

PC computer configurations & Windows optimizations

(Updated November 2012)

A fast processor and a good amount of memory are important, but do not necessarily guarantee that a computer will perform well when using audio/DJ applications, which can be very demanding.

This document covers many changes and modifications that can be applied to your computer to improve performances, and hopefully provide a more satisfying experience when using your Hercules DJ Console.

The following subjects will be covered:

- [USB](#)
- [Power configuration](#)
- [Processor \(CPU\) settings](#)
- [Hard drives and partition](#)
- [Internet and Antivirus](#)
- [Programs and applications](#)
- [Graphic card performance improvements](#)
- [Windows performance improvements](#)

Please note:

This guide assumes that you have a working knowledge of Windows, and sufficient privileges to make changes to the computer you are trying to use. Most changes proposed here are easy enough to be performed by anyone, using tools included in the operating system:

[Windows Control Panel](#)

[Device Manager](#)

[Windows Explorer](#)

[RUN command](#)

If you have any doubts about your capacities to perform these changes, please ask for help to a qualified computer user or technician.



USB

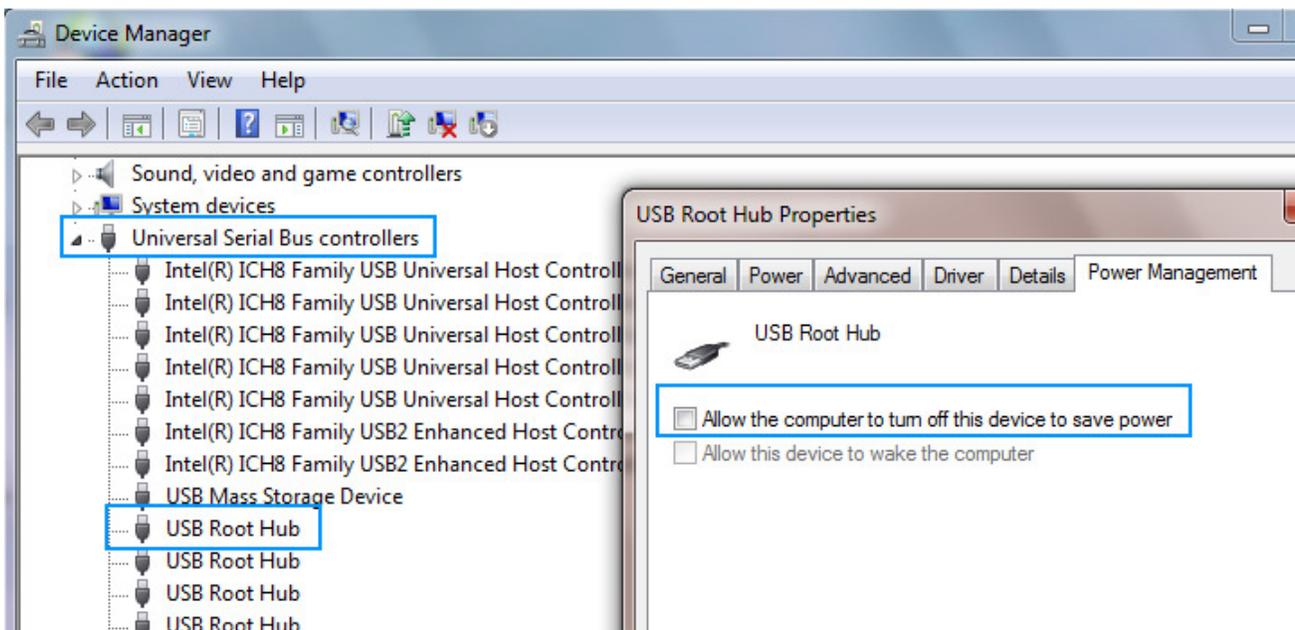
a) Some USB ports can share resources with other internal computer components (webcam, card reader, etc) and may not be provided with the same amount of power. This can create problems such as audio interrupts and/or dropped samples.

Try using different USB port on your computer until you find the one that works best for your console.

b) Disable the USB ports power management through **Device Manager**:

- Under **Universal Serial Bus Controllers**, Double-click on **USB root hub**.

- In **Power Management** tab, uncheck **Allow the computer to turn off this device to save power**. Repeat for all USB root hub,



c) Regarding **USB hubs**

Ideally, your audio interface should be connected directly to the computer while all other USB devices would be connected to the hub. However, if this is not possible, first make sure your Hercules DJ Console works as expected when connected directly to the computer's USB port. Then, test using a good quality powered USB hub.

It is also preferable **NOT** to use a USB hub while performing a Firmware update.



Another thing to keep in mind is that when connecting multiple devices to the same hub (such as external hard drives), they all have to share the USB port's bandwidth. This means that it is more likely to run into problems when the bandwidth limit of the USB port is reached.

d) Regarding USB 3.0

Although it is faster and backward compatible (supporting USB 1.1 and 2.0 devices), this new standard has yet to prove how well it can handle audio.

As these ports are more present on new computers, manufacturers are actively working at improving support. Before trying to install your console on a computer with USB 3.0 ports, please verify with the computer's manufacturer website for potential updates or information about known issues.

Also be sure to use the most recent DJ drivers available from the [Hercules support site](#) to install your console.

Power Configuration

By design, laptops are configured to use as little power as possible in order to be operated on battery. This, however, is not desirable when it comes to audio applications.

It is then preferable to use your computer's power supply and to configure your laptop to run as a normal desktop computer:

From the **Control Panel**, open **Power Options**:

- Under **Select a power Plan**, choose **High Performance**

Your computer could have specific power option in the BIOS that may also require to be changed. Consult your computer's documentation or the manufacturer's web site for more details.

You may also want to disable a Windows functionality that monitors the battery's status and charging process. This can improve playback and performance, even if your computer is not running on battery.

- From the **Device Manager**, expand the **Batteries** category.
- Right-click on **Microsoft ACPI-Compliant Control Method Battery**, and select **Disable**.

Your computer's manufacturer may also have installed a custom power management application that should also be disabled.



Processor (CPU) settings

Recent laptops incorporate a feature that reduces the speed of the processor. This allows to save energy, but again, is not desirable for audio purposes, as it may induce pops, clicks and noise.

This feature, known as **CPU Throttling**, **SpeedStep** or **SmartCPU**, is usually turned **OFF** when the computer's power scheme is set to **ALWAYS ON/ High Performance**, but may also require changes in the BIOS.

Also, if your computer uses an Intel processor, it is recommended to disable **HyperThreading** from the computer's BIOS.

Regarding these features and their possibilities, please see your computer's documentation or the manufacturer's web site for more details.

Hard drive and partition

Ideally, you should use multiple hard drives when working with audio and video applications; one affected to the operating system and software, while other(s) used for the files being played or recorded, and storage/backup.

If this is not possible, creating multiple partitions on the same hard drive is the next suitable solution, which can provide similar results, preferably with fast drives (7200 rpm).

- When using a USB external drives, please refer to the [USB recommendations](#) previously mentioned.

- The performance of your audio drive can also be optimized by disabling **Indexing**:

(Please note that this process may take some times depending on the size of the drive).

- Open **Computer**
- Right-click on the drive(s) you intent to use for audio playback/recording, then select **Properties**.
- From the **General** tab, uncheck **Compress this drive to save disk space** and **Allow files on this drive to have contents indexed**.
- Click **Apply** and then **OK**



Networks and security

Ideally, your computer should be dedicated for DJ performance, and as such, wouldn't need to connect to the Internet. Under these circumstances, antivirus, firewall and similar protection software should not be installed, as they can create problems during audio playback by constantly scanning the hard drives.

However, if you also use your computer for Internet and obviously require protection software to be present, you can take the following steps to reduce the risks of disturbances during a performance:

- Disable any **Wi-Fi**, **Bluetooth** or network connections
- Disable all protection programs (Antivirus, Firewall, etc)
- Close all communication software (Messenger, Skype, etc)
- Close all download applications (Torrents, etc)

Programs and applications

It is always best to perform a clean installation of any operating system, but as it is often the case with many manufacturers, your computer probably came with a pre-installed version of Windows, and you were provided with a way to restore your system in case of problem.

A downside with this method is that the manufacturer also installs many programs and applications that you may never use, but might utilize precious memory and processor resources even if they are not running.

- Use **Programs and Features** from **Windows Control Panel** to uninstall any applications and programs that you don't need or use.
- In the **Notification Area** (near the clock), right-click on each icon present. Some programs may give you access to a preference menu from which you could prevent some taskbar applications from running or launching at startup.

Graphic card performance improvements

Graphic card drivers have been known to be the cause of several audio issues. Although it is always advisable to use the latest version available, going back to a previous version might help correct problems.

- It is not necessary to install all additional components related to the graphic card. Manufacturers often provide elaborate configuration software or game-oriented devices like **PhysX** which will use precious resources.



- Modern graphic card and computers now often included a **HDMI** port for connecting screens and multimedia devices. Unless it is being used, it is advisable to disable them, or at least the audio components, which can be the cause of conflicts. This can easily be done from **Device Manager**.

Windows performance improvements

Following are simple modifications that can be made to Windows to improve the performance of the operations system, and consequently, how applications will perform.

Most modifications will be done from **Windows Control Panel**.

a) System

- In **Remote**, uncheck **Allow Remote Assistance to connect to this computer**.
- For **System Protection**, uncheck all available disks.
- In **Advanced**, open the **Performance** settings.
 - In the **VISUAL EFFECTS** tab, select **Adjust for Best Performance** and click **APPLY**.
 - In the **Advanced** tab, set **Processor scheduling** to **Background Services**

b) Sound

- In the **Sound** tab, select **No Sound** in the **Sound Scheme** menu.

c) Personalization

- For **Themes**, select **Windows Classic**.
- For **Desktop Background**, select **Solid Color**
- For **Screen Saver**, select **None**



d) Disable User Account Control

- Launch the **Run** command, and type **msconfig**
- Under **Tools**, scroll down till you find **Disable UAC**.
- Click on the line, and then press the **Launch** button.
- Once the operation is completed, close **msconfig** and reboot the computer for the changes to apply.

