose functionality of laptops – and that is with regards to what is commonly referred to as "*function keys*". In particular, as a laptop keyboard is generally smaller when compared to a desktop keyboard, in order to compensate for a lack of keys, laptops come *with a special function key* appropriately called, *the Fn key*. This "Fn" key is used in combination with other keys thus giving those keys multiple purposes.



It is very common to find these "other" keys using an alternative colour, such as that shown above.

### **Usage**

To actually put these other keys to some practical use, you would first select the Fn key, and while holding this Fn key down, you would then select one of the other keys. Once both keys are selected, you would then immediately release both keys. So ...

Fn + [other key] → Release

### **Overall Longevity**

One final point of interest before finishing the article and this has to do with *longevity*. Depending on the make and model of laptop, it is not at all uncommon for laptops to be replaced every three to four years – whereas desktops can last upwards of seven years. Why is this so?

In comparison to desktops, laptops require more initial knowledge – as can be seen here in this article, and laptops do require more care – especially when a laptop is being transported.

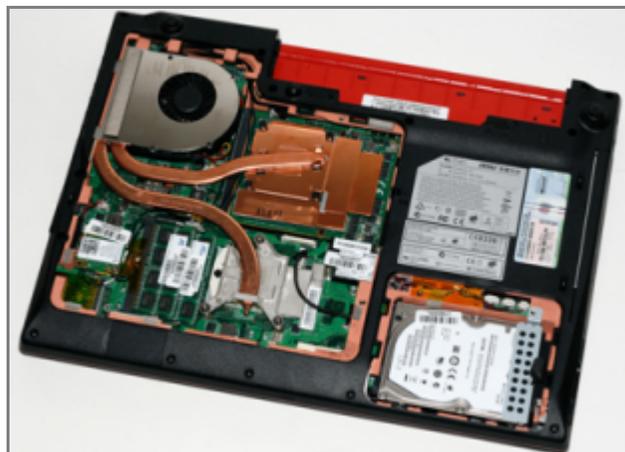
This being said, an understanding of the differences between a laptop and a desktop – along with some good old common sense, should help in maintaining a healthy working relationship between you and your laptop.

In particular though, one of the major downsides of a laptop *is heat*.

### **Heat**

Heat is a problem for desktops as well as for laptops. However, desktops are *bigger* and provide for less restricted flow of air and therefore, allows for increased heat dissipation. Laptops, on the other hand are, in a word, *tight* – and rightly so. Along with heat being generated by the processor, heat is also generated by the battery and the hard disk drive. This all adds up to a lot of heat being generated! Heat, especially *over-heating*, can cause hardware to prematurely fail.

With this in mind, an important preventative measure then is *to keep the laptop cool*. Precisely how this done is dependent on the make and model of the laptop – so perusing the User Manual would be helpful.



### **Vents**

As the means of dissipating heat, laptops come with "vents". These vents can be "self-venting" or "forced venting" – the latter using an internal fan to direct heat to the outside world. Also, if you are considering the purchase of a laptop, look for vents that are located on the side of the unit, as in "B" below, – rather than on the bottom, as in "A" below" – as shown in the following image. Even better –

obtain a laptop that has *both* bottom and side vents. Whatever you do – *please do not cover up these vents!*



### **In closing...**

What is interesting – as well as being important to note, is that *all* of the above information should have been mentioned to a perspective purchaser of a laptop *prior to the actual purchase of a laptop!* As I have mentioned in previous articles, asking questions – especially relevant questions is preferable prior to considering the purchase of pretty much anything. But here is the conundrum – "*What if I simply do not know the questions to ask in the first place?*" Now, if I were a salesperson and was aware of this conundrum at the outset, I would do all humanly possible to ensure that a perspective customer had access to such relevant information prior to the purchase of said item. This would be the right-and-good thing to do! Thus the purpose in writing this article.

As always, I sincerely hope that you will find this information of some practicable use. Thank you for your time and interest to the above.

Sincerely,

*Dell Krauchi*